

STOLL

THE RIGHT WAY TO KNIT

STOLL pattern software M1plus

knit and wear

Training



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1 Stoll-knit and wear® on the M1plus Pattern Workstation

Topics of the course:

- Manual creation of k&w patterns (with the stamp-out method)
- Working with Color Arrangements
- Working with k&w Arrangements
- Using Shapewizard
- Handling of the ShapeSizer
- Special features with k&w

Requirements:

- Knowledge according to M1plus - Handling and Programming training
- Knowledge according to M1plus - Fully-Fashion and Special training
- Good knowledge of knitting technique

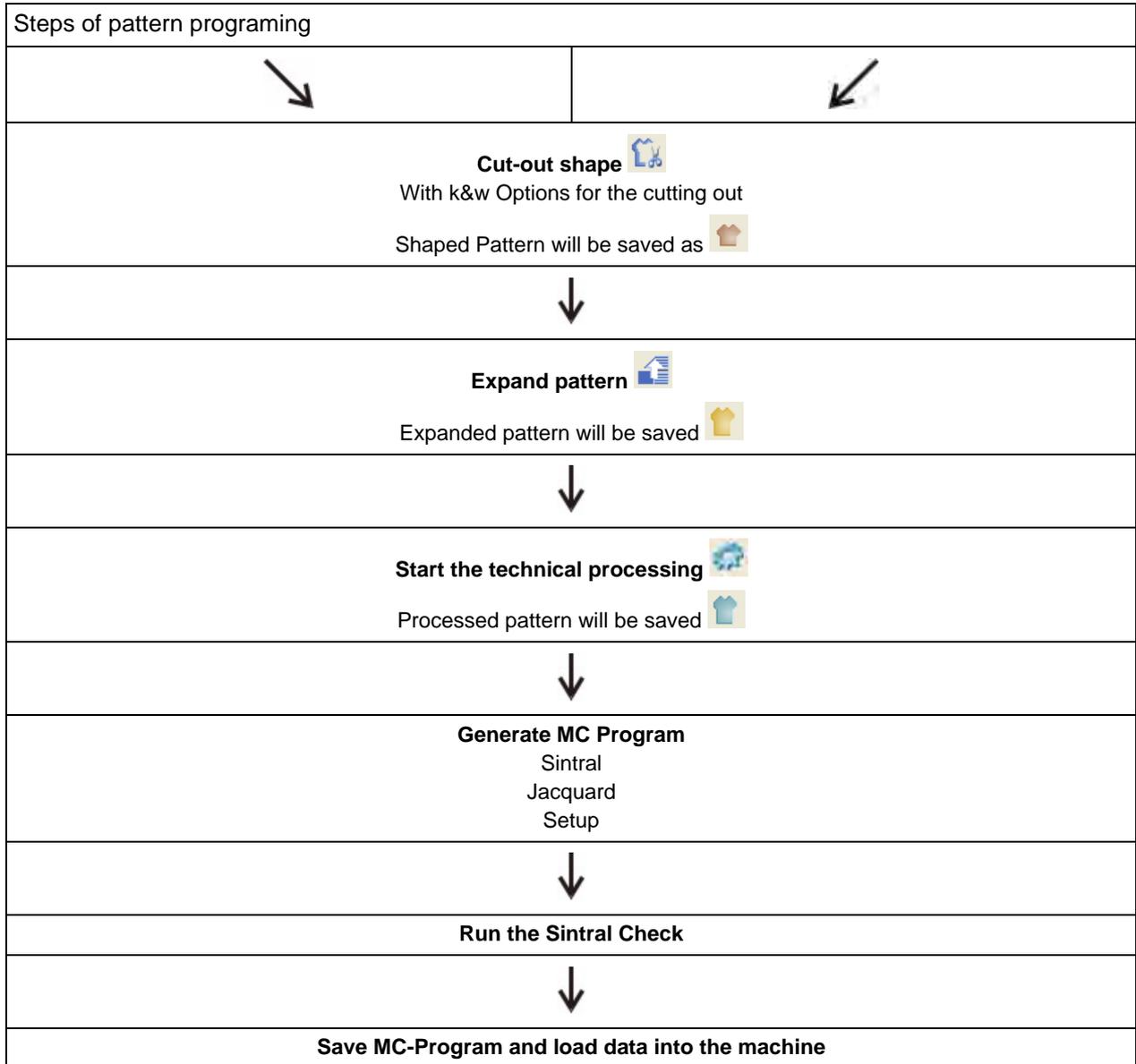
2 Steps to knit and wear Pattern



| Setting | Meaning |
|---|--|
| <input checked="" type="radio"/> "Design Pattern" | k&w pattern programming on the M1plus with the new functions <ul style="list-style-type: none"> ▪ You can create k&w patterns easier ▪ new drawing tools ▪ newly designed structure modules ▪ You can work with Color Arrangements |
| <input type="radio"/> Technical Pattern | Selection is not possible: <ul style="list-style-type: none"> ▪ You can generate k&w pattern with the M1plus in the Design Mode only. ▪ You can open and edit k&w pattern coming from the M1 in the Technical Mode. |

Steps to knit and wear Pattern

| Steps of pattern programing | |
|---|---|
|  | |
| ↓ | |
| Generate new pattern: <ul style="list-style-type: none"> ▪ Select a "Machine" ▪ Select a "Type of Pattern": k&w Basic Pattern ▪ "Design Pattern" (Design Mode) Basic pattern without start | |
| ↓ | |
| Drawing the Pattern (Basic) in the Design Mode  <ul style="list-style-type: none"> ▪ Drawing Tools ▪ Yarn or yarn carrier colors ▪ Module Arrangements  ▪ Pattern Parameters ▪ Yarn field allocation | |
| ↓ | |
| Generate shape in the: <ul style="list-style-type: none"> ▪ "ShapeSizer" ▪ "Shape editor / ShapeWizard" Save shape with k&w Arrangements as kaw file | |
| ↓ | |
| Menu "Shape" / "Open and Position Shape..." | |
| ↓ | ↙ |
| | Edit the k&w Arrangements <ul style="list-style-type: none"> ▪ Open the Shape View (Preview)  ▪ Switch Symbol View to "Display Pattern Cut-out"  |
| | ↓ |
| | <ol style="list-style-type: none"> 1. Make a selection and get the Color Arrangements calculated 2. Modify the shape |

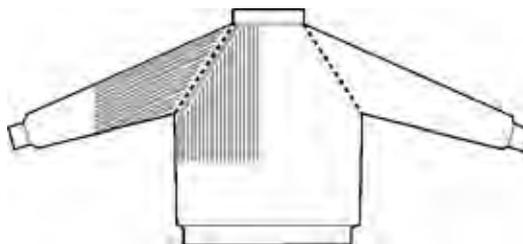


You can start the steps of processing ,  and  together as well.
Intermediate states of pattern will not be saved then.

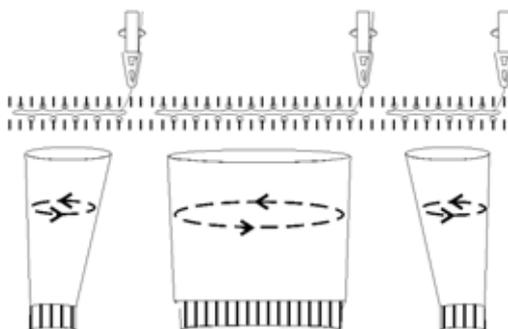
3 General information on Stoll knit and wear® technique

This knitting technique enables you to knit complete pullovers in a fully-fashioned shape.

The individual pieces body and sleeve are knit in a tubular way in the machine and connected by widening, narrowing and binding off in order to get a complete garment.



- The elements sleeve / body / sleeve are knit side by side with a separate yarn carrier at first.



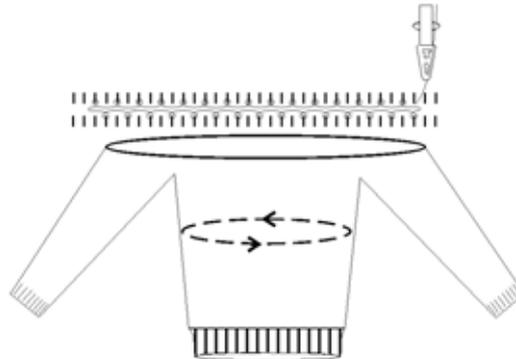
Yarn Carrier Specifications:

| CMS - Type | Yarn carrier specifications with knit and wear | | |
|----------------|--|------|--------------|
| | Left sleeve | Body | Right sleeve |
| CMS xxx | 4 | 5 | 6 |
| CMS 822 | 3 | 4 | 5 |

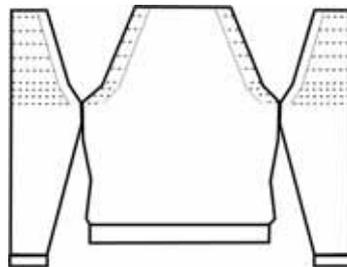
Shape part colors with knit and wear:

| Left sleeve | Body | Right sleeve |
|---------------------|---------------------|---------------------|
| Shape part color #2 | Shape part color #1 | Shape part color #3 |

- After connecting the elements body and sleeve only one yarn carrier will be used until the end.



- The narrowings are performed in sleeve and body for shaping.



- Complete pullover with collar.



Pullover with V-neck:

If a V-neck is present in the fabric piece, a corresponding knitting sequence with a yarn carrier is used.



Tank top with V- neck:

With a tank top or waistcoat, the yarn carriers may not switch layers (front/back), so that no connection arises and the arm openings remain open. 3 yarn carriers are used in the corresponding knitting cycle.



The Stoll knit and wear® technique:

The Stoll-knit and wear® technology is based on the knitting in 1X1-technique.

Knitting of the fabric back (back layer L1):



Knitting of the fabric front (Front layer L0):



Stoll-knit and wear® knitting cycle:

Knitting of the fabric back (L1) in the carriage direction to the left



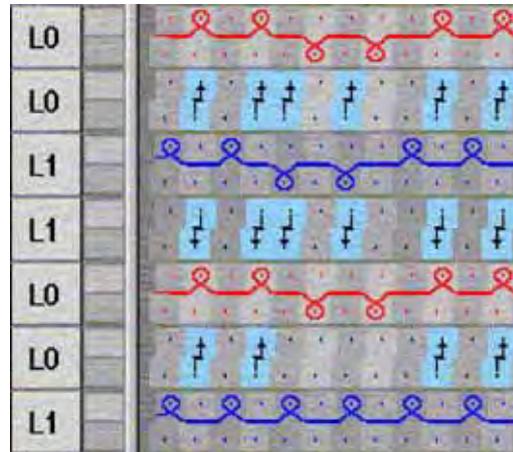
Knitting of the fabric front (L0) in the carriage direction to the right



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When generating the pattern the transfer rows of both knitting layers (L0+L1) will be combined to one technical row.

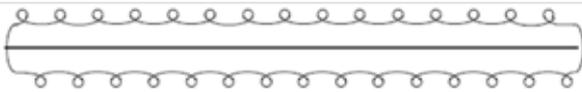
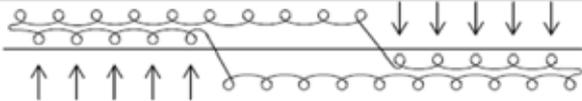
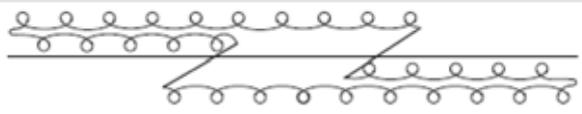
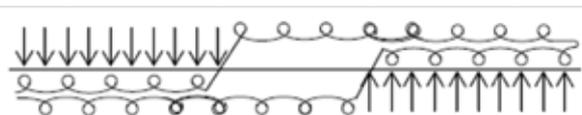
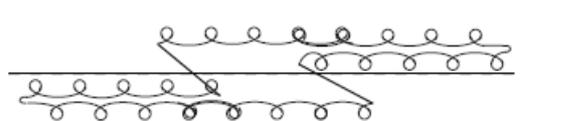
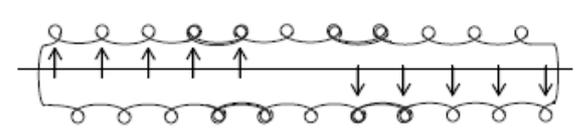
Stoll-knit and wear® knitting cycle:



Stoll knit and wear® knitting cycle with V-neck:

| Knitting of back (L1) and front (L0). | Knitting cycle with V-neck |
|---------------------------------------|----------------------------|
| | |

Stoll-knit and wear® knitting cycle when narrowing:

| Knitting cycle when narrowing | |
|---|--|
|  | <p>Back Needle Bed</p> <p>Front Needle Bed</p> |
|  | <ul style="list-style-type: none"> ▪ Transferring the left narrowing edge to the back in V0 ▪ Transferring the right narrowing edge to the front in V0 |
|  | <p>Racking to the right</p> |
|  | <ul style="list-style-type: none"> ▪ Transferring the left narrowing edge to the front in VR1 ▪ Transferring the right narrowing edge to the back in VR1 |
|  | <p>Racking back into the home position V0</p> |
|  | <p>Spacing of the stitches on the layer L0 and the layer L1</p> <ul style="list-style-type: none"> ▪ Double stitches result in the transfer areas |

4 k&w shape: Managing and basic rules for generating

Shapes for generating a k&w pattern:

- from the directory "D:\Stoll\M1plus\4.x.xxx\Shapesizer\k&w" ...
 - pullover
 - cardigan
 - slipover_waistcoat
 - others



Stoll default attributes are allocated to the shapes of the directory.

- create new shapes

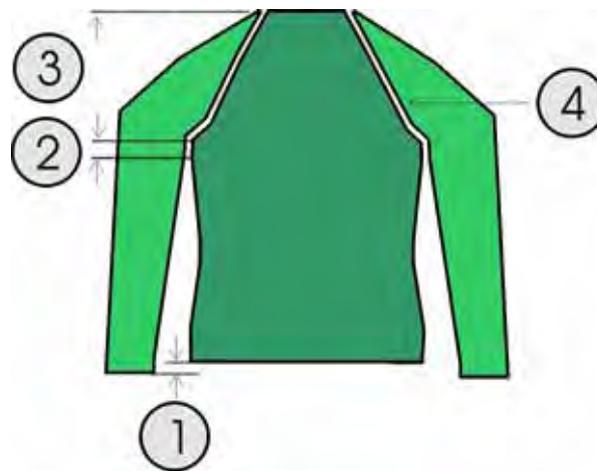
Elements (individual shapes) of a k&w shape:

- Shape for the front (front layer L0)
- Shape for the back (back layer L1)
- Shape for sleeves (with cardigans and pullovers)
- Shape for the collar



All the elements of a k&w shape must be saved in a common directory.

Rules to generate a k&w shape



| Shape | Conditions and requirements |
|-------|--|
| 1 | Length difference between sleeve and body is to be even numbered. Maximum: 20% |
| 2 | No widening or narrowing below the sleeve cross-over (6 rows). |
| 3 | The number of knitting rows of sleeve and body above the sleeve-body crossover depends on the type of shape (Raglan, saddle shoulder, inserted sleeve) |
| 4 | The stepping width of narrowings of sleeve and body is 3 stitches at the maximum. |

5 Possibilities for pattern generation with k&w

You have different possibilities to determine the shapes and the required knitting cycles for knitting when generating k&w patterns:

- **ShapeSizer**
- **Shapewizard**
- **Shape View**
- **Manual (stamping-out)**

ShapeSizer:

- Generate different sizes.
- Quick editing of a STOLL standard shape by grading.
- Simple and fast changing of the shape attributes for the different sizes



No own shapes can be saved in the ShapeSizer.

Shapewizard:

- Simple combination of the shape elements.
- Working out the docking points of the shape elements
- Automatic determination of the k&w Arrangements.

Shape view:

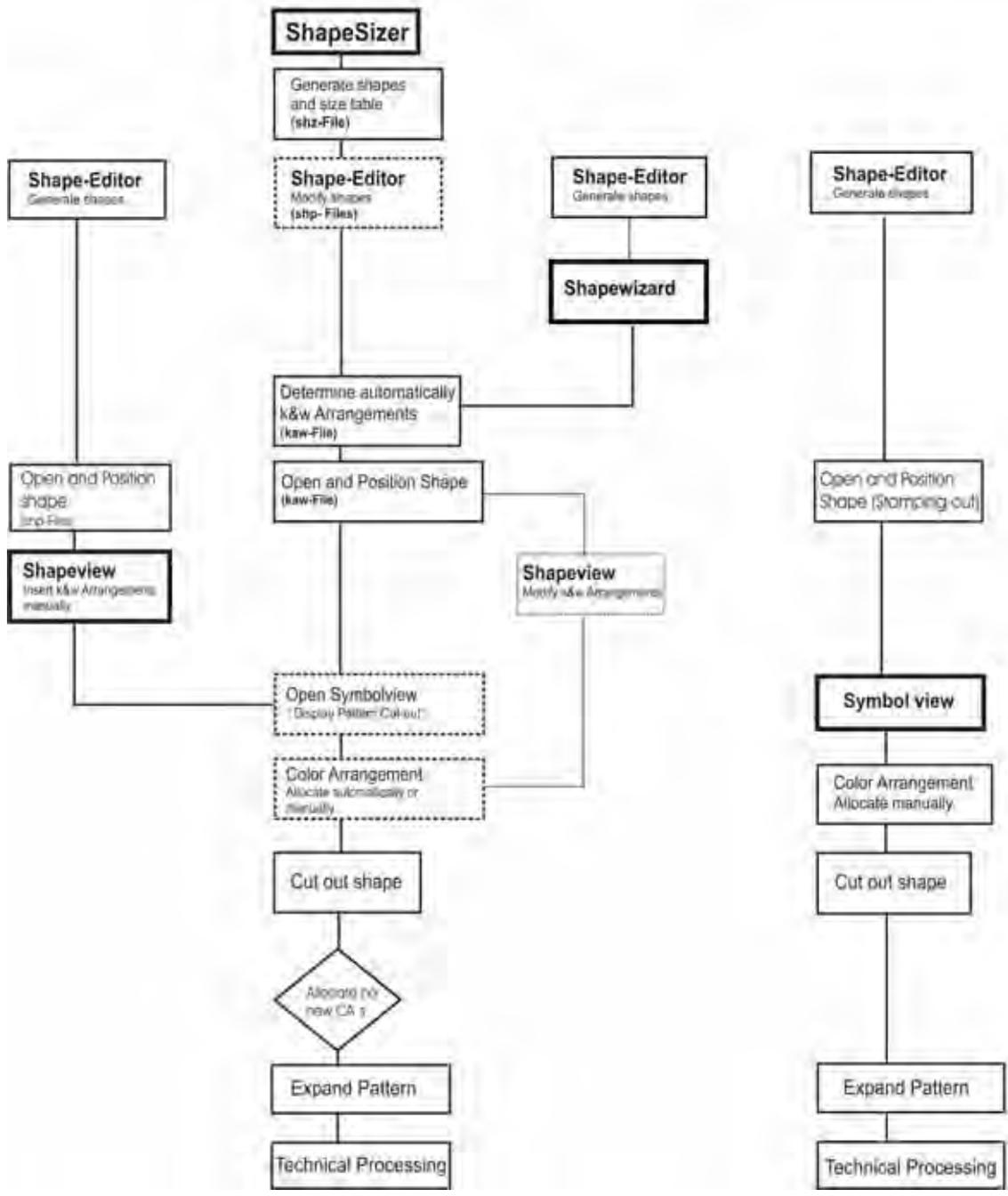
- Drawing-in manually the k&w Arrangements.
- Individual designing option by simply using your own k&w Arrangements.
- Allocate Color Arrangements generated from k&w Arrangements

Manual (stamping-out):

- Drawing-in manually the Color Arrangements.
- Individual designing option by simply using your own Color Arrangements.

k&w Patterns with Automatic

k&w Patterns Manually (Stamping-out)



6 Overview of the knitting modes and shapes

Knitting modes:

- Single jersey
- Rib 2X2
- Structure

Shapes in the ShapeSizer:

All the existing shapes are saved under "D:\Stoll\M1plus\4.x.xxx\Shapesizer\k&w" in the corresponding subdirectories.

| Shapes | | |
|---|---|---|
| Pullover | | |
| Raglan - Fair Isle - with neck gore | Raglan - Fair Isle - with neck gore |  |
| Raglan with neck gore | Raglan with neck gore |  |
| Raglan with neck opening | Raglan with neck opening |  |
| Saddle shoulder with neck gore | Saddle shoulder with neck gore |  |
| Saddle shoulder with neck opening | Saddle shoulder with neck opening |  |
| Inserted sleeve with French shoulder and neck gore | Set-in sleeve with French shoulder and neck gore |  |
| Inserted sleeve with French shoulder and neck opening | Set-in sleeve with French shoulder and neck opening |  |
| Inserted sleeve with shoulder gore and neck gore | Set-in sleeve with shoulder gore and neck gore |  |
| Inserted sleeve with shoulder gore and neck opening | Set-in sleeve with shoulder gore and neck opening |  |
| Cardigans | | |
| Raglan with neck gore | Raglan with neck gore |  |
| Raglan with neck opening | Raglan with neck opening |  |

| Shapes | | |
|---|--|---|
| Saddle shoulder with neck gore | Saddle shoulder with neck gore |  |
| Saddle shoulder with neck opening | Saddle shoulder with neck opening |  |
| Inserted sleeve with French shoulder and neck gore | Set- in sleeve with french shoulder and neck gore |  |
| Inserted sleeve with French shoulder and neck opening | Set- in sleeve with french shoulder and neck opening |  |
| Inserted sleeve with shoulder gore and neck gore | Set- in sleeve with shoulder gore and neck gore |  |
| Inserted sleeve with shoulder gore and neck opening | Set- in sleeve with shoulder gore and neck opening |  |
| Slipover - waistcoat | | |
| Tank top with French shoulder and neck gore | Slipover with french shoulder and neck gore |  |
| Tank top with French shoulder and neck opening | Slipover with french shoulder and neck opening |  |
| Tank top with shoulder gore and neck gore | Slipover with shoulder gore and neck gore |  |
| Tank top with shoulder gore and neck opening | Slipover with shoulder gore and neck opening |  |
| Top | Top |  |
| Waistcoat with shoulder gore and neck gore | Waistcoat with shoulder gore and neck gore |  |
| Waistcoat with shoulder gore and neck opening | Waistcoat with shoulder gore and neck opening |  |
| Others | | |
| Body | Body |  |
| Cap | Cap |  |
| Trousers | Trouser |  |

7 k&w patterns with shapes from the ShapeSizer

7.1 ShapeSizer: Raglan with neck gore

| | |
|---|--|
|  | |
| Pattern name | Raglan mit Halsspickel |
| Pattern size | Width: 350 Height: 350 |
| Machine type | CMS 822 k&w |
| Gauge | E 6.2 |
| Start | 1x1 rib |
| Basic pattern: | Jersey |
| Shape | From ShapeSizer: Raglan with neck gore |
| Knitting technique | knit and wear |
| Description of pattern: | k&w shape "Raglan with neck gore" in single-jersey knitting mode |

7.1.1 Generate Pattern without Shape

I. Generate new pattern:

1) Select "File" / "New" from the menu bar.

- or -

→ Click the  icon.

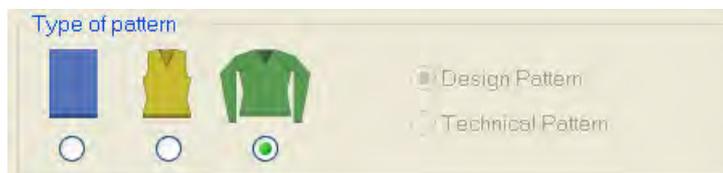


| Setting | Meaning |
|--------------------------|--|
| Design Pattern | Pattern programming on the M1plus with the new functions |
| Technical Pattern | Not possible for generating k&w patterns |

2) Enter a pattern name.

3) Select machine type.

4) Select "Type of pattern" **k&w pattern**.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field.

Height: 350

Width: 350



With k&w knitting technique, the size of the pattern field is automatically doubled in height and width.

- 6) Select the "Jersey" binding for the basic pattern via the selection list.



You can not select a start for the k&w pattern at the beginning.

The start will be inserted with the  "Cut-out shape" processing step.

- 7) Confirm the settings with the "Generate Design Pattern" button.
⇒ The "Symbol View [Basic]" in the k&w presentation appears.

II. Presentation of the knitting layers:

| Symbol View [Basic] | Technical view after expanding |
|---------------------|--------------------------------|
| | |

- 1) Select the desired presentation in the "Pattern Presentation k&w" toolbar.



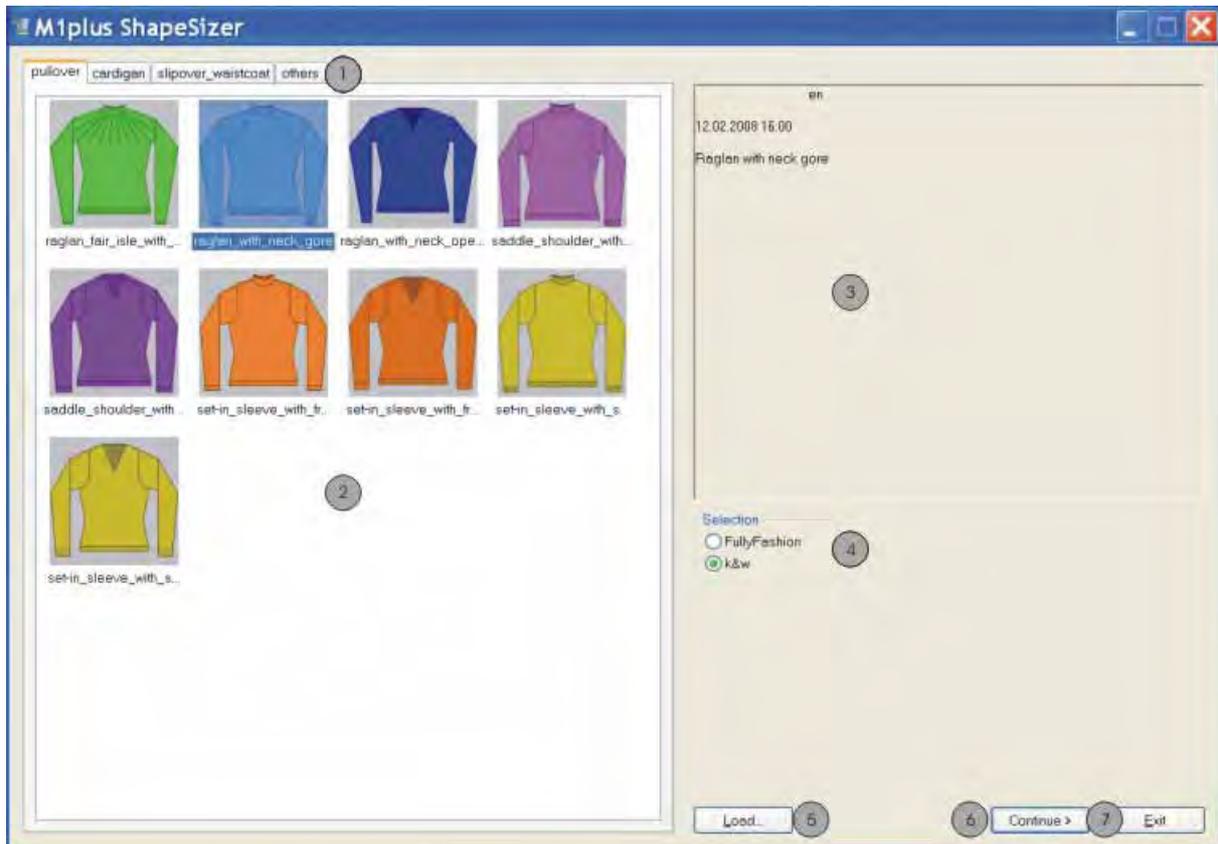
| Symbol | Property | |
|--------|---|---|
| | All layers | Presentation of the front L0 and the back L1 layer. |
| | Knitting layer L0 | Presentation of the layer L0 with all needles (1x1 technique) |
| | Knitting layer L1 | Presentation of the layer L1 with all needles (1x1 technique) |
| | Display the columns of the knitting layer L0 only | Presentation of the knitting needles of the front layer L0. |
| | Display the columns of the knitting layer L1 only | Presentation of the knitting needles of the back layer L1 |

III. Knitting cycle neck gore:

| | | |
|----|----|--|
| >> | L0 | |
| << | L0 | |
| >> | L1 | |
| << | L0 | |
| >> | L0 | |
| << | L1 | |

7.1.2 Create the shape in the ShapeSizer and open it in the pattern

- 1) Open the "ShapeSizer" program via the "Shape" / "ShapeSizer..." menu.



| No. | Function |
|-----|---|
| 1 | Tabs of the different directories |
| 2 | Overview of the different Stoll default shapes of the selected directory |
| 3 | Display field |
| 4 | Select directory for: <ul style="list-style-type: none"> ▪ <input type="radio"/> "Fully Fashion shapes" ▪ <input checked="" type="radio"/> "k&w shapes" |
| 5 | Load the saved ShapeSizer file (*.shz) |
| 6 | Continue to the next page of the ShapeSizer |
| 7 | Close the ShapeSizer |

2) Open the desired shape in the overview with double click.

- or -

➔ Select shape and press "Continue >".

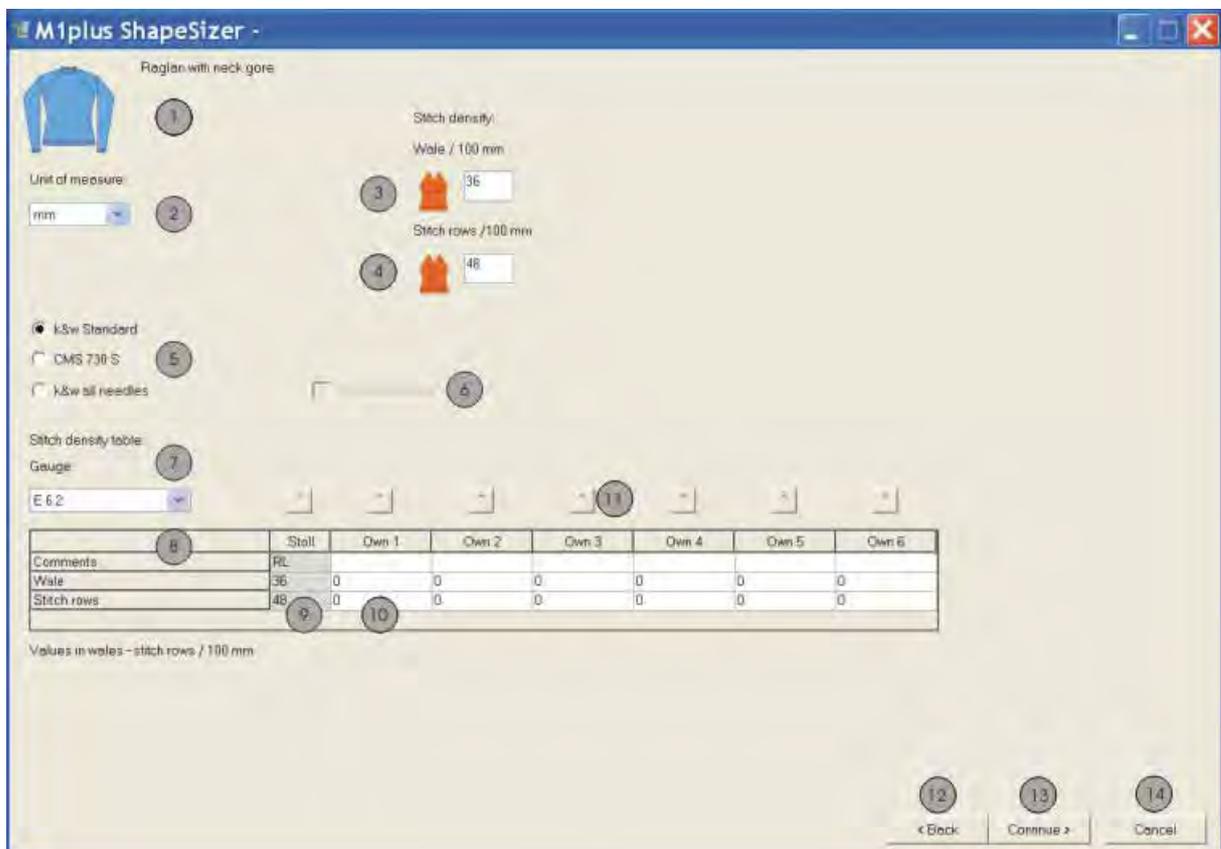
⇒ The next window of the ShapeSizer appears.



The default attributes are saved with the **(FRONT / BACK / SLEEVE / COLLAR)** shape elements in the files "defaultform_.....shp".

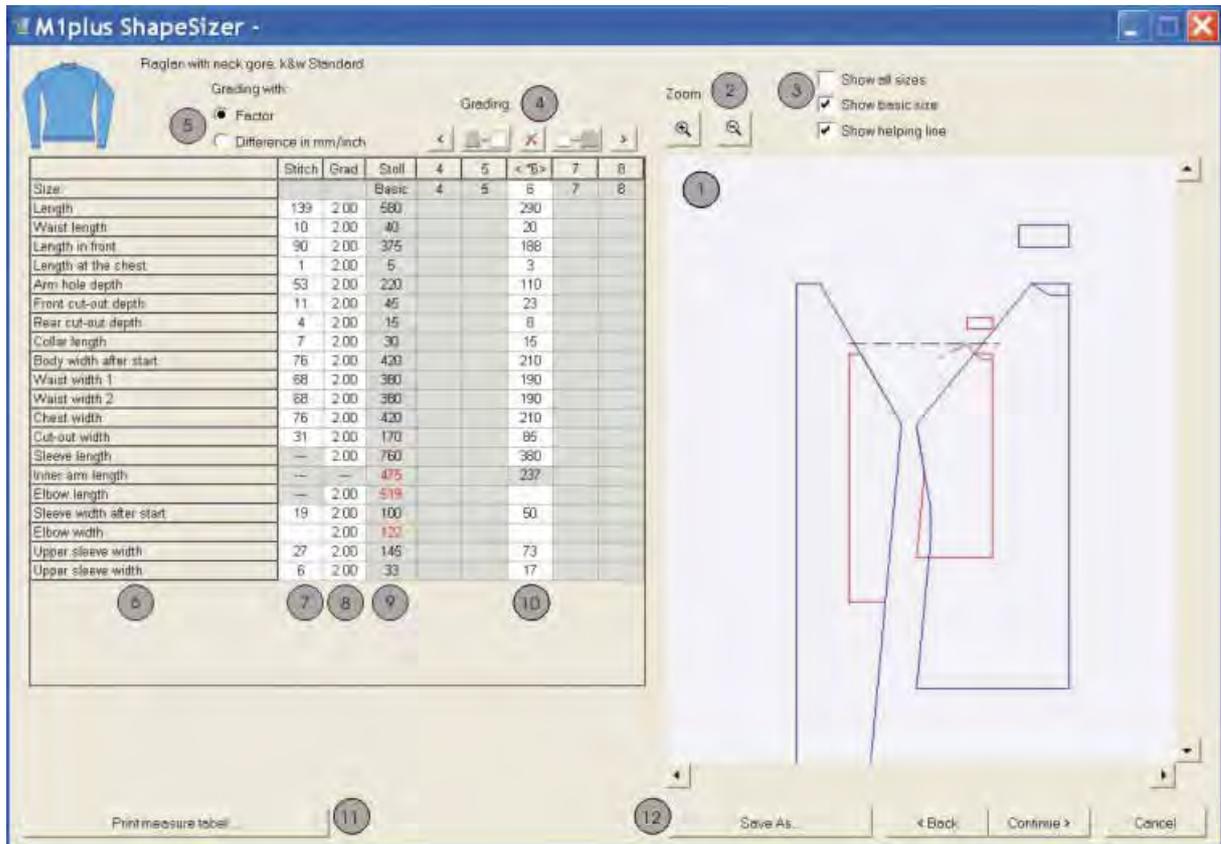
3) Set the measure unit and the stitch density.

⇒ The measure unit (2) and the stitch density (3) + (4) will be used for further processing.



| No. | Function | |
|-----|---|--|
| 1 | Graphic presentation of the selected shape | |
| 2 | Select the measure unit. <ul style="list-style-type: none"> ▪ mm ▪ inch | |
| 3 | Stitch density (=stitch ratio) | Number of stitches in the width (stitch rods) |
| 4 | | Number of stitches in the height (stitch rows) |
| 5 |  "k&w Standard" Working out k&w patterns in 1x1 technique | |
| |  "730 S" Working out k&w patterns for the machine type CMS 730 S / CMS 830 S | |
| |  "All needles" Working out k&w pattern for CMS machines with additional beds | |
| 6 | k&w Arrangements without empty rows are used Result: higher production | |
| 7 | Selection list for the machine gauge | |
| 8 | Gauge-dependent stitch density table | |
| 9 | Stoll default stitch ratio for the back-layer knitting mode | |
| 10 | Input fields Own 1-6 : Define your own stitch ratios for the various knitting modes. | |
| 11 | Transfer of the stitch ratio from the column to the input fields for the stitch density (3) + (4) | |
| 12 | Back to the previous page of the ShapeSizer | |
| 13 | Continue to the next page of the ShapeSizer | |
| 14 | Cancel the editing in the ShapeSizer | |

4) Open the next dialog window with "Continue >".

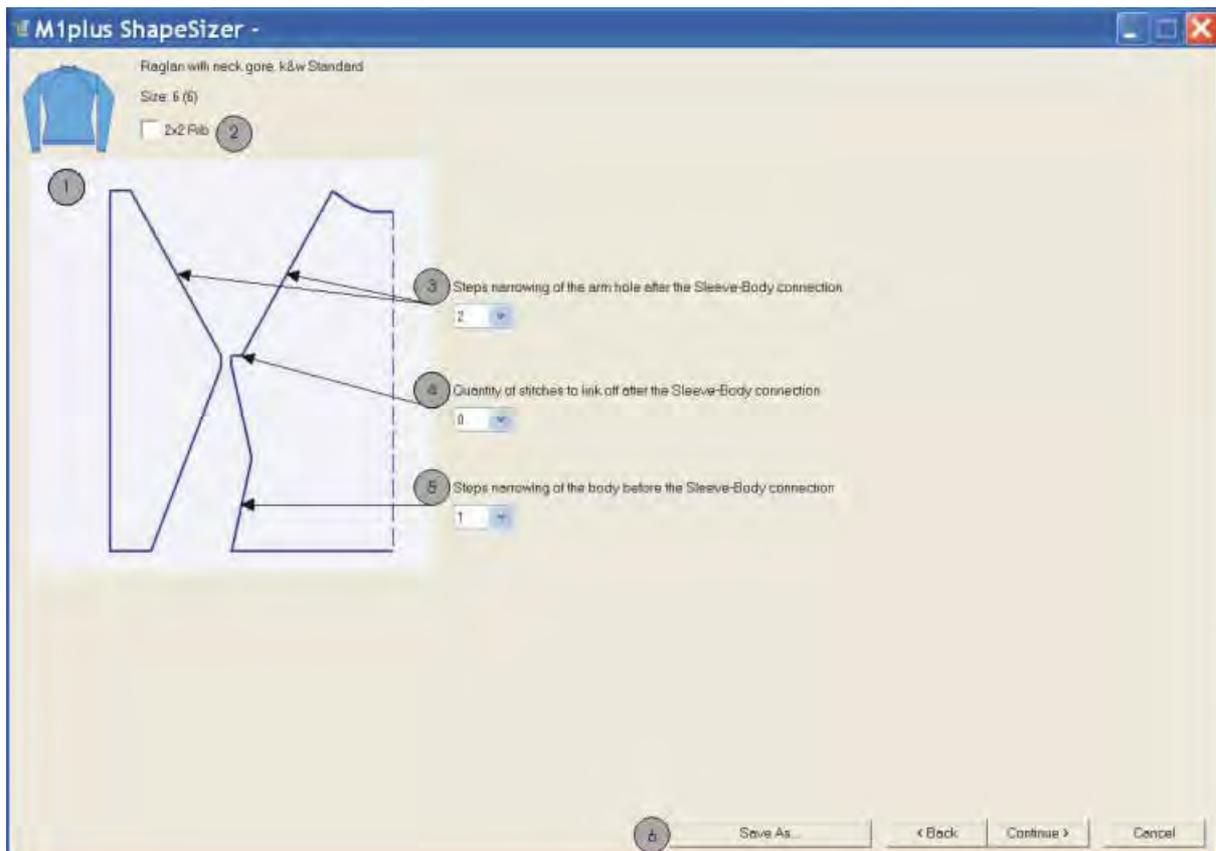


| No. | Function | | | | | | | | | | |
|-----|---|---|---|---|--------------------------------------|---|---|---|---|---|-------------------------------------|
| 1 | Graphic presentation of the shape | | | | | | | | | | |
| 2 | Decrease or increase the graphic display | | | | | | | | | | |
| 3 | Options of the graphic display | | | | | | | | | | |
| 4 | Calculating sizes according to the grading factor | | | | | | | | | | |
| | <table border="1"> <tr> <td><</td> <td>Call up the previous column of the measure table.</td> </tr> <tr> <td>←</td> <td>Calculation of the next smaller size</td> </tr> <tr> <td>✗</td> <td>Delete the values in the selected column.</td> </tr> <tr> <td>></td> <td>Call up the next column of the measure table.</td> </tr> <tr> <td>→</td> <td>Calculation of the next larger size</td> </tr> </table> | < | Call up the previous column of the measure table. | ← | Calculation of the next smaller size | ✗ | Delete the values in the selected column. | > | Call up the next column of the measure table. | → | Calculation of the next larger size |
| < | Call up the previous column of the measure table. | | | | | | | | | | |
| ← | Calculation of the next smaller size | | | | | | | | | | |
| ✗ | Delete the values in the selected column. | | | | | | | | | | |
| > | Call up the next column of the measure table. | | | | | | | | | | |
| → | Calculation of the next larger size | | | | | | | | | | |
| 5 | Grading of the sizes with a factor or a difference (mm/inch) | | | | | | | | | | |
| 6 | List of edge lines | | | | | | | | | | |
| 7 | Measures in stitches referring to the selected size. Conversion from mm to stitches based on the specified stitch ratio. | | | | | | | | | | |

| No. | Function |
|-----|---|
| 8 | Factor or difference in mm/inch for the grading Change from one size to the next size. |
| 9 | Dimensions of the basic size: These values cannot be changed. Dimensions of the Stoll default shape (mm) or manual entry of the dimensions (mm) in the < * 6 > column (basic size). |
| 10 | Dimensions of the basic size in the < * 6 > column: Values can be changed. Or enter new values directly in the empty column. |
| 11 | Display and print measure table. |
| 12 | Save all the ShapeSizer data in one file (*.shz). |

i If the other sizes are generated based on the basic size < * 6 >, then the attributes are applied.

5) Open the next dialog window with "Continue >".



| No. | Function |
|-----|--|
| 1 | Graphic presentation of shape edges |
| 2 | Shape specifications for 2x2 rib as basic pattern |
| 3 | Definition of the step width for the narrowings after the sleeve-body connection |
| 4 | Number of stitches in the sleeve hole to be bound-off in the body. The number of stitches is subtracted from the original number and the sleeve hole is recalculated. |
| 5 | Definition of the step width of the narrowings before the sleeve-body connection |
| 6 | Save size table as *.shz file |

6) Open the next dialog window with "Continue >".

⇒ If the size table is not yet saved as *.shz file, the "Save as" dialog box appears.



When saving, ensure the proper path!

7) Save the size table.

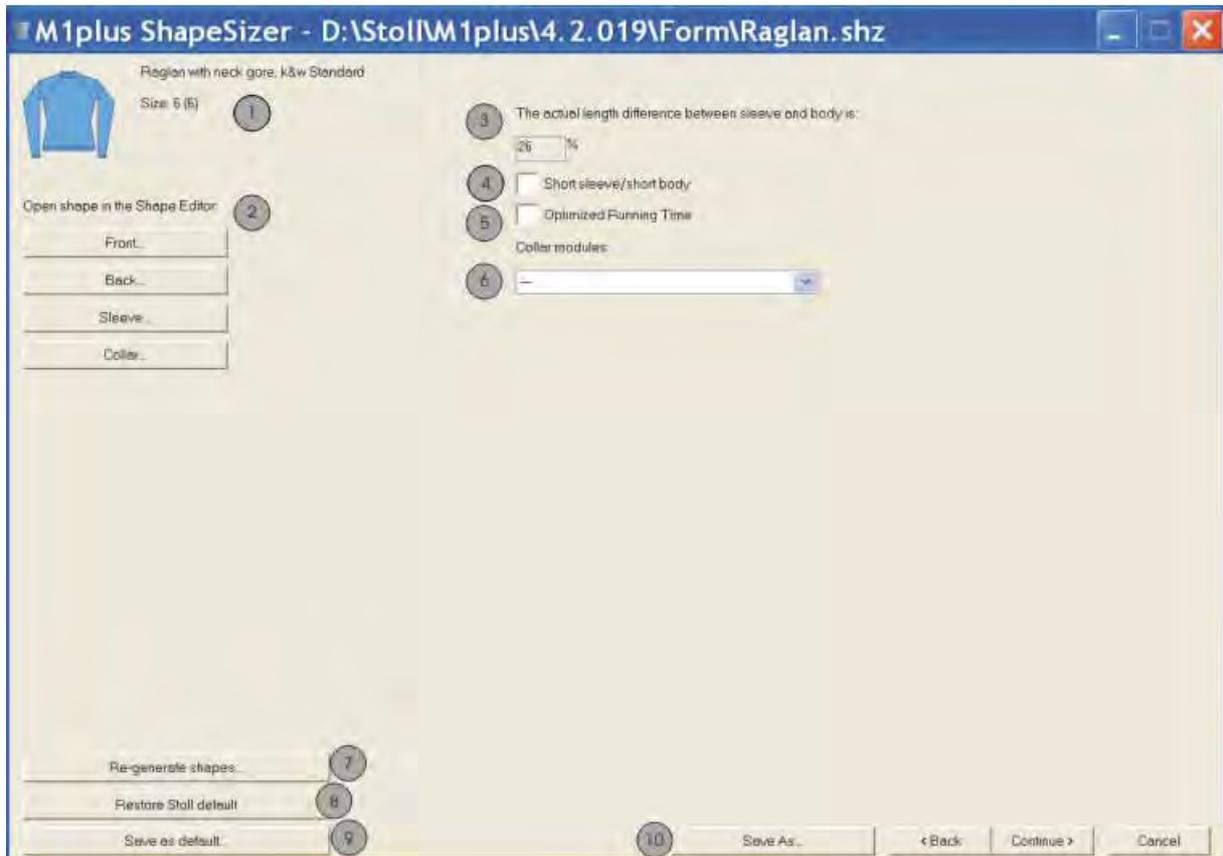
⇒ The selected size will be saved as shp file in the directory and the data is displayed in the next dialog window.

Designation of the automatically generated files:

Test_B_front.shp

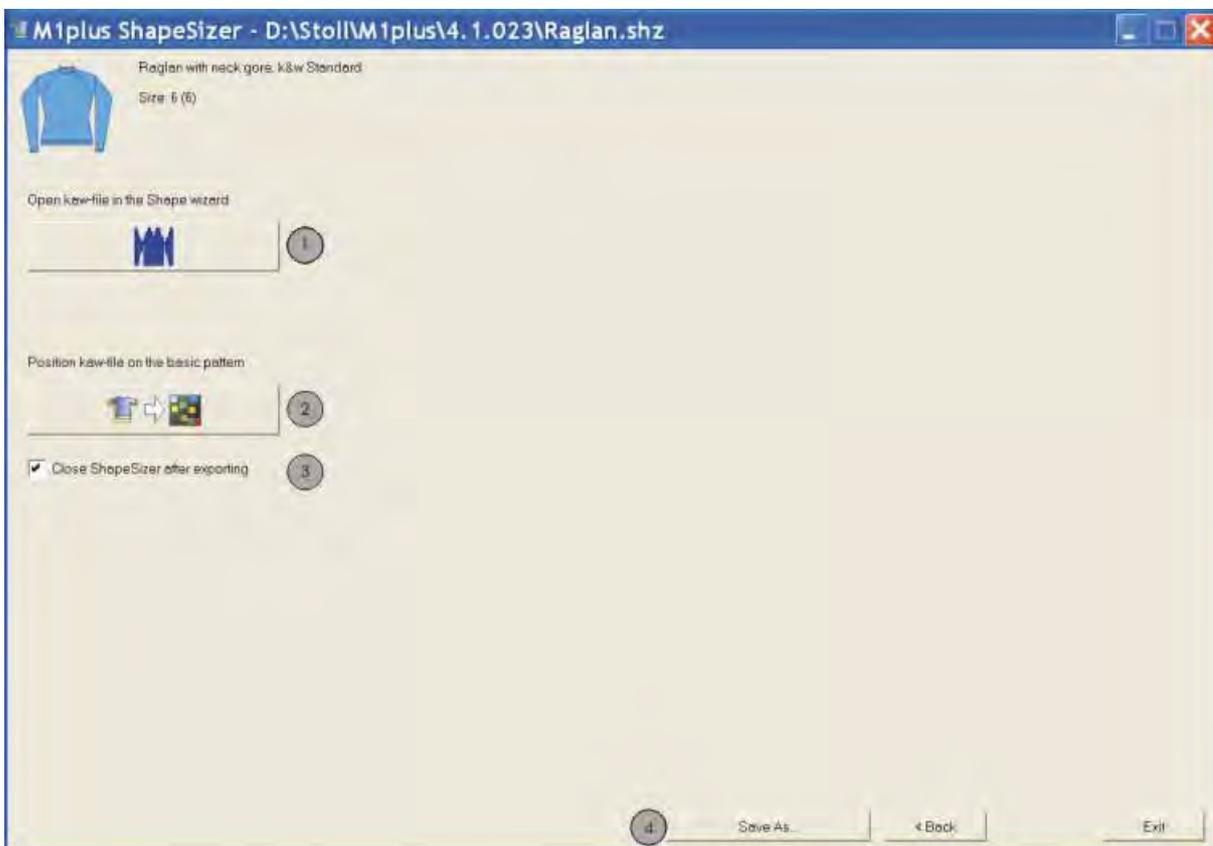


| No. | Meaning |
|-----|--|
| 1 | Name of shape |
| 2 | B = Basic shape (corresponds to basic size <*6> 01 = Size 1 02 = Size 2 and so on |
| 3 | Type of shape element: Front/back/sleeve/collar |



| No. | Function |
|-----|---|
| 1 | Graphic presentation of the selected shape with size specification |
| 2 | Open shape elements of the selected size in the shape editor. |
| 3 | Percentage of length difference between body and sleeve. |
| 4 | Selection short sleeve/short body |
| 5 | Optimize the running time alternating the knitting of the sleeve and the body. |
| 6 | Selection of the knitting mode for the collar element. |
| 7 | The shape files changed in the shape editor (*.shp) will be deleted and new shape files (*.shp) will be generated based on the data from the shz file. The shape editor will be opened via the ShapeSizer. |
| 8 | Own defaults (defaultuser files) are deleted from the directory and the defaultform files are used. |
| 9 | Save attribute changes as own default "defaultuser_... .shp". If a directory contains defaultuser files, then these data are used to open the shape in the ShapeSizer. |
| 10 | Save size table as *.shz file |

- 8) Open the next dialog window with "Continue >".
 ⇒ **k&w Arrangements** are determined and saved as kaw file in the same directory.



| No. | Function |
|-----|--|
| 1 | Open the kaw file in the ShapeWizard. The ShapeSizer will not be closed. |
| 2 | Lay the kaw file onto the M1plus basic pattern already generated. i : If no basic pattern is generated yet, then the "New Pattern" dialog box appears. |
| 3 | <input checked="" type="checkbox"/> The ShapeSizer is closed after positioning the kaw file on the basic pattern |
| | <input type="checkbox"/> The ShapeSizer is not closed after positioning the kaw file on the basic pattern |
| 4 | Save size table as *.shz file |

i The size selected in the table will be saved under the same name in the same directory of the files (*.shz).



9) Press the  key with the activated checkbox (3).

⇒ The kaw file is laid onto the active pattern.

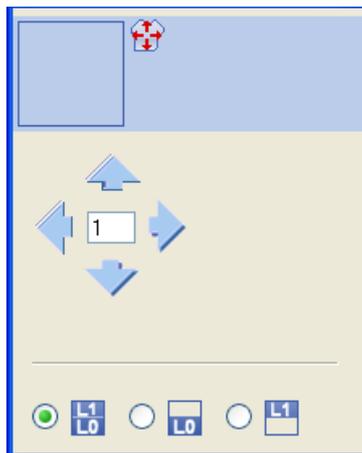


When opening and positioning a kaw file, the k&w Arrangements are displayed as **local k&w Arrangements** in the "Modules" dialog box under .

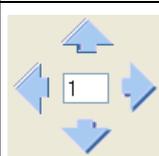
7.1.3 Position and cut-out the shape and expand the pattern

I. Position the shape:

- ▷ The shape with k&w Arrangements is located on the pattern after the "ShapeSizer" is closed.
- 1) Position the shape elements **Sleeve** and / or **Body with collar** on the motif with the  symbol selected and the left mouse button pressed.
- or -
- ➔ Select the desired shape element with the  symbol selected. Position the selected shape element with the arrow keys of the keyboard or of the "Tool properties" toolbar.



Settings in the "Tool properties" dialog box for the Drawing Tool :

| Symbol | Function |
|---|---|
|  | Input of a number (factor): Moving the selected element with each click on a direction arrow by the factor entered |
| | Direction arrows: Moving the selected element in the different directions |
|  | Move front layer (L0) and back layer (L1) of the selected element |
|  | Move only the front layer (L0) of the selected element |
|  | Move only the back layer (L1) of the selected element |

Select the shape elements:

- Selection by left clicking in the shape element
- Multiple selection of shape elements with "Ctrl" + "LMB" in the individual shape elements.
- Delete selection via "LMB" outside a shape element



Select the desired layer or layers of the shape elements you want to move in the "Tool properties" toolbar before selecting the shape elements.

Different presentations of the shape elements laid on:

| Symbol | Function | |
|---|----------------------------|--|
|  | Display Pattern Cut-out | <p>k&w symbol preview only possible in the processing step </p> <p>Result: The positioned shape will be displayed cut out with structure and color in the Symbol view.</p> <p>i: Allocation of CA and MA.</p> |
|  | Display Pattern Folded out | <p>Presentation of the shape with shape attributes (narrowing, fade-out, aligning symbols) and sleeves folded out.</p> <p>i: Presentation is recommended for modifying the steppings at the outer edges.</p> |
|  | Display Pattern Collapsed | <p>Presentation of the shape with shape attributes without the Suspend symbols.</p> <p>i: The symbol  will automatically get active.</p> |



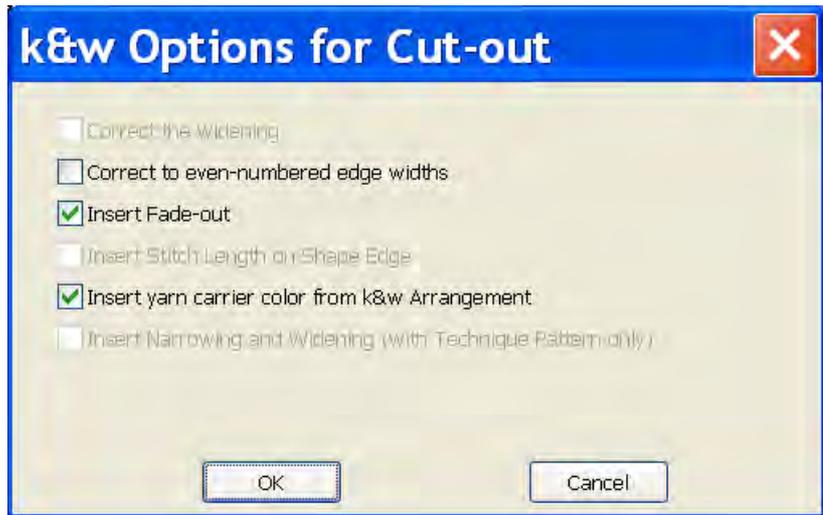
Click on the selected symbol and the k&w presentation is reset.

II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
- ⇒ The "k&w Options for Cut out" dialog box appears.



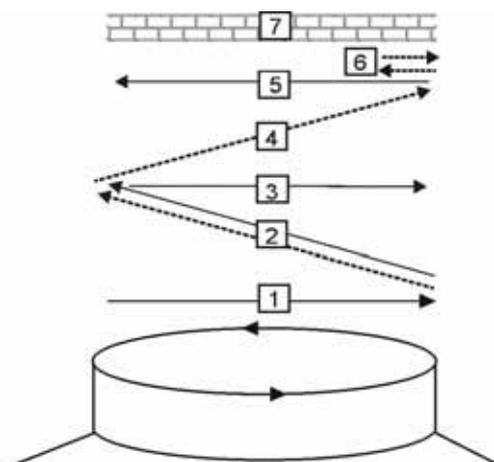
| Options | | Function |
|--|-------------------------------------|--|
| "Correct the widening" | | No correction when "Cutting out"  . i : The correction takes place when expanding  . |
| "Correct to even-numbered edge widths" | <input checked="" type="checkbox"/> | Activated automatically with odd-numbered edge widths. |
| | <input type="checkbox"/> | With even-numbered edge widths |
| "Insert Fade-out" | <input checked="" type="checkbox"/> | The specifications in the "Fade out" tab of the shape attributes will be entered. |
| | <input type="checkbox"/> | The specifications in the "Fade out" tab of the shape attributes will not be entered. |
| "Insert Stitch Length on Shape Edge" | | Selection only active, if settings for stitch length on shape edge are present in the shape. |
| | <input checked="" type="checkbox"/> | Specifications are inserted |
| | <input type="checkbox"/> | Specifications are not inserted |

| Options | | Function |
|---|-------------------------------------|---|
| "Insert yarn carrier color from the k&w Arrangement" | <input checked="" type="checkbox"/> | The yarn carrier colors specified for the different shape elements in the k&w Arrangement are applied to the pattern. |
| | <input type="checkbox"/> | The yarn carrier colors specified for the different shape elements in the k&w Arrangement are not applied to the pattern. i : The basic color #23 (blue) is preserved in the different shape elements. (For CMS with additional beds, the basic color #9 is used) |
| "Inserting Narrowing and Widening (only with Technical Patterns)" | | Only active when loading old M1 k&w patterns. |

- 2) Confirm the settings in the dialog box with "OK".
- ⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start for body.
- 4) Confirm with "OK".
- ⇒ The selected start is inserted.

III. Expand the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
⇒ The shape edges with the **Widening** attribute are corrected.
⇒ The bind-off module for the collar is inserted.



| No. | Meaning |
|-----|---|
| 1 | Knitting-in draw thread in front. |
| 2 | Bind-off layer 1 (back) the draw thread is carried along. |
| 3 | Knit draw thread to the right. |
| 4 | Bind-off front. |
| 5 | Knit out the draw thread at the front. |
| 6 | Fix the bind-off stitch. |
| 7 | Protection rows. |

7.1.4 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program/Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

7.2 ShapeSizer: Saddle shoulder with neck gore

| | |
|---|--|
|  | |
| Pattern name | Sattelschulter mit Halsspickel |
| Pattern size | Width: 350 Height: 350 |
| Machine type | CMS 822 k&w |
| Gauge | E 6.2 |
| Start | 2x2 Rib |
| Basic pattern: | Jersey |
| Shape | From ShapeSizer: Saddle shoulder with neck gore |
| Knitting technique | knit and wear |
| Description of pattern: | <p>The shape Saddle shoulder with neck gore contains a flat-shaped shoulder in the front and the back, which is knitted with frequent narrowings carried out in short intervals. The sleeves are knitted straight (without narrowings).</p> <div style="text-align: center;">  </div> |

7.2.1 Generate Pattern without Shape

1) Select "File" / "New" from the menu bar.

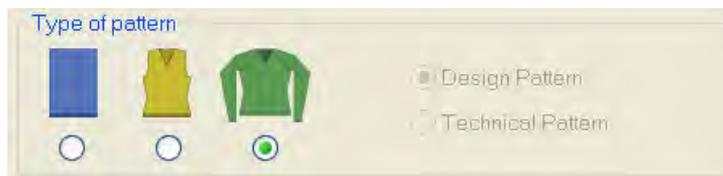
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Select "Type of pattern" **k&w pattern**.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field.

Width: 350

Height: 350



With k&w the size of the pattern field is automatically doubled in height and width.

6) Select "Jersey" for the basic pattern via the selection list.



The start will be inserted with the **Cut-out shape** step of processing.

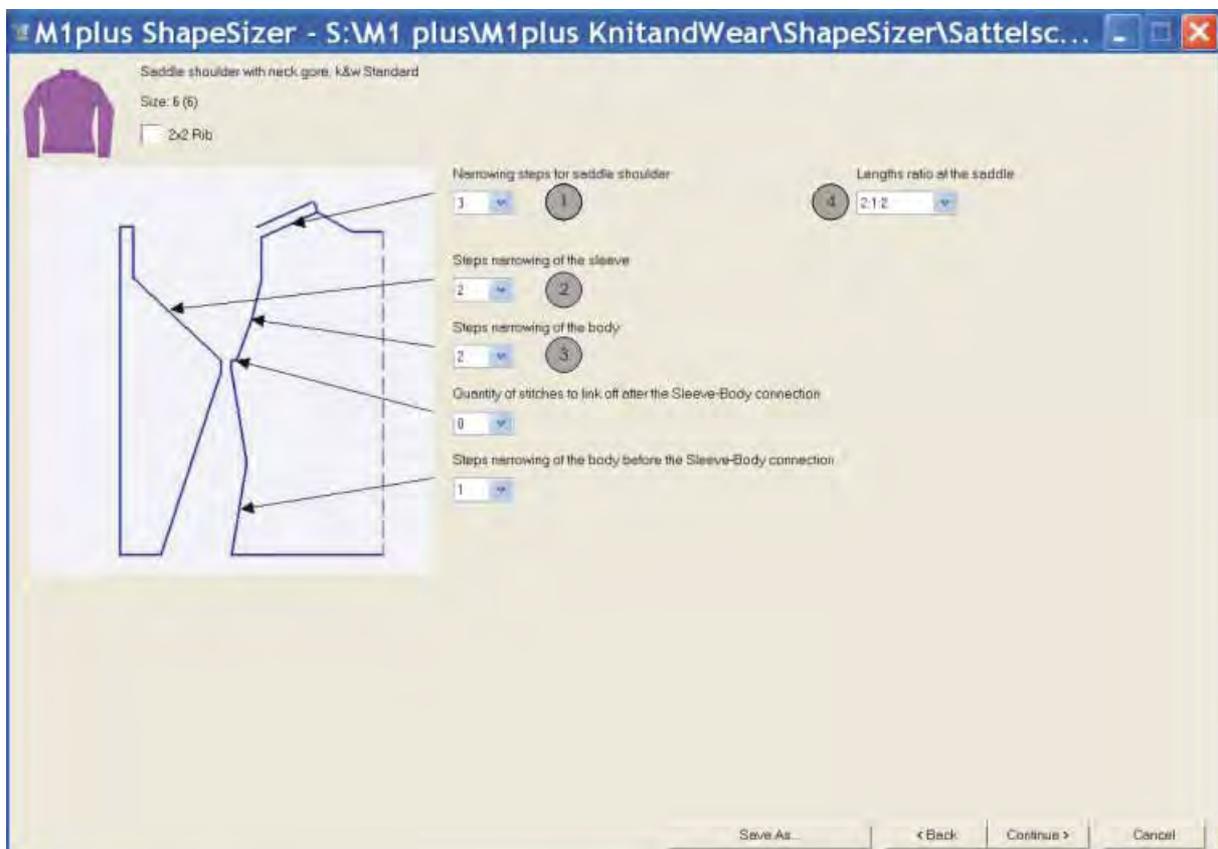
7) Confirm the settings with the "Generate Design Pattern" button.

⇒ "Symbol View [Basic]" in k&w presentation appears.

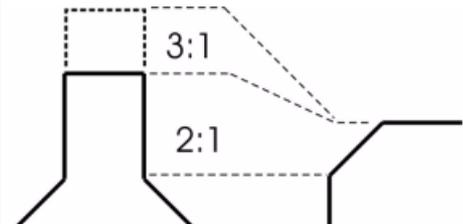
7.2.2 Create the shape in the ShapeSizer and open it in the pattern

I. Open shape and work out in the ShapeSizer:

- 1) Open the "ShapeSizer" program via the "Shape" / "ShapeSizer..." menu.
- 2) Open the desired shape in the overview with double click.
- or -
- ➔ Select the shape and press "Continue >".
- ⇒ The next window of the ShapeSizer appears.
- 3) Set the measure unit and the stitch density.
- ⇒ The measure unit (2) and the stitch density (3) + (4) will be used for further processing.
- 4) Open the next dialog window with "Continue >".
- 5) Generate basic size in the < * 6 > column.
- 6) Open the next dialog window with "Continue >".
- 7) Enter size specifications.



| No. | Function |
|-----|--|
| 1 | Narrowing stepping of saddle shoulder in body |
| 2 | Narrowing stepping in sleeve |
| 3 | Narrowing stepping in body |
| 4 | Stitch ratio between sleeve and body (saddle shoulder) |



- 8) Open the next dialog window with "Continue >".
 ⇒ If the size table has not yet been saved as an shz file, then a window for saving the data now appears automatically.
- 9) After saving the size table, the next dialog window appears.
- or -
- ➔ Open the next dialog window with "Continue >".



The selected size will be saved as shp file to the directory and the data is displayed in the dialog window.

- 10) Open the element to be changed under "Open Shapes in the Shape Editor":
- Front
 - Back
 - Sleeve
 - Collar
- 11) Carry out changes in the shape editor:
- Narrowing type + narrowing width
 - Widening type + widening width
 - Fade out + fade out width



Changes in the reference size are also used for the other sizes.

- 12) Open the next dialog window with "Continue >".
 ⇒ **k&w Arrangements** are determined and saved as kaw file in the same directory.

13) Press the  key with the activated checkbox.

⇒ The kaw file is laid onto the active pattern.

Further information

 Create the shape in the ShapeSizer and open it in the pattern [-> 30]

7.2.3 Position and cut-out the shape and expand the pattern

I. Position the shape:

▷ The shape with k&w Arrangements is located on the pattern after the "ShapeSizer" is closed.

1) Position the shape elements **Sleeve** and / or **Body with collar** on the motif with the  symbol selected and the left mouse button pressed.

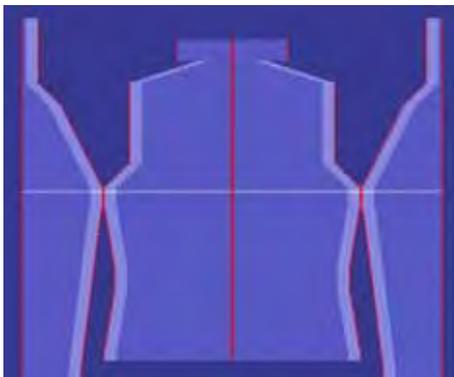
- or -

➔ Select the desired shape element with the selected  symbol and position the selected shape element with the arrow keys of the keyboard.

- or -

➔ using the "Tool properties" dialog box

2) Select desired k&w pattern presentations:



II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
 - ⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm the settings in the dialog box with "OK".
 - ⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm with "OK".

III. Expand the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.

7.2.4 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

7.3 ShapeSizer: Inserted sleeve with shoulder gore and V-neck

| | |
|---|--|
|  | |
| Pattern name | Eingesetzter Arm mit Schulterpickel und V-Ausschnitt |
| Pattern size | Width: 350 Height: 350 |
| Machine type | CMS 822 k&w |
| Gauge | 6.2 |
| Start | 1x1 rib |
| Basic pattern: | Jersey |
| Shape | From ShapeSizer: Inserted sleeve with shoulder gore and neck opening |
| Knitting technique | knit and wear |
| Description of pattern: | k&w shape Inserted sleeve with shoulder gore and V-neck in single-jersey knitting mode |

7.3.1 Generate Pattern without Shape

Generate new pattern:

1) Select "File" / "New" from the menu bar.

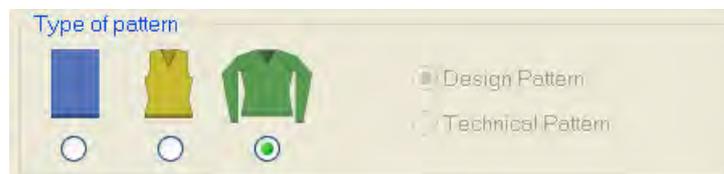
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Select "Type of pattern" **k&w pattern**.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field.

Width: 350

Height: 350



With k&w the size of the pattern field is automatically doubled in height and width.

6) Select "Jersey" for the basic pattern via the selection list.



The start will be inserted with the **Cut-out shape** step of processing.

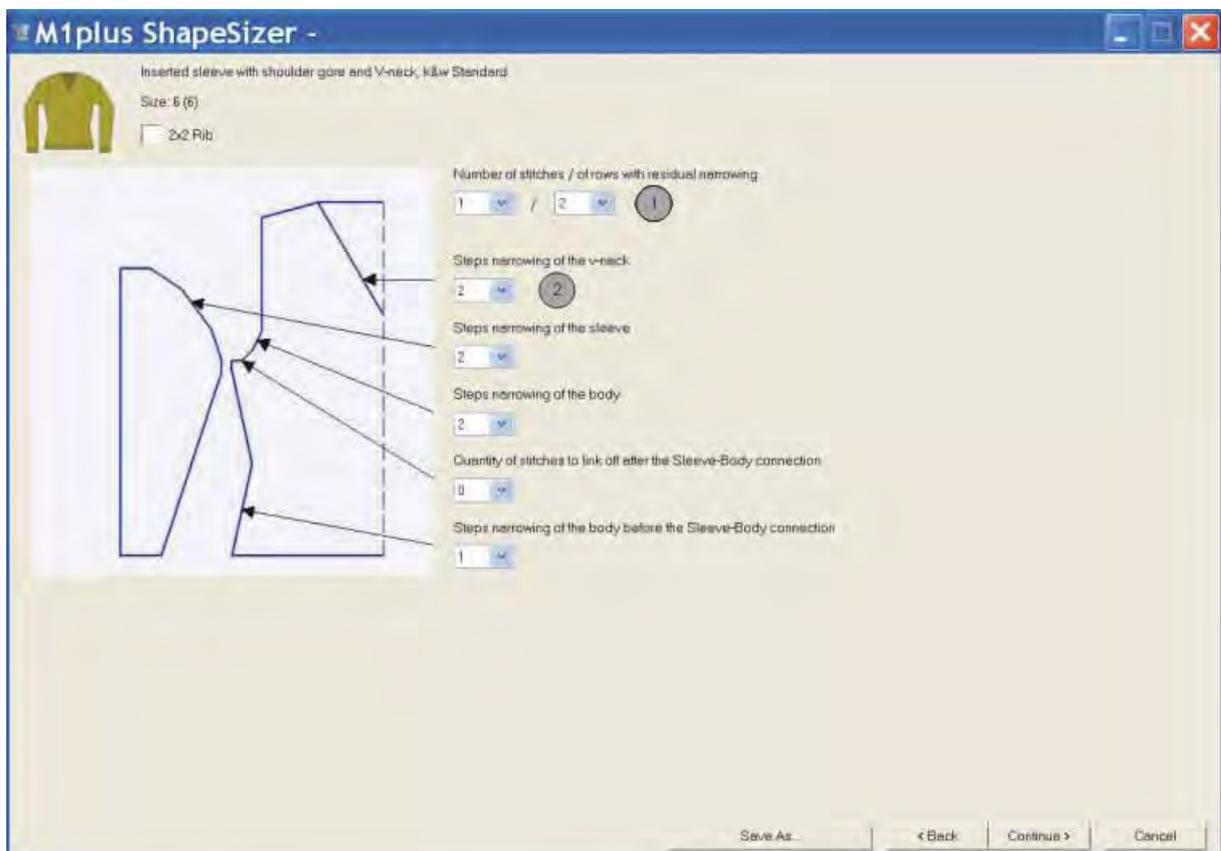
7) Confirm the settings with the "Generate Design Pattern" button.

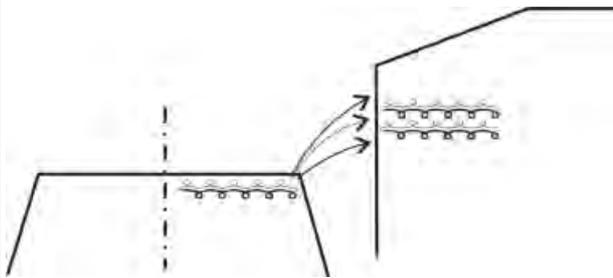
⇒ Symbol View [Basic] in k&w presentation appears.

7.3.2 Create the shape in the ShapeSizer and open it in the pattern

Open shape and work it out in the ShapeSizer:

- 1) Open the "ShapeSizer" program via the "Shape" / "ShapeSizer..." menu.
- 2) Open the desired shape in the overview with double click.
- or -
➔ Select the shape and press "Continue >".
⇒ The next window of the ShapeSizer appears.
- 3) Set the measure unit and the stitch density.
⇒ The measure unit and the stitch density are used for further editing.
- 4) Open the next dialog window with "Continue >".
- 5) Generate basic size in the < * 6 > column.
- 6) Open the next dialog window with "Continue >".
- 7) Enter size specifications.



| No | Function |
|----|--|
| 1 | <p>The number of stitches present in the end line must be transferred into the body piece.</p>  <p>Thereby, the stepping of the remaining narrowing can be set. Also the number of knitting rows between the narrowings.</p> |
| 2 | Narrowing stepping in the V-neck |

Possible settings for remaining narrowing

| Stitches (A) | Rows (B) | Function |
|--------------|----------|--|
| 1 | 1 | With the remaining narrowing 1 row in the body is knitted on L0 and then 1 stitch (L0+L1) is narrowed from the sleeve. The ratio between sleeve (A) and body (B) is 1:1 . |
| 1 | 2 | With the remaining narrowing 2 rows in the body are knitted on L0 and then 1 stitch (L0+L1) is narrowed from the sleeve. The ratio between sleeve (A) and body (B) is 1:2 . |
| 1 | 1-2 | With the remaining narrowing two rows in the body are knitted on L0 and one stitch (L0) of the sleeve is narrowed. Then one row (L0) is knitted and one stitch (L1) is narrowed. The ratio between sleeve (A) and body (B) is 1:3 . |
| 2 | 1 | With the remaining narrowing one row of the body is knitted on L0 and then two stitches (L0+L1) of the sleeve are narrowed. The ratio between sleeve (A) and body (B) is 2:1 . |
| 2 | 2 | With the remaining narrowing two rows of the body are knitted on L0 and then two stitches (L0+L1) of the sleeve are narrowed. The ratio between sleeve (A) and body (B) is 2:1 (=1:1) . |
| 2 | 1-2 | With the remaining narrowing two rows of the body are knitted on L0 and two stitches (L0) of the sleeve are narrowed. Then one row (L0) is knitted and two stitches (L1) are narrowed. The ratio between sleeve (A) and body (B) is 2:1,5 (=1:1) . |

8) Open the next dialog window with "Continue >".

⇒ If the size table has not yet been saved as an shz file, then a window for saving the data now appears automatically.

9) After saving the size table, the next dialog window appears.

- or -

➔ Open the next dialog window with "Continue >".



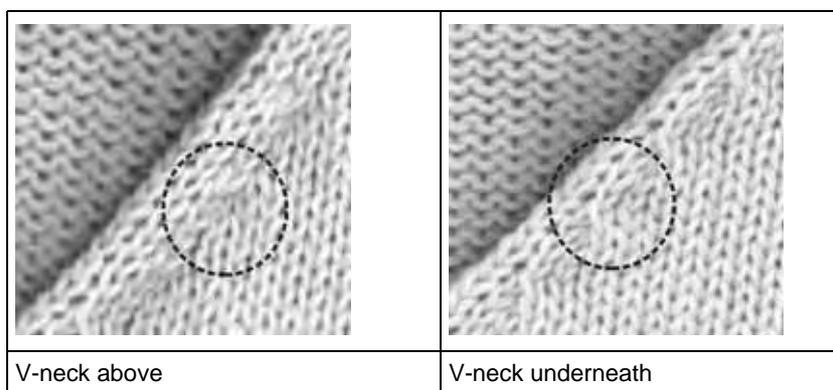
The selected size will be saved as shp file to the directory and the data is displayed in the dialog window.

10) Open the element to be changed under "Open Shapes in the Shape Editor":

- Front
- Back
- Sleeve
- Collar

11) Carry out changes in the "Shape Editor":

- Narrowing type + narrowing width
- Widening type + widening width
- Fade out + fade out width



Changes in the reference size are also used for the other sizes.

12) Open the next dialog window with "Continue >".

⇒ **k&w Arrangements** are determined and saved as kaw file in the same directory.



13) Press the key with the activated checkbox.

⇒ The kaw file is laid onto the active pattern.

7.3.3 Position and cut-out the shape and expand the pattern

I. Position the shape:

▷ The shape with k&w Arrangements is located on the pattern after the "ShapeSizer" is closed.

1) Position the shape elements **Sleeve** and / or **Body with collar** on the motif with the  symbol selected and the left mouse button pressed.

- or -

➔ Select the desired shape element with the selected  symbol and position the selected shape element with the arrow keys of the keyboard.

- or -

➔ using the "Tool properties" dialog box

2) Select desired pattern presentations:



II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

1) Cut out the shape with  in the "Steps of Processing" toolbar.

⇒ The "k&w Options for Cut out" dialog box appears.

2) Confirm the settings in the dialog box with "OK".

⇒ The "Insert/Replace k&w Start" dialog box appears.

3) Select the desired start.

4) Confirm with "OK".

III. Expand the pattern:

1) Expand the pattern with  of the "Steps of Processing" toolbar.

⇒ The "Correction of Widening" dialog box appears.

2) Confirm with "Yes".

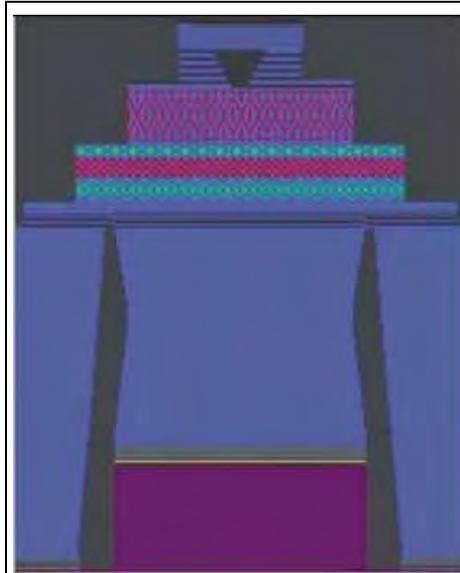
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.

7.3.4 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

7.4 ShapeSizer: Raglan with Fair Isle narrowing technique and neck gore



| | |
|-------------------------|--|
| Pattern name | Raglan mit Fair Isle Mindertechnik und Halsspickel |
| Pattern size | Width: 350 Height: 350 |
| Machine type | CMS 822 k&w |
| Gauge | E 6.2 |
| Start | 2x2 Rib |
| Basic pattern: | Jersey |
| Shape | <p>From ShapeSizer: Raglan with Fair Isle narrowing technique and neck gore</p>  |
| Knitting technique | Knit and wear with float jacquard |
| Description of pattern: | k&w shape Raglan with Fair Isle narrowing technique and neck gore in single-jersey knitting mode with float jacquard |

7.4.1 Generate Pattern without Shape

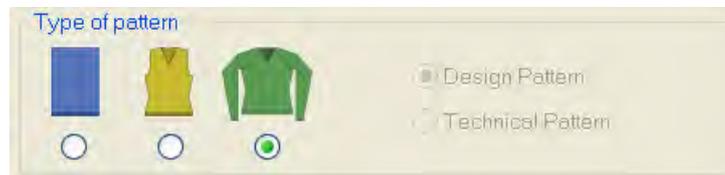
Generate new pattern:

- 1) Select "File" / "New" from the menu bar.

- or -

➔ Click the  icon.

- 2) Enter a pattern name.
- 3) Select machine.
- 4) Select "Type of pattern" **k&w pattern**.



The k&w pattern type is in the "Design Pattern" mode available only.

- 5) Enter height and width of the pattern field.
Width: 350
Height: 350



With k&w the size of the pattern field is automatically doubled in height and width.

- 6) Select "Jersey" for the basic pattern via the selection list.



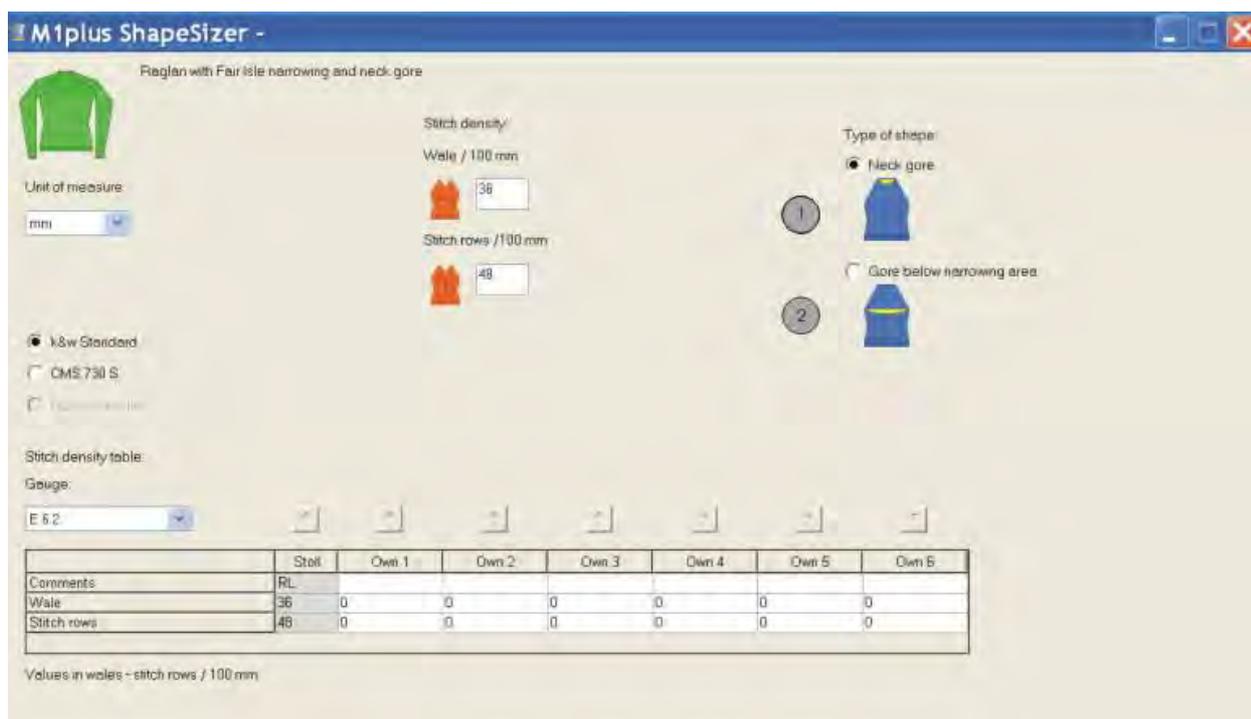
The start will be inserted with the **Cut-out shape** step of processing.

- 7) Confirm the settings with the "Generate Design Pattern" button.
⇒ "Symbol View [Basic]" in k&w presentation appears.

7.4.2 Create the shape in the ShapeSizer and open it in the pattern

Open shape and work it out in the ShapeSizer:

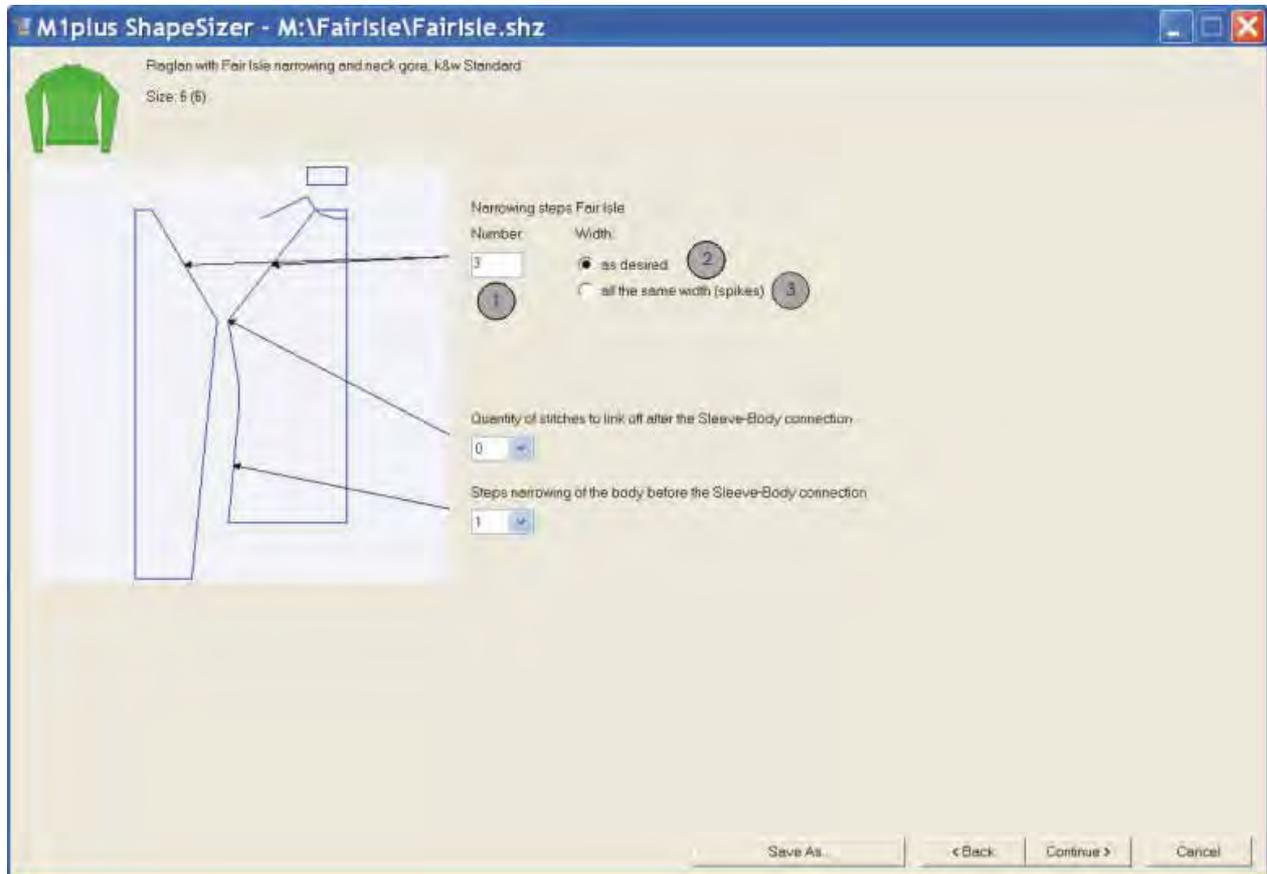
- 1) Open the "ShapeSizer" program via the "Shape" / "ShapeSizer..." menu.
- 2) Open the desired shape in the overview with double click.
- or -
➔ Select shape and press "Continue >".
- ⇒ The next window of the "ShapeSizer" appears.
- 3) Set the measure unit and the stitch density.
- ⇒ The measure unit and the stitch density are used for further editing.
- 4) Select the desired gore type under "type of shape".



| No. | Function |
|-----|---|
| 1 | A gore in the area of the neck opening (FRONT) is inserted. |
| 2 | A gore below the Fair Isle area is inserted. Result: With it the Fair Isle yoke becomes rounder and replaces the usual neck gore. |

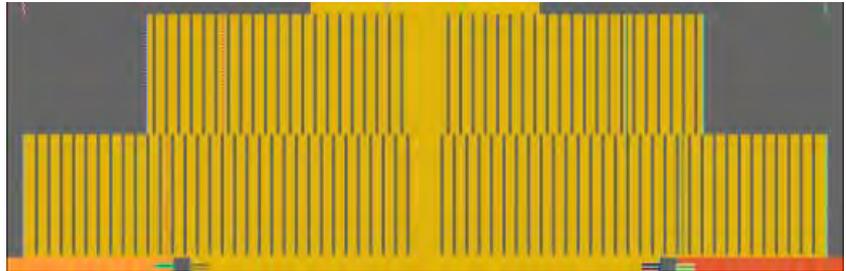
- 5) Open the next dialog window with "Continue >".
- 6) Generate basic size in the < * 6 > column.

- 7) Open the next dialog window with "Continue >".
- 8) Shape specifications and under "Narrowing steps Fair Isle" enter the desired specifications:

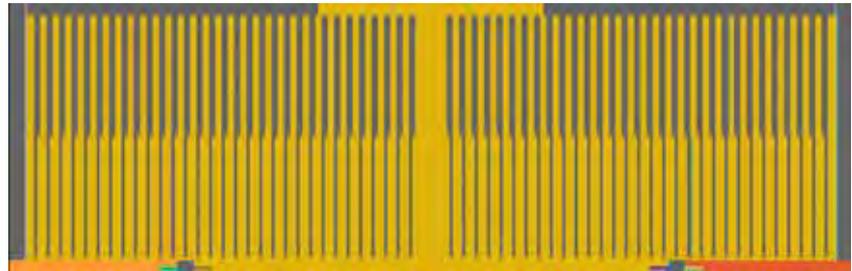


| No | Function | |
|---------------|--|---|
| . | | |
| Number | | |
| 1 | Define the number of narrowing steps in the Fair Isle area | |
| Width | | |
| 2 | <input checked="" type="radio"/> "as desired" | The step width of the Fair Isle narrowings have different widths. Result: no spikes are generated |
| 3 | <input type="radio"/> "All the same width (spikes)" | The step widths of the Fair Isle narrowings have the same width and are placed in such a way that the spikes result. Result: a type of spikes are generated |

Result: Without spikes

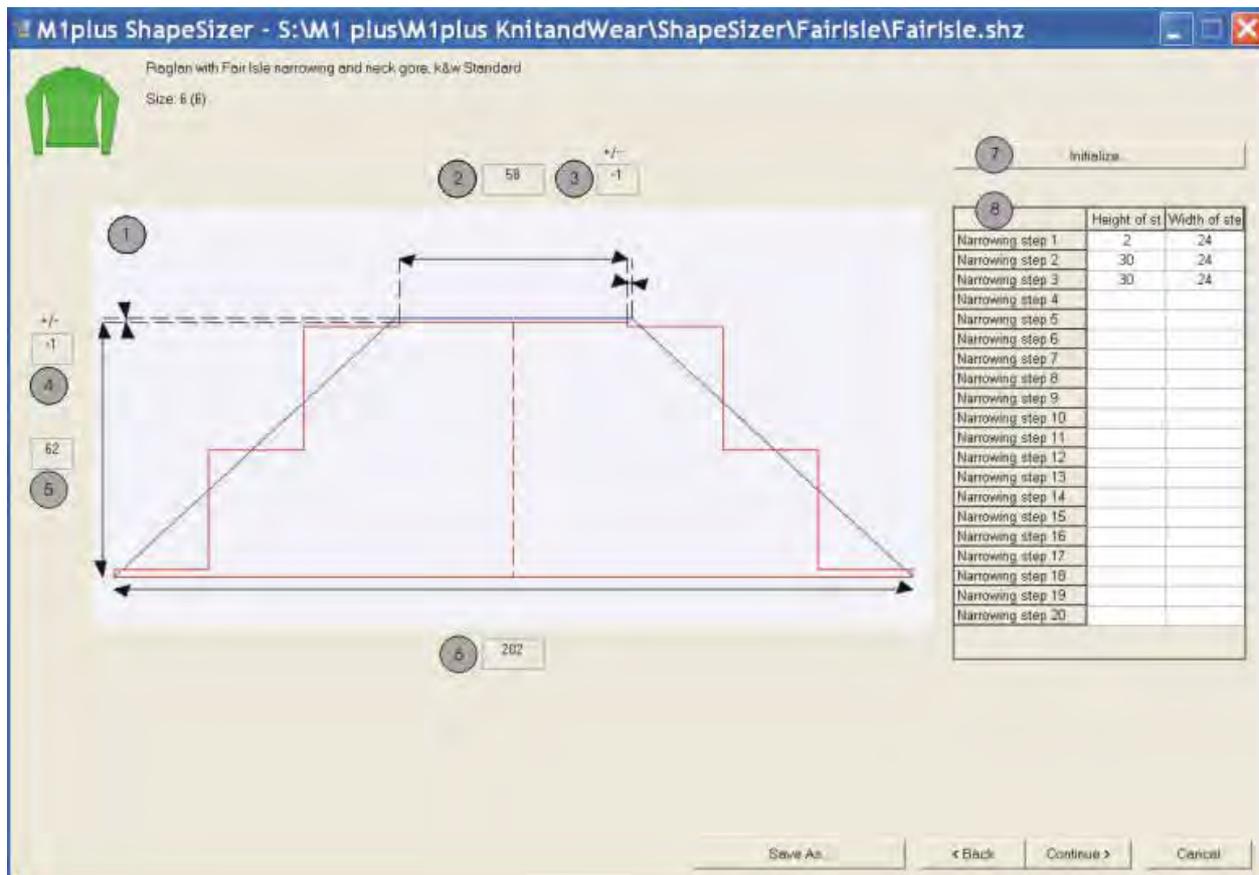


Result: Spikes



With the Fair Isle narrowing technique, only the shape part color Body is used from the sleeve-body connection on.

- 9) Open the next dialog window with "Continue >".
 - 10) Modify the entries in the table (8) if necessary.
- ⇒ The values in the display window change.



| | Function |
|---|--|
| 1 | Graphic presentation of the Fair Isle stepping calculated by the ShapeSizer. |
| 2 | Number of needles (width) at end of Fair Isle. All needles are counted, even the non-knitting needles. The displayed value (3) is doubled (1x1 knitting technique) and added to/ subtracted from the Wert (2). |
| 3 | Display of the width changes (stitches) based on the original width. Specification of the actual knitting needles. Positive value: more stitches Negative value: fewer stitches |
| 4 | Display of the height changes (rows) based on the original height. Positive value: more rows Negative value: fewer rows |
| 5 | Actual number of rows in the height. |
| 6 | Number of needles (width) at the beginning of the Fair Isle. |
| 7 | Reset changed table (8). Values calculated by ShapeSizer (original) are entered. |
| 8 | Table with information on every narrowing step of the Fair Isle in height and width. Values can be changed. |

- 11) Open the next dialog window with "Continue >".
- 12) Open the element to be changed under "Open Shapes in the Shape Editor":
 - Front
 - Back
 - Sleeve
 - Collar
- 13) Carry out changes in the "Shape Editor":



A "multi-step narrowing" narrowing type is inserted in the area of the Fair Isle.

- Narrowing type + narrowing width
- Widening type + widening width
- Fade out + fade out width



Changes in the reference size are also used for the other sizes.

- 14) Select the desired collar type under **collar modules**.
 - 15) Open the next dialog window with "Continue >".
- ⇒ **k&w Arrangements** are determined and saved as kaw file in the same directory.



- 16) Press the  key with the activated checkbox.
- ⇒ The kaw file is laid onto the active pattern.

7.4.3 Position and cut-out the shape and expand the pattern

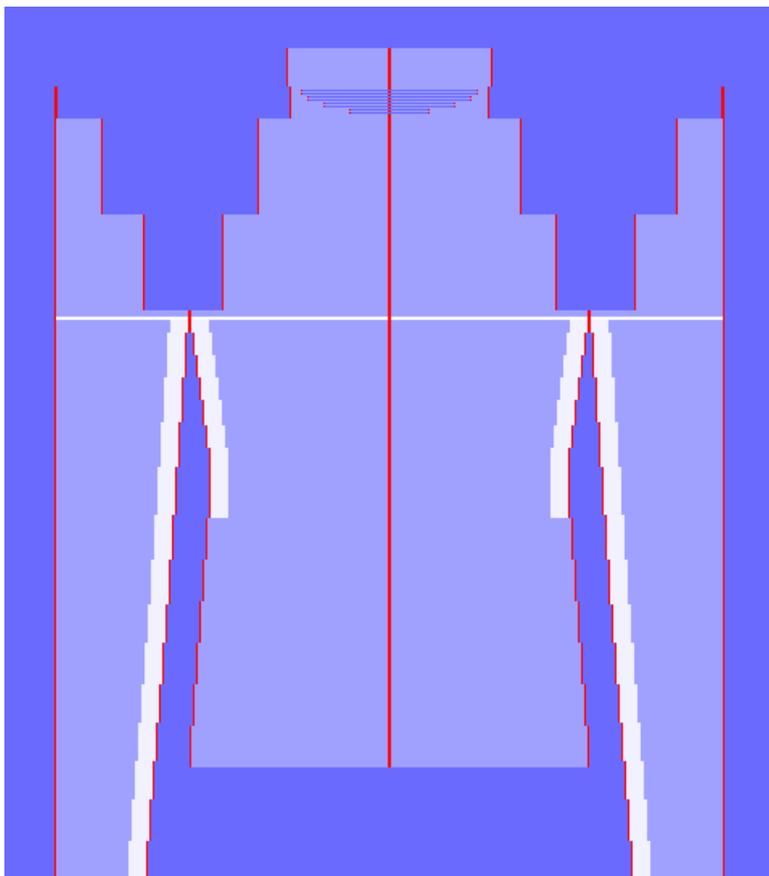
I. Position shape and draw-in float jacquards:

▷ The shape with k&w Arrangements is located on the pattern after the "ShapeSizer" is closed.

1) Position the shape elements **Sleeve** and / or **Body with collar** on the motif with the  symbol selected and the left mouse button pressed.

- or -

➔ Select the desired shape element with the selected  symbol and position the selected shape element with the arrow keys of the keyboard or of the "Tool Properties" toolbar.

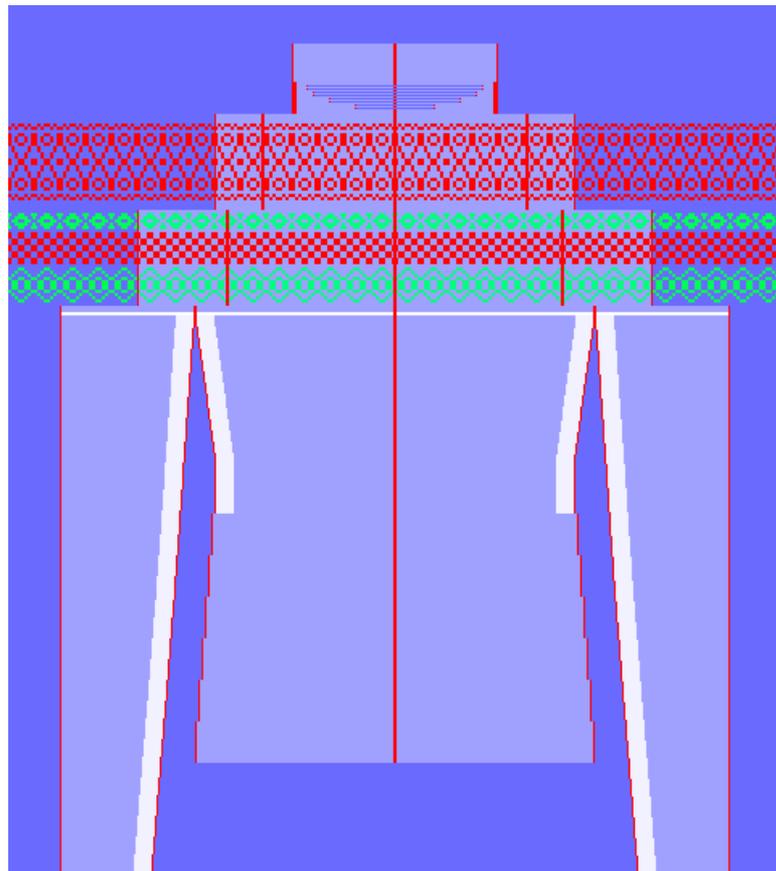


i

For drawing-in the motif, place the white help line (position of sleeve-body connection) of the different elements (sleeves and body) at the same height.

- 2) Open via "Pattern Parameters" / "Configuration..." menu.
- ⇒ The dialog box appears.
- 3) Select the "Knitting Zones k&w" tab
- 4) Activate the  "Cut folded in" option.
- 5) Confirm with "OK".
- 6) Draw in motif for float jacquard in basic pattern.

Presentation **Cut folded in**:



Possible settings for drawing:

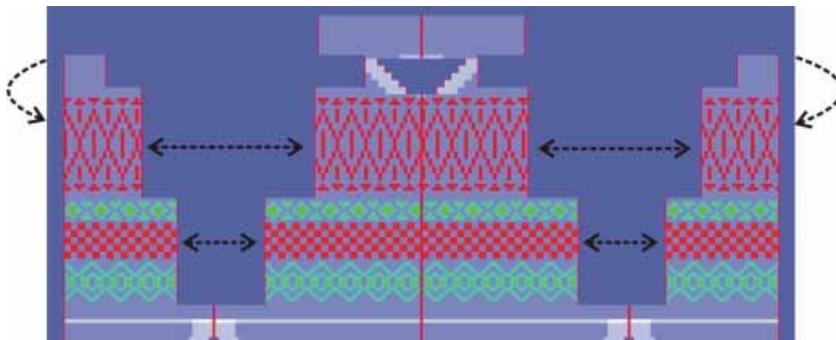
-  Front layer only
-  /  Display only columns of knitting layer.
-  /  Color Presentation

Ensure a continuous motif when drawing:

- **from body to sleeves**

Activate the  "Cut folded in" option in the "k&w Configuration" dialog box under "Knitting Zones" / "Cutting out" section.

- **from front layer to back layer**



- 7) Select the desired "Pattern Presentations k&w":



- 8) Run the function "Mirror k&w Design to Knitting Layer L1..." in the "Edit menu".
 - 9) Make the desired settings in the dialog box.
 - 10) Press the "Apply" key.
- ⇒ The pattern is applied to the back.

II. Insert Jacquard generator and cut-out shape:



You can make pattern related settings in the "k&w configuration" dialog box before cutting out.

- 1) Select the jacquard area
- 2) Call up the "Jacquards" jacquard dialog box in the "Edit" / "Generate or Edit Jacquard..." menu.
- 3) Select the setting **front** in the dialog box under "Knitting layer".
⇒ The Jacquard generator will be inserted only for the front layer L0.
- 4) Select "Float L0" under "Jacquard" / "k&w" / "Float".
- 5) Press the "Apply" key.
⇒ The Jacquard generator will be inserted in the front layer.
- 6) Select the same jacquard area again.
- 7) Select the setting **back** in the dialog box under "Knitting layer".
⇒ The Jacquard generator will be inserted only for the front layer L1.
- 8) Select "Float L1" under "Jacquard" / "k&w" / "Float".

9) Press the "Apply" key.

⇒ The Jacquard generator will be inserted in the back layer.



Carry out this cycle in all the other jacquard areas.

10) Cut out the shape with  in the "Steps of Processing" toolbar.

⇒ The "k&w Options for Cut out" dialog box appears.

11) Confirm the settings in the dialog box with "OK".

⇒ The "Insert/Replace k&w Start" dialog box appears.

12) Select the desired start.

13) Confirm with "OK".

III. Expand the pattern:

1) Expand the pattern with  of the "Steps of Processing" toolbar.

⇒ The "Correction of Widening" dialog box appears.

2) Confirm with "Yes".

⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.

7.4.4 Complete the pattern

Complete the pattern:

1) Start the technical processing with the  icon.

⇒ The query "Generate MC Program" appears.

2) Confirm the query with "OK".

3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.

- or -

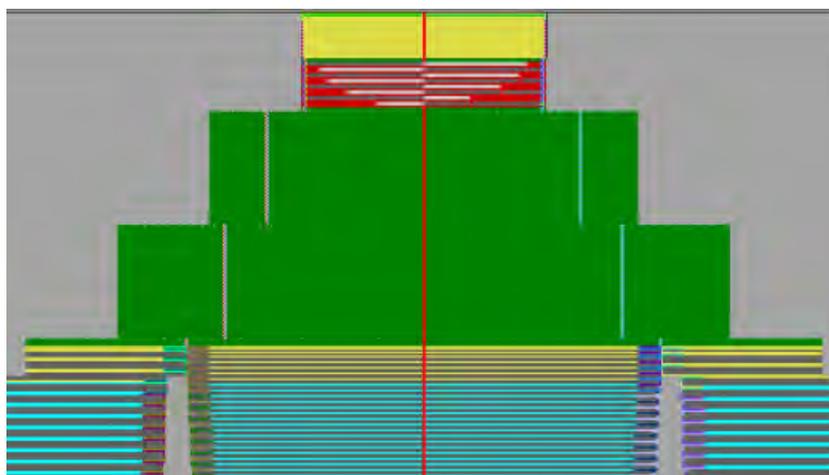
➔ Start the "Sintral Check" with the  button.

7.4.5 Edit markings

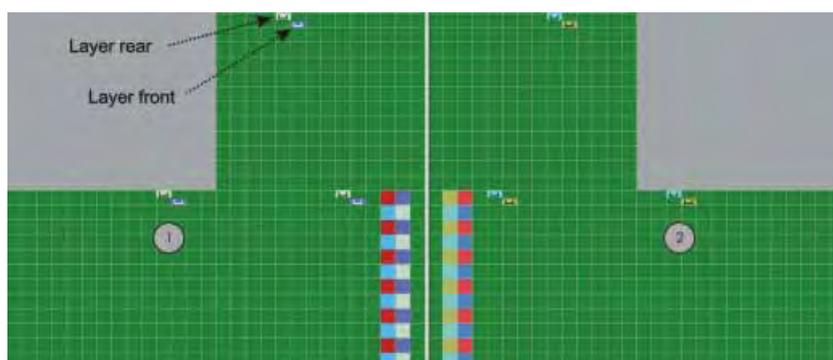
I. Display Fair Isle markings:

i In the **Basic pattern** state of pattern you can edit the Fair Isle markings (multi-step narrowing) in the Shape View.

- 1) Load the **basic pattern** state of pattern with .
 - 2) Call up the shape view with the  button.
- ⇒ The shape with the determined knitting cycles and the Fair Isle markings is displayed.



Multi-step narrowing in the Shape View:



| No. | Meaning |
|-----|--|
| 1 | Left shape edge with markings for multi-step narrowing. Different colors for L0 and L1. |
| 2 | Right shape edge with markings for multi-step narrowing. Different colors for L0 and L1. |

II. Move markings:

- 1) Call up "Initialize Markings for Multi-Step Narrowing" in the context menu of the Shape View.
- 2) Place the cursor on the marking and move the marking with the left mouse button pressed.



The markings can only be moved in the same row.

III. Delete markings:

| Types of markings | |
|---|---------------------------------|
|  | Multi-step narrowing underneath |
|  | Multi-step narrowing above |

- 1) Select the type of marking  or  in the "Shape Attributes" toolbar.

⇒ The selection  turns active.

- 2) Select the  key additionally.

- 3) Click on the marking with the left mouse button.

⇒ The marking is deleted.

- 4) Select the desired layer in order to delete the markings.

| | Function |
|---|-----------------------------|
|  | You can delete in L0 and L1 |
|  | You can delete in L0 |
|  | You can delete in L1 |

IV. Insert and change markings:

- 1) Select the type of marking  or  in the "Shape Attributes" toolbar.
 - 2) Enter the desired cover width under .
 - 3) Left click the existing marking and overwrite it.
- ➔ Insert the marking at the new position with the left mouse button.

| Symbol | Function |
|---|--|
|  | Narrowing marking with stitch underneath (default) |
|  | Narrowing marking with stitch above |
|  | Selecting the cover width 1-3 |
|  | Cover width 1 = racking by 1 needle |
|  | Cover width 2 = racking by 2 needle |
|  | Cover width 3 = racking by 3 needle |
|  | Selection of layers for inserting the markings |



When changing the cover width, the markings must be recalculated manually.

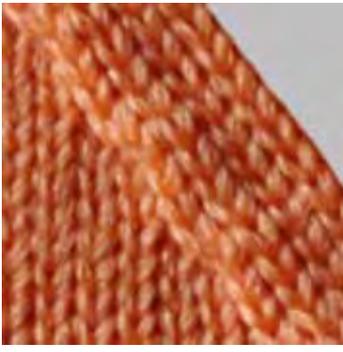
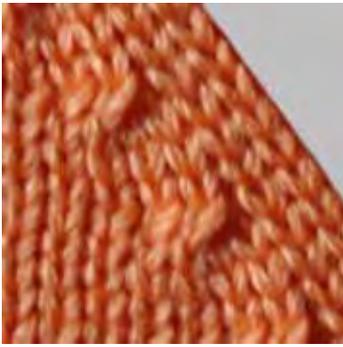
8 Narrowing, widening and binding-off types

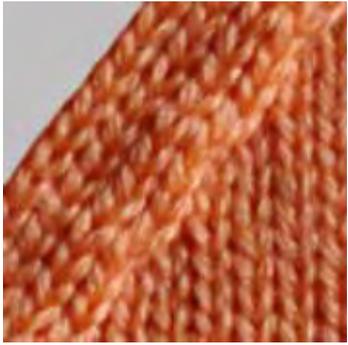
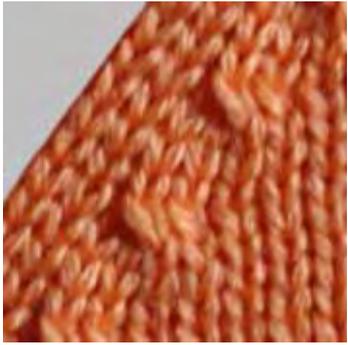
8.1 Use different narrowing types

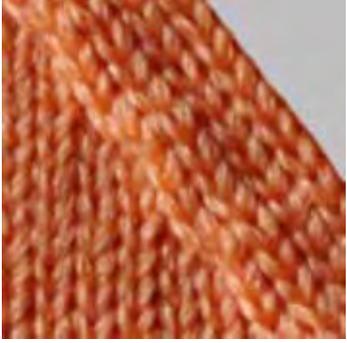
With the different narrowing types you achieve a different visual effect of the narrowings.

Use different narrowing types:

- 1) Open the "Shape Editor".
- 2) Allocate the desired narrowing type and narrowing width to the **Narrowing edges** under "Function".

| Designation | Function | Presentation |
|--------------------------------|---|---|
| Sleeve | | |
| Sleeve above Layers apart | Narrowing stitches lie on the basic stitches. The layers L0 and L1 will be narrowed separately. Different narrowing widths are possible. |  |
| Sleeve above | Narrowing stitches lie on the basic stitches | |
| Sleeve underneath Layers apart | Narrowing stitches lie under the basic stitches. The layers L0 and L1 will be narrowed separately. Different narrowing widths are possible. |  |
| Sleeve underneath | Narrowing stitches lie under the basic stitches. | |
| Sleeve Rib | Special transferring cycle for ribs. |  |
| Sleeve Rib Layers apart | Special transferring cycle for ribs The layers L0 and L1 will be narrowed separately. Different narrowing widths are possible. | |

| Designation | Function | Presentation |
|------------------------------|---|---|
| Remaining Narrowing | Special narrowing cycle for shapes with inserted sleeve, in various ratios of number of stitches to stitch rows. | |
| F-Shoulder Sleeve | Special narrowing cycle for the shapes with French shoulders. | |
| Body | | |
| Body above Layers apart | Narrowing stitches lie on the basic stitches. The layers L0 and L1 will be narrowed separately. Different narrowing widths are possible. |  |
| Body above | Narrowing stitches lie on the basic stitches. | |
| Body underneath Layers apart | Narrowing stitches lie under the basic stitches. The layers L0 and L1 will be narrowed separately. Different narrowing widths are possible. |  |
| Body underneath | Narrowing stitches lie under the basic stitches. | |
| Body-rib | Special transferring cycle for ribs. |  |
| Body Rib Layers apart | Special transferring cycle for ribs. The layers L0 and L1 will be narrowed separately. Different narrowing widths are possible. | |

| Designation | Function | Presentation |
|--|--|---|
| Shoulder | In the front and back the shoulder is narrowed instead of gored. |  |
| Neckline | | |
| V-neck above Neck above Layers apart L0 / L1 | Narrowing stitches lie on the basic stitches. |  |
| V-neck underneath Neck underneath Layers apart L0 / L1 | | |
| Neck Rib_ L0 / L1 Neck Rib_ L0 Neck Rib_ L1 | Special transferring cycle for ribs. |  |

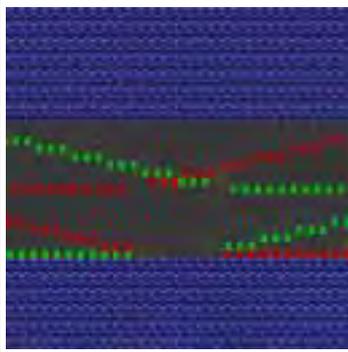
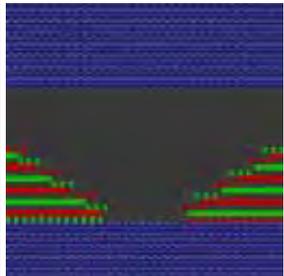


The designation **above** or **underneath** always refers to the narrowing stitches.

8.2 Multi-step narrowing / Doubling

Multi-step narrowing / Use Doubling:

- 1) Open the "Shape Editor".
- 2) Open the attributes of a narrowing edge via "Function".
- 3) Activate "Multi-step narrowing" in the "Narrowing" tab.

| Designation | Use | Presentation | Function |
|-----------------------------|---|---|--|
| Fair Isle + Doubling k&w | With doubling after the start - or - with Fair Isle pattern |  | Each stitch will be transferred only once. Large rackings are necessary. |
| Fair Isle + Doubling k&w II | |  | Stitches will be transferred several times. Small rackings are necessary. Use with TC-T pattern as all needles are allocated and no large rackings are possible. |

8.3 Use different widening types

If a **Widening** edge line is present in the shape, you can specify the type of widening.

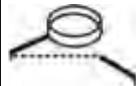
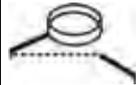
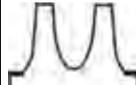
Use different widening types:

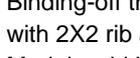
- 1) Open the "Shape Editor".
- 2) Allocate the desired widening type and widening width to the **widening edges** under "Function".

| Widening body/sleeve | |
|--------------------------------|--|
| Designation | Function |
| No module | No special technique is used |
| Standard | Alternating widening technique. Widening of L0 and L1. |
| Split | Widening by splitting. |
| Closing-Stitch | Widening with plugging technique. |
| Standard Selvedge open | Alternating widening technique. Widening of L0 and L1, but separated layers. |
| Darn stitch Layer-separated | Layer-separated widening by plugging technique. |

8.4 Use different binding-off types

| Setting | Use |
|-------------------------------------|---|
| "Neckline" | <p>Binding-off of the round neck or of the body with stitch rows over the entire length.</p>  <p>Example: Turtleneck collar</p> |
| "Fast cut-out" | <p>Binding-off of the round neck or of the body with stitch rows over the entire length. The running time of the binding-off will be reduced substantially using the maximum racking of the machine.</p>  |
| "Open cut out L0" | <p>Binding-off of the body or of the collar without stitch rows over the entire length.</p>  <p>Example: V-neck or waistcoat - open in the front layer</p> |
| "Opening open at the left" | <p>Binding off round neck with side opening on left</p>  |
| "Opening on the right" | <p>Binding off round neck with side opening on the right</p>  |
| "Opening open left+right" | <p>Binding off round neck with side opening on left</p>  |
| "Opening open L0+L1" | <p>Binding off a cut-out with an opening in front and back layer</p>  |
| "Neckline open L0 end on the right" | <p>Binding-off of the body or of the collar without stitch rows over the entire length. Yarn carrier stands at right after binding off.</p>  <p>Example: V-neck or waistcoat</p> |
| "Neck with draw thread" | <p>Bind off with draw thread in the neck of the back.</p>  <p>Example: V-neck</p> |

| Setting | Use |
|-------------------------------------|--|
| "Neck without draw thread" | Bind off without draw thread in the neck of the back piece.  |
| "V-neck start L0 L1" | Binding-off in the round neck, body front or body back.  |
| "Shoulder standard - 01" | Binding-off shoulder consecutively (narrow shoulder seam)  |
| "Shoulder standard - 02" | Binding-off shoulder consecutively (wide shoulder seam)  |
| "Shoulder simultaneous 01" | Binding-off both shoulder simultaneously.  |
| "Shoulder simultaneous 02" | Binding-off both shoulder simultaneously.  |
| "Side Bind-off" | Binding off the sleeve opening  |
| "Binding off the shoulder of a top" | Binding off fabrics with straps |
| "French shoulder above V-neck" |  The stitches lie on the basic stitches. |
| "French shoulder above " | |

| Setting | Use |
|---|--|
| "French shoulder underneath V-neck" |  <p>The stitches lie under the basic stitches.</p> |
| "French shoulder underneath" | |
| "French shoulder Neck " | Binding off the neck with the french shoulder shape  |
| "Neckline Protection Rows" | Neckline with following Protection rows Instead of binding-of, protection rows are knit  |
| "Neckline open L0 Protection rows" | Neckline in front layer with following protection rows on back layer  |
| "Neckline open at the left Protection rows" | Neckline with opening on left side with following protection rows  |
| "Neckline open on the right Protection rows" | Neckline with opening on right side with following protection rows  |
| "Neckline open on the left + right Protection rows" | Neckline with opening on left + right side with following protection rows  |
| "Neckline open L0 + L1 Protection rows" | Neckline in front and back layer with following protection rows.  |
| "Cap" | Binding-off at the and of a cap  |
| "French Shoulder 2x2 Rib 6 stitches V-neck" | Binding-off the shoulder with French shoulder with 2X2 rib and V-neck. Module width 6 stitches.  |

| Setting | Use |
|--|--|
| "French shoulder 2x2 rib" | Binding-off the shoulder with French shoulder with 2X2 Rib. Module width 6 stitches.  |
| "French Shoulder Neck 2x2 Rib 6 stitches " | Binding-off the shoulder and the Neck with French shoulder with 2X2 Rib. Module width 6 stitches.  |

9 Generate own k&w modules

Generate own k&w module:

- 1) Call up the "New module" dialog box via the "Module" / "New" / "Module ... " menu.



- 2) Make settings:
 - Module Names
 - k&w option
 - Specify width / height in stitches.
 - Basic pattern

Result:

The module will be presented in k&w technique: Width in 1x1 technique and height in complete rows.

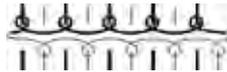
- 3) Confirm settings with "OK".
 - ⇒ The "Properties of: XX" dialog box appears.
- 4) Open the ones of the "Technique" tab and make settings:

| Setting | Setting | Function |
|--|-------------------------------------|---|
| k&w module | <input checked="" type="checkbox"/> | Default: Automatic allocation of the k&w layer set |
| | <input type="checkbox"/> | No allocation of the k&w layer |
| Do not move the structure transfer over the other layer | <input checked="" type="checkbox"/> | The structure transfer (non-automatic transfer) is carried out before knitting the other layer. Example: Cable at the shape selvedge |
| | <input type="checkbox"/> | The structure transfer (non-automatic transfer) is carried out after knitting the other layer. (Default) |
| Knitting layer | No setting | Application on front layer and back layer |
| | Front | Application only on front layer |
| | Back | Application only on back layer |

- 5) Confirm the settings in the dialog box with "OK".
- 6) Draw the desired structure with "knit and wear binding elements" in the "Module editor".

⇒ When drawing with the "knit and wear binding elements", the knitting and the column layer are automatically taken into account.

- Modules of layer L1 (back) start always with stitch on the left side.



- Modules of layer L0 (front) start always with float on the left side.



Make the required settings in the control columns, as for example stitch length, fabric take-down, etc.

- 7) If necessary, change the layer allocation via the "Knitting layer" control column in knitting rows.
- 8) If necessary, change the column layer allocation via the "Module" / "k&w column layer" menu.



With k&w modules, the column layer is set automatically.

- 9) Close the Module Editor with .
- ⇒ The module is saved under "New Modules" in the "Module Explorer of Database".

10 Allocate and display knitting layers / column layers

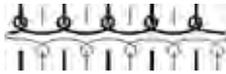
I. Change the allocation of the knitting layer L1 / L0:

- in the symbol view (pattern)
- in the module editor

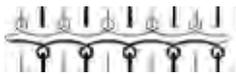
▷ The control column knitting layer is displayed.

- 1) Place the cursor in the "Knitting layer" control column.
- 2) Call up the context menu with the right mouse button.
- 3) Select the desired knitting layer in the menu.

- Knitting layer L1 (back)



- Knitting layer L0 (front)



- 4) Left-click in the pattern rows to be modified.

⇒ The selected layer is entered in the pattern row.

II. Remove / newly set the k&w column layer in a module:

When inserting a k&w module (1x1 technique), the information of the column layer is required to be able to correctly draw-in this, based on the knitting layer L0 / L1 and the corresponding column layer.

Behavior when inserting a module with set k&w column layer:

- Insert the modules in layer L0:
With modules of the layer L0, the knitting instruction is always in an even column layer
Result: The module can only be inserted in the column that corresponds to the layer L0.
- Insert the modules in layer L1:
With modules of the layer L1, the knitting instruction is always in a odd column layer
Result: The module can only be inserted in the column that corresponds to the layer L1.



When inserting a module in the pattern, the cursor jumps to the corresponding column layer.

Behavior when inserting a module with removed k&w column layer:

- Insert the modules in layer L0.
Result: The module can be inserted in every column.
- Insert the modules in layer L1.
Result: The module can be inserted in every column.



When inserting a module in the pattern, the cursor does **not** jump to the corresponding column layer.

Example:

With modules for k&w patterning for the machine type CMS xxx-T, the k&w column layer is removed, as the knitting will take place with all needles.

Remove the k&w column layer in a module:

With a newly generated k&w module, the column layer is set automatically.

- ▷ Module is opened in the "Module Editor".
- 1) Select **Remove** via the "Module" / "k&w Column Layer" menu.
- ⇒ The information of the k&w column layer is removed in the module.
- 2) Close the Module Editor with .
- ⇒ The module is saved **without** the information of the column layers.

Newly set the k&w column layer in a module:

- ▷ Module is opened in the "Module Editor".
- 1) Select **Set Newly** via the "Module" / "k&w Column Layer" menu.
- ⇒ The information of the k&w column layer is newly set in the module.
- 2) Close the Module Editor with .
- ⇒ The module is saved **with** the information of the column layers.

III. k&w layers / highlight columns:

For a better recognition of the k&w layers and columns, they can be highlighted.

- In the symbol view (pattern)
- In the module editor
- 1) Call-up the context menu with the right mouse button in the corresponding window for this purpose.
- 2) Select the "Highlight k&w Layer" menu.
- ⇒ The layers / columns are displayed shaded.

IV. Presentation of the knitting layers:

- in the symbol view (pattern)
- in the module editor

| Symbol | Property | |
|---|---|---|
|  | All layers | Presentation of the front L0 and the back L1 layer. |
|  | Knitting layer L0 | Presentation of the layer L0 with all needles (1x1 technique) |
|  | Knitting layer L1 | Presentation of the layer L1 with all needles (1x1 technique) |
|  | Display the columns of the knitting layer L0 only | Presentation of the knitting needles of the front layer L0. |
|  | Display the columns of the knitting layer L1 only | Presentation of the knitting needles of the back layer L1 |

11 Mirroring module

For creating a k&w pattern, you can use the mirroring modules and create your own.

I. Mirroring modules in the Module Explorer of Database:

The mirroring modules are stored in the "Module Explorer of Database" under "Modules" / "knit and wear" in the subgroups:

- Binding Elements
- Ribs
- Cable one side float
- Cable both side float
- Aran
- Petinet
- k&w_basic pattern
- Binding elements-TC-T
- Pointelle TC-T
- 730S Cable both side float
- 730S Cable single side float
- 730S Aran

II. Example for the application of mirroring modules:

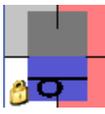
Modules can be inserted mirrored:

- To the front knitting layer (L0)
- To the back knitting layer (L1)

| Example of mirroring modules | | |
|-------------------------------|--------|----------------|
| | Jersey | Reverse jersey |
| Modules for L0 (front) | | |
| Modules for L1 (back) | | |

III. Switch the layer in the mirroring module:

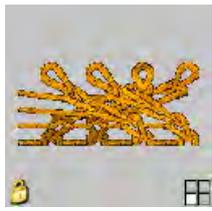
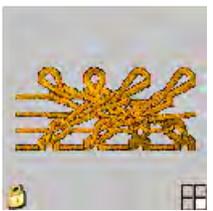
The selected module is displayed in the "Tool Properties" toolbar. It is possible to mirror to the desired layer by switching.

1) Mirror the module for Layer 0 with the button  at the bottom.

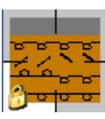
2) Mirror the module for Layer 1 with the button  at the top.

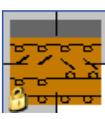
IV. Switch the racking direction in the mirroring module:

With modules with racking (cable, petinet), the racking direction of the module can be switched.

| | |
|--|---|
|  |  |
| Cable 2X2 < | Cable 2X2 < |
| Racking direction left | Racking direction right |

- Mirrored left / right

1) Switch the racking to the left with the  key.

2) Switch the racking to the right with the  key.

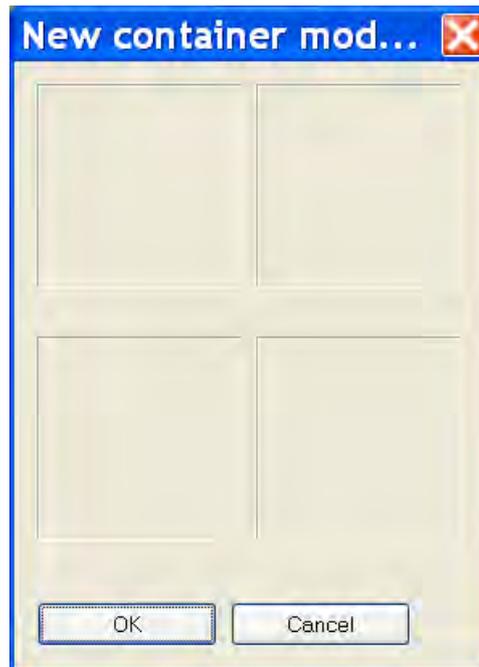


Mirroring modules are automatically set to the correct stitch row (layer) and column (k&w column).

11.1 Generate and edit mirroring modules

I. Generate container module mirroring:

- 1) Call up via the "Module" / "New" / "Container Module Mirroring..." menu.
- ⇒ The New container module is displayed.



- 2) Drag a generated structure module onto the **lower left** position of the "New container module mirroring" container using Drag & Drop.

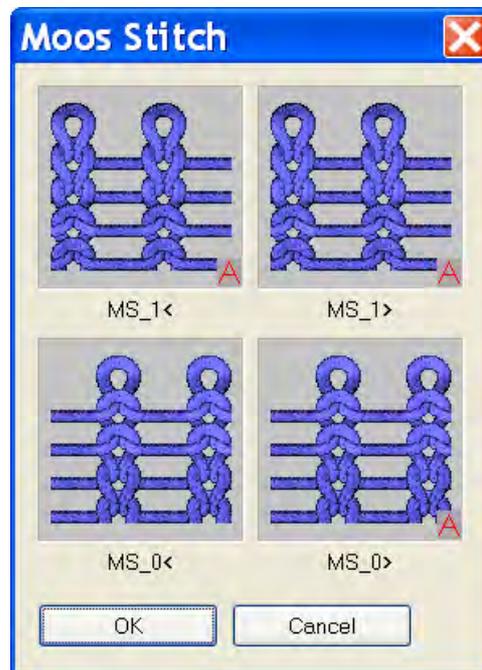


No container module mirroring can be allocated to a container module mirroring.

Behavior when selecting a container module mirroring:

- **Selection + Drag & Drop:** no allocation possible in a container module mirroring
- **Selection + click with LMB in a new container module mirroring:** Allocation of the original module from the selected container module mirroring.

Example: Module for moos stitch



| Mirroring positions | |
|---------------------------|---------------------------------|
| Mirrored to the back (L1) | Mirrored to the back right (L1) |
| Original (L0) | Mirrored to the right (L0) |

- Only the original module is saved in the Module Explorer of Database.
- The other modules are automatically generated and displayed in the mirrored positions.
- If the original module contains the name ending _0<, the name endings for the automatically generated modules will be changed as follows:

| Original | Generated name: |
|----------|-----------------|
| _1< | _1> |
| _0< | _0> |

- Mirrored modules are automatically marked with the  symbol.
- The mirroring modules that are not wider than one stitch are inserted in the right column of the container without being mirrored. They will be mirrored only for the back layer.
- Self-generated modules can be allocated with drag & drop or via selecting the module to one of the four positions in a "New container module mirroring".
- Different modules can be allocated to the front and back layer.

3) Click the "OK" button.

⇒ The module is saved to the "New Modules" module group of the "Module Explorer of Database".

II. Edit mirroring module:

After a module is inserted in the mirroring container, the context menu and the following functions can be run with the right mouse button:

| Menu | Function |
|-------------------------------|---|
| Remove | The module is removed from the tool. |
| Edit | The module can be edited. |
| Do Not Generate Mirror | Mirroring can be deactivated for the right-hand side. |
| Explorer | The module explorer is opened. |

1) Open the "Module Editor" with "Edit".

2) Edit module.



Edited modules no longer have the marking . These modules are saved under "New modules".

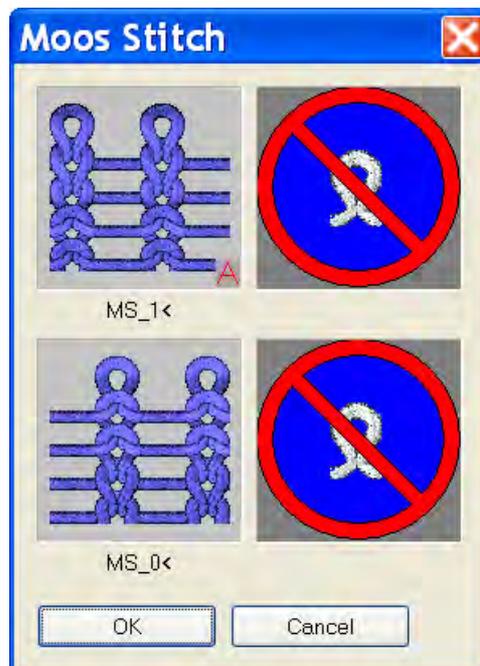
III. Generate the mirroring module only for the back layer:

A module is to be mirrored to the back layer, but not to the right.

- 1) Call-up the context menu in the "New container module mirroring" dialog box and activate "Do Not Generate Mirror".



- 2) Drag the module to be mirrored to the **lower left** position with drag & drop.

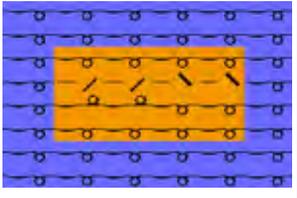
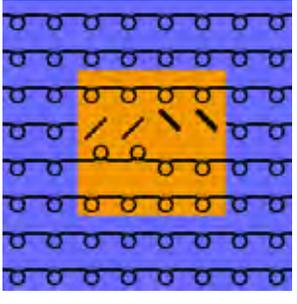
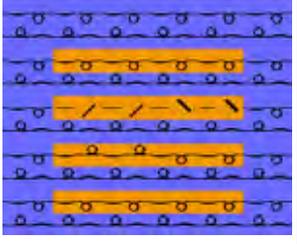


- 3) Click the "OK" button.
⇒ The module is saved under "New Modules".

12 Help functions for the pattern design generation

Generate pattern design:

The different presentations of the knitting layers can be displayed in the symbol view for creating a motif.

| Symbol | Setting | Presentation |
|---|--|---|
|  | Presentation of all needles (columns) of layer L0 |  |
|  | Presentation of the knitting needles (columns) of layer L0 |  |
|  | Presentation of front and back layers |  |

- 1) Select the desired setting.
- 2) Draw motif.



Use only mirroring modules when drawing.

12.1 Possibilities in the Mirror k&w Design to Knitting Layer L1 dialog box

I. Apply a pattern element from the front (L0) to the back (L1):

You can apply the design of layer 0 (front) to layer 1 (back) in order to generate the pattern more easily.

▷ The design of the layer 0 is created **only** with mirroring modules.

- 1) Run the design creation help functions via the "Edit" / "Mirror k&w Design to Knitting Layer L1..." menu.
- 2) Click on the checkbox "Apply pattern design from front to back".

⇒ **without selection**

The entire pattern design of the layer L0 is applied to the layer L1.

⇒ **with selection**

Only the selected area of the layer L0 is applied to the layer L1.

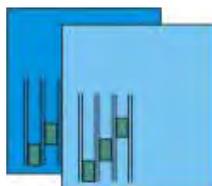
- 3) If necessary, move the motif in the back vertically in relation to the front via the "Vertical shift in pattern rows" input field.

- Specified number **without sign**: Pattern design by **n** pattern rows to the top.
- Specified number with **negative sign**: Pattern design by **n** pattern rows to the bottom.

- 4) Activate the option "Module", "Color" or both.

- 5) Carry out with "apply".

⇒ The design is applied from the layer L0 to the layer L1.



A mirrored module is inserted with the same racking direction.

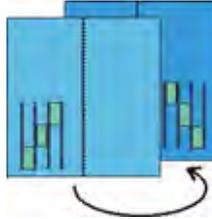
II. Mirror back on vertical center axis:

- 1) Run the design creation help functions via "Edit" / "Mirror k&w Design to Knitting Layer L1...".



The "Apply pattern design from front to back" checkbox is active.

- 2) Activate the "Mirror back on vertical center axis" checkbox.
 - 3) If necessary, move the motif in the back vertically in relation to the front via the "Vertical shift in pattern rows" input field.
 - 4) Carry out with "apply".
- ⇒ The design and the modules are mirrored on the center axis and applied to the back.



13 Module Explorer of Database with Stoll knit and wear®

The k&w modules in the Module Explorer of Database are saved in different groups with subgroups.

| Module group | Subgroups | Remarks |
|--------------------|--|--|
| "k&w-Starts" | "Stoll" "Private" "Stoll-TC-T" "Stoll-730S" | The module groups for starts contain the starts for: <ul style="list-style-type: none"> ▪ Sweater / Cardigan / Body ▪ Tank top / Top / Waistcoat ▪ Short sleeve ▪ Short body ▪ Trousers The type of the start is automatically selected based on the shape. |
| "k&w Favorites" | Frequently needed module groups can be saved in the module group "k&w Favorites". These are displayed in the module bar, and quick access is therefore possible. | |
| "knit and wear" | "Binding Elements" "Ribs" "Cable one side float" "Cable both side float" "Aran" "Petinet" "k&w basic pattern" "Binding elements-TC-T" "Pointelle TC-T" "Cable at the shape selvedge" "730S Cable both side float" "730S Cable single side float" "730S Aran" | Subgroups for the pattern generation |
| "k&w Arrangements" | "Stoll" "Private" "Favorites / Basic Shape Types" "For automatic only" | |

| Module group | Subgroups | Remarks |
|-----------------|---|---|
| "k&w Technique" | "Narrowing" "multi-step narrowing" "Widening" "Binding-off" "Fade out" "Start V-neck" "Shape edge start" "Shape edge end" "k&w replacement modules" "Shape correction" "connections" "Transfer inward sleeves" "Intarsia Edge Editing" "Knitting In and Out" "Knit-in before Start" "Collar modules" | These modules are used automatically by the technical function. |

14 Settings in Configuration k&w dialog box

In this dialog box, you make different settings for the **processing** of the entire pattern.



The changes in the "k&w configuration" dialog box, which you carry out after the **technical processing**, are preserved, even if you switch back to one of the previously performed processing steps "Expanding" or "Basic Pattern".

Call up the "k&w configuration" dialog box:

- 1) Open the "k&w configuration" dialog box via the "Pattern Parameters" / "Configuration..." menu.
- ⇒ The dialog box with the tabs will be opened.

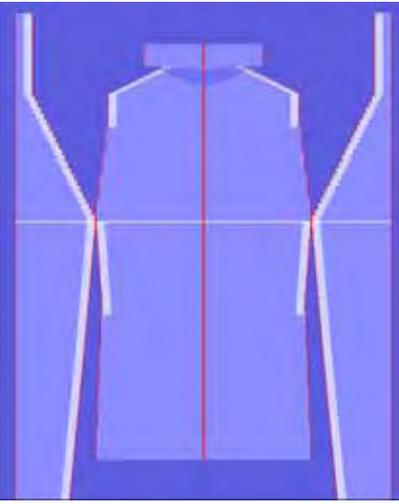
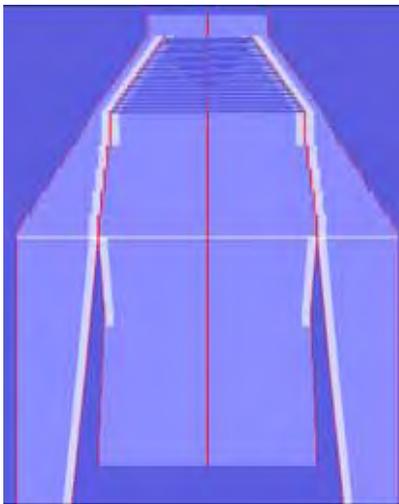
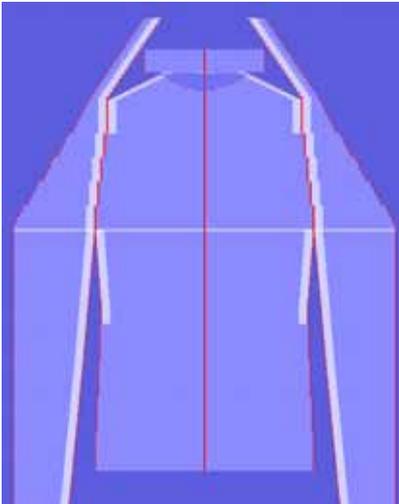
14.1 Knitting Zones k&w tab

I. Settings when cutting out

On the **Knitting Zones k&w** tab you can select different settings for cutting out.

- Cut folded out
- Cut folded in
- Cut folded in without length compensation.

Presentation types before cutting out:

| Cut folded out | Cut folded in | Cut folded in without length compensation |
|--|--|--|
|  |  |  |
| <p>With this setting, the k&w shapes with sleeves folded out are cut from the basic pattern.</p> | <p>With this setting, the k&w shapes are cut out with the sleeves folded in above the sleeve-body connection, with a length compensation between the sleeves and the body.</p> | <p>With this setting, the k&w shapes are cut out with sleeves folded in above the sleeve-body connection, without length compensation.</p> |

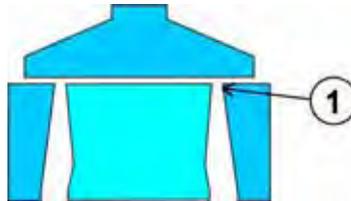
II. Body-Sleeve distance

For the production of the fabric pieces, a distance of the yarn carriers must be ensured between the sleeve and the body.

- 1) Specify the intermediate spacing for the yarn carriers on the **Knitting Zones k&w** tab under Body-Sleeve distance.
- 2) Specify the Distance of transferring inward (needles) (1) of the sleeve body connection in the input field.

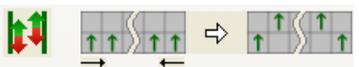
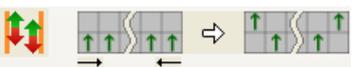


The number of needles depends on the number / positions of the yarn carriers.



14.2 Transfer k&w tab

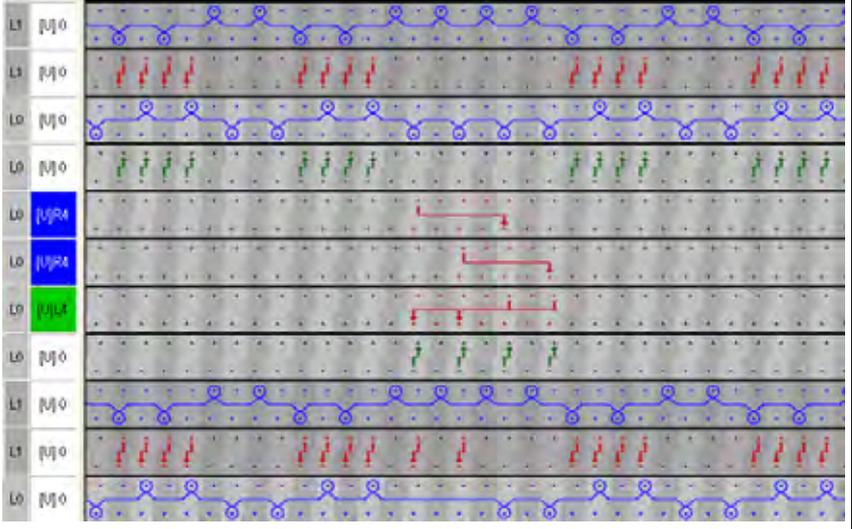
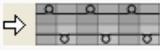
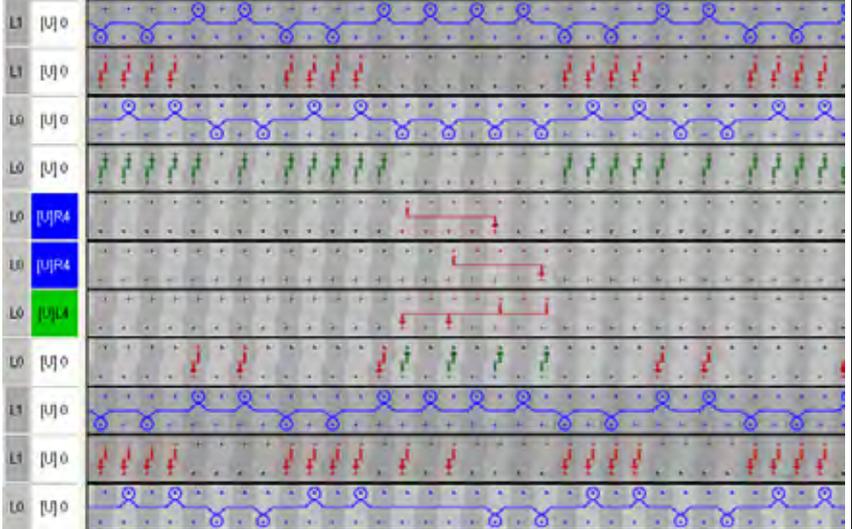
Multi-system transferring Transfer Sequence

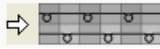
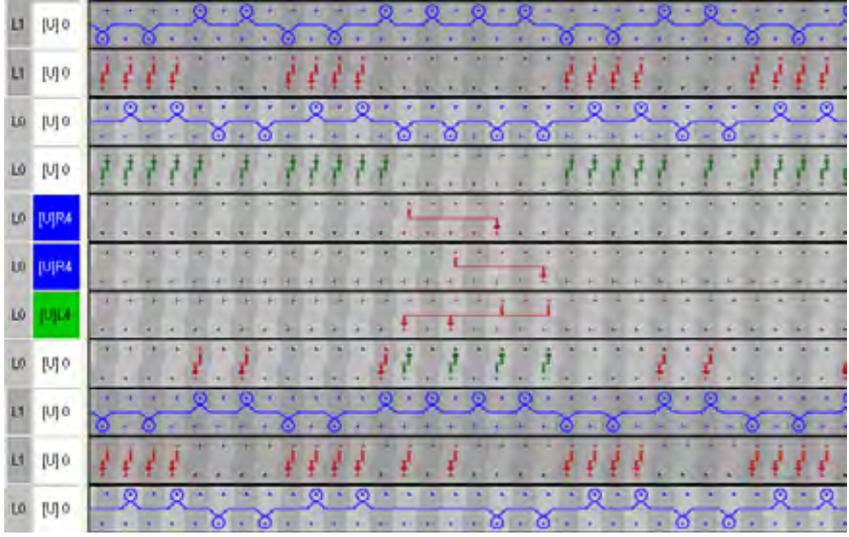
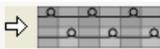
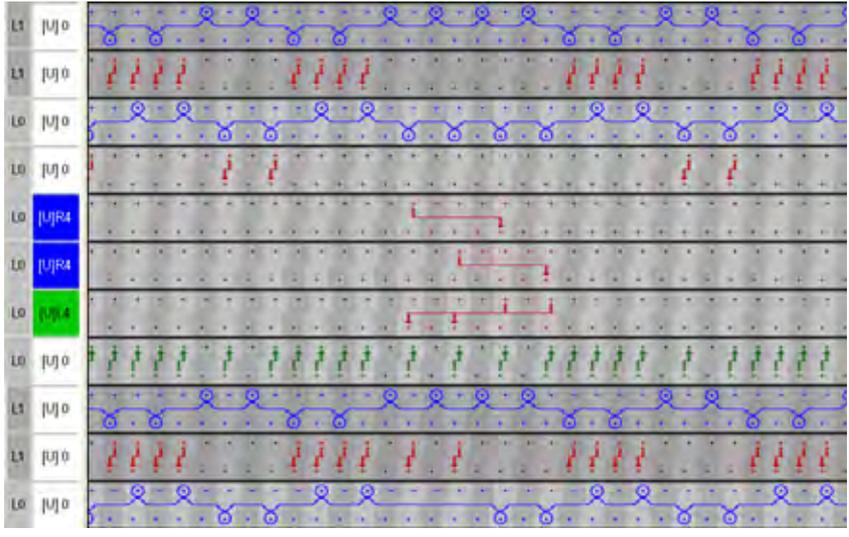
| Option field | Function | Meaning |
|---|--|--|
|  "OFF" | Switch off transferring in several technical rows (systems). | Transfer actions will not be separated into several technical rows. |
|  | Two neighboring transfer actions will be divided up into two technical rows. | The first needle coming from the left will be transferred in the first technical row . |
|  | | The first needle coming from the left will be transferred in the second technical row . |
|  | | The first needle coming from the left or right will be transferred in the first technical row . |
|  | | The first needle coming from the left or right will be transferred in the second technical row . |
|  "Freely definable"  | Freely definable order coming from the left or from the right. | <p>Neighboring transfer processes will be divided-up into up to six technical rows.</p> <ul style="list-style-type: none"> ▪ Number 1 - 6 is allowed. (corresponds to 1-6 technical rows) ▪ A maximum of eight numbers can be entered ▪ The numerical sequence has to be complete ▪ The order is also applied, if the transfer processes are contained only partly in the pattern ▪ The order will be repeated. |

Settings for Transfer Sequence

| Option field | Function | Meaning |
|---|---|---|
| "Max. Distance" | Specification of the distance for transferring in several technical rows. | Number of needles between two neighboring transfer actions in order to separate them on two technical rows (systems). |
| "From racking" | Specification of the racking step for transferring in several technical rows. | Transferring will be separated on several technical rows from the specified racking on only. |
|  | Transfer to the front and to the rear | Transfer actions to both directions will be separated to several technical rows. |
|  | Transfer to front only | Only transfer actions from rear to front will be separated to several technical rows. |
|  | Transfer to rear only | Only transfer actions from front to back will be separated to several technical rows. |

Transfer surrounding

| Option field | | Meaning | |
|--|-------------------|--|---|
|  | "Off" | Surrounding will not be transferred. |  |
|  | "Separate layers" |  Transfer surrounding onto separate layers. |  |

| Option field | | Meaning |
|---|--|--|
|  | "Transfer to front"  Transfer surrounding area on the front needle bed. |  <p>Diagram illustrating the transfer of surrounding area to the front needle bed. The diagram shows a sequence of rows (L1, L0) with various needle settings (1, 0, 1, 0) and transfer actions (indicated by red arrows) moving stitches from the back to the front needle bed.</p> |
|  | "Transfer to rear"  Transfer surrounding area on the back needle bed. |  <p>Diagram illustrating the transfer of surrounding area to the back needle bed. The diagram shows a sequence of rows (L1, L0) with various needle settings (1, 0, 1, 0) and transfer actions (indicated by red arrows) moving stitches from the front to the back needle bed.</p> |
|  | "Transfer depending on the next row" | Carry out the transfer surrounding to the front or back needle bed specified by the technique, depending on the layer of the following knitting row (situation-related). |
| | "From racking" | Specification of the racking step for transferring in several technical rows. |

Group cast-offs/transfers

| Option field | | Function | Meaning |
|---|---|------------------------------------|--|
|  | "Off" | Do not group cast-off and transfer | Cast-off and transfer will not be carried out together in the same technical row (system). |
|  | "On"  | Group cast-off and transfer. | Cast-off and transfer will be grouped in a technical row. |

Transfer - distribute depending on layer

| Option field | | Meaning | |
|---|------------------|---|---|
|  | "Off" | | Transfer actions will not be separated into several technical rows. |
|  | "Open layer" |  | Layer L1 will be transferred first when transferring to the back. Layer L0 will be transferred first when transferring to the front. |
|  | "covered layers" |  | Layer L1 will be transferred first when transferring to the front. Layer L0 will be transferred first when transferring to the back. |

i

With **Transferring surrounding** and with **Group casting-off and transfer** only stitches of those modules will be transferred which have the "Transfer of surroundings permitted" checkbox activated.
The checkbox is located on the "Technique" tab in the "Properties of: <module-name>" dialog box.

14.3 Intarsia k&w and Intarsia all needles TC-T k&w tab

Knitting-in

| Adjustments | Selection | Meaning |
|-----------------------|--|---|
| "with knot" | <input type="checkbox"/> | No specification possible in the "Binding" selection list |
| | <input checked="" type="checkbox"/> | The specification of different knots is possible in the "Binding" selection list. |
| "Binding" | Selection list of knots from directory | |
| | No selection | No knots are inserted at the yarn field selvedge. |
| | "Knots 1 border" | A knot will be formed on the shape selvedge at the start and end of a yarn field. i : Make the setting before the yarn field view is opened the first time. |
| | "Knots" | Knot for tying-in the thread at the shape edge |
| | "Knots French shoulder" | Knot for tying-in the thread at the end of binding-off the left and the right shoulder. |
| | "Knots French shoulder V-neck" | Knot for tying-in the thread at the end of binding-off the right and the left shoulder plus neck. |
| "Feed-in" | "Cast off before layer L0" | Feed on L0 with cast off |
| | "Cast off after layer L1" | Feed on L1 with cast off |
| | "Float TC-T" | Knitting in and knitting out with float (no connection) |
| | "Float" | Knit-in and knit-out with floats (no binding) |
| | "End Tubular connection" | Knitting in and knitting out with cast off (no connection). |
| "Connection of tubes" | "Knots connection of tubes" | Knot at the end of the sleeve-body connection, i.e. before knitting-out the yarn carriers |
| | "Knots connection of tubes TC-T" | Knot for TC-T at the end of the sleeve-body connection, i.e. before knitting-out the yarn carriers |

Selvedge editing

| Adjustments | Selection | Meaning |
|-----------------|--------------------------------|--|
| "Feed" | "Float fine" | Feeding with float with all needles |
| | "Tuck (4)" | Feeding with float and tuck in 1x1. Module width: 4 |
| | "Tuck (6)" | Feeding with float and tuck in 1x1. Module width: 6 |
| | "Tuck (8)" | Feeding with float and tuck in 1x1. Module width: 8 |
| | "Float" | Feeding with float in 1x1. Module width: 2 |
| | "Loop" | Feeding with stitch in 1x1. Module width: 2 |
| | "Tuck fine (2)" | Feeding with float and tuck on all needles. Module width: 2 |
| | "Tuck fine (3)" | Feeding with float and tuck on all needles. Module width: 3 |
| | "Tuck fine (4)" | Feeding with float and tuck on all needles. Module width: 4 |
| | "Front stitch fine" | Feeding with stitch on all needles. Module width: 1 |
| "Reduce" | No functionality | |
| "Allowed steps" | Same function as for intarsia. | |

14.4 Comb, Clamping tab

Knitting-in all yarn carriers before the start (1 piece)

| Knitting-in yarn carriers between sleeve and body | |
|---|---|
| Selection | Meaning |
| <input type="checkbox"/> (Default) | The yarn carriers, which are not used in the k&w start, will not be knit-in until necessary. |
| <input checked="" type="checkbox"/> | The yarn carriers, which are not used in the k&w start will be knit-in with the selected knit-in module before the knitting start and positioned between the sleeve and the body. |

| Take yarn carrier out of clamp | |
|--|---|
| Selection | Meaning |
| <input type="checkbox"/> | The yarn carriers, which are not used in the k&w start will be taken out of the clamp before the knitting start and positioned between sleeve and body. |
| <input checked="" type="checkbox"/> (Default) | With the "k&w_Float and Lock ->y<-" module selected: All the yarns will be knit-in after knitting the comb thread and fixed at the outer edge. |

14.5 Additional settings k&w tab

I. Open fabric take-down

Number of narrowings until the next opening of the fabric take-down.

| Value | Meaning |
|-------|---|
| 0 | Function is not active Result: Fabric take-down remains closed |
| n | Fabric take-down is briefly opened after n narrowing operations to relieve the fabric |

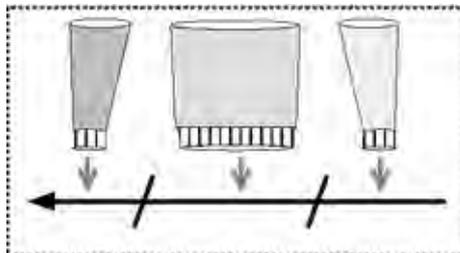
II. Yarn carriers



The "Combine Yarn Carriers" setting is recommended for structured patterns, thus knitting systems are freed up for transfer. Not necessary for single jersey patterns, as no transfer of layers is carried-out here.

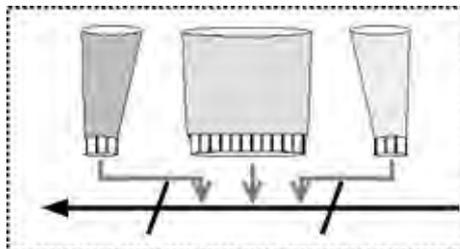
- Checkbox deactivated (default setting)

Result: The yarn carriers for sleeve/body/sleeve will not be combined **in the entire pattern**. Meaning the yarn carriers will knit by separate systems.



- Checkbox activated

Result: The yarn carriers for sleeve/body/sleeve will be combined **in the entire pattern**. Meaning knit by one system.



| Option | Function |
|---|---|
| Standard | Allocation of the yarn carriers for optimized productivity |
| Secure yarn insertion at color widening | Allocation of the yarn carriers for the secure yarn insertion at widenings of intarsia color fields |

III. Combine yarn carriers within an area:

If the yarn carriers are not to be combined over the entire pattern but only by area, this is to be carried out by generating Color Arrangements.

▷ The basic pattern is generated and the shape is positioned.

1) Switch the symbol view [basic] to "k&w presentation with narrowing" with the  key.

2) Display the control columns Color Arrangement  and k&w Arrangement .

3) Generate a row selection above the desired area.

4) In the context menu of the control column Color Arrangement  select "Allocate a Color Arrangement from the k&w Arrangement".

⇒ The automatically generated "Color Arrangements" are entered in the control column and saved in the module bar under local "Color Arrangements".



5) Edit Color Arrangement



6) Complete the pattern.

⇒ The yarn carriers are combined during the Technical Processing.

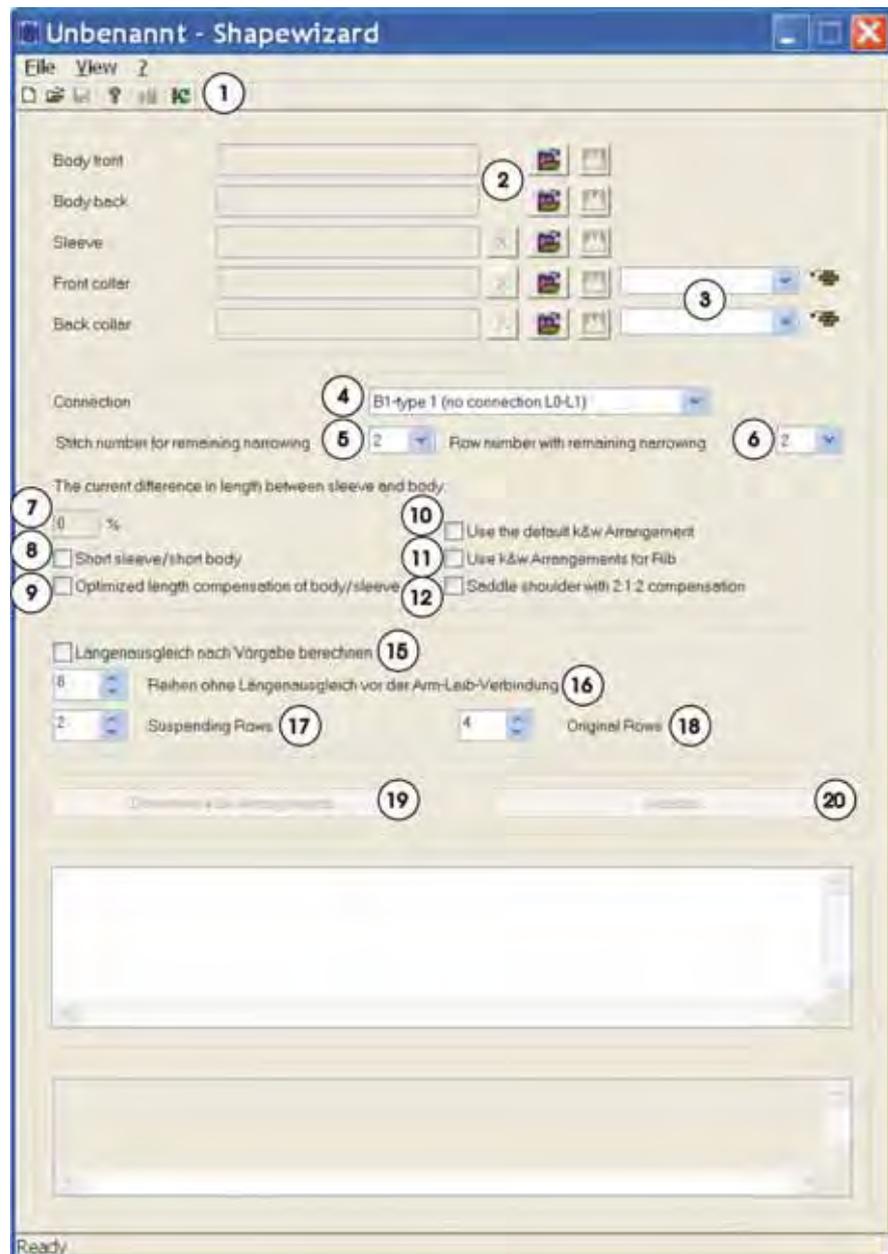
15 Generate k&w pattern with the Shapewizard

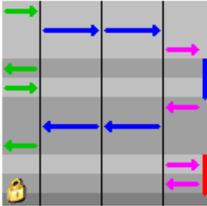
15.1 Shapewizard: Combine shape elements

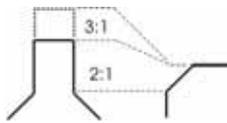
Combine the shape elements to form a k&w shape:

▷ The shape elements for the front and back of the body, sleeve and collar were generated in the shape editor.

➔ Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.



| No. | Function |
|-----|---|
| 1 |  Open shape display. Graphic presentation for defining the docking points. |
| |  Update of the k&w Arrangements loaded at the start of the Shapewizard. Meaning k&w Arrangements newly saved in the Module Explorer after starting the Shapewizard will be reloaded. |
| 2 |  Delete loaded shape elements |
| |  Load shape elements |
| |  Open Shape Editor |
| 3 | Specify the module for knitting mode of the collar. |
| 4 | Select the type of the sleeve-body connection. |
| 5 | Select the number of stitches per remaining narrowing. |
| 6 | Select the number of knitting rows per remaining narrowing. |
| 7 | Percentaged display of the length difference between sleeve and body |
| 8 | Short sleeve/short body |
| | <input checked="" type="checkbox"/> Length compensation between sleeve and body will be knit with residual yarn. i : Activate the checkbox if the length difference between the sleeve and body is greater than 20%. |
| | <input type="checkbox"/> Length compensation between sleeve and body will be done by suspension. |
| 9 | Optimized Running Time |
| | <input checked="" type="checkbox"/> A special k&w Arrangement (A25-3 tubulars x:1:x) for length compensation between sleeve-body-sleeve will be inserted. Result: The sleeve on the right will be knitted x-times - one row of the body - the sleeve on the left will be knitted x-times – one row of the body.  Traversing path of the carriage is shorter resulting in a shorter running time. |
| | <input type="checkbox"/> Default k&w Arrangement for the length compensation between sleeve-body-sleeve will be inserted. Result: Both sleeve are knitted in the same stroke whereas the body suspends. The traversing path of the carriage overruns both sleeves resulting in longer running time. i <ul style="list-style-type: none"> This k&w Arrangement is necessary if you want to work with Color Arrangements. Not possible if Short-sleeve / Short body is active. |

| No. | Function | |
|---|---|--|
| 10 | Use the standard k&w Arrangement | |
| | <input checked="" type="checkbox"/> | The X-Standard k&w Arrangement is inserted in areas without a automatically determined k&w Arrangement. You have to overwrite this in the Shape View later. |
| | <input type="checkbox"/> | For all areas for which no k&w Arrangement could be determined, no k&w Arrangement will be inserted. |
| 11 | Use k&w Arrangements for Rib | |
| | <input checked="" type="checkbox"/> | k&w Arrangement for the knitting mode 2x2 rib will be used. |
| | <input type="checkbox"/> | k&w Arrangement matching all other knitting modes will be used. |
| 12 | Saddle shoulder with 2:1:2 compensation | |
| | <input checked="" type="checkbox"/> | The shape with saddle shoulder will be edited in the 2:1 ratio. |
| | <input type="checkbox"/> | The shape with saddle shoulder will be edited in the 3:1 ratio (default). |
|  | | |
| 13 | Calculate length compensation according to setting | |
| | <input checked="" type="checkbox"/> | Length compensation between body - sleeve is not calculated |
| | <input type="checkbox"/> | Length compensation between body - sleeve is calculated |
| | 14 | Specification of the number of knitting rows without length compensation before the sleeve-body connection |
| | 15 | Specification of the number of suspending rows for calculating the length difference |
| 16 | Specification of the number of original rows (knitting rows) for calculating the length difference | |
| 17 | Determine the k&w Arrangement with the set specifications. | |
| 18 | Delete the determined k&w. | |

15.2 Shapewizard: Raglan with neck gore

| | |
|---|---|
|  | |
| Pattern name: | Raglan mit Halsspickel |
| Pattern size: | Width: 250 Height: 200 |
| Machine type: | CMS 822 k&w |
| Gauge: | E 6.2 |
| Start: | 1X1 - Rib |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | k&w shape Raglan with neck gore and collar |

15.2.1 Generate Pattern without Shape

Generate knit and wear pattern:

1) Select "File" / "New" from the menu bar.

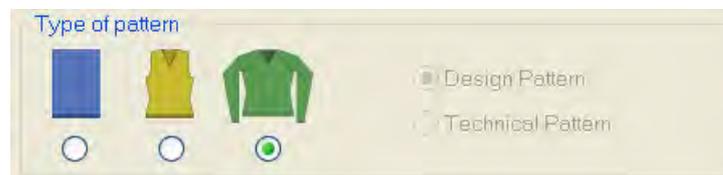
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select **k&w pattern** type.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field.

Width: 250

Height: 200



With k&w the size of the pattern field is automatically doubled in height and width.

6) Select "Jersey" for the basic pattern via the selection list.



The start will be inserted with the **Cut-out shape** step of processing.

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

15.2.2 Rules for generating a shape: raglan

Rules for knit and wear raglan with neck gore

| Rules for raglan with neck gore | |
|--|---|
|  | |
| 1 | Even-numbered difference in length between body and sleeve. (e.g. 2, 4, 6 etc.) |
| 2 | No widening or narrowing below the sleeve cross-over (6 rows). |
| 3 | Even-numbered height of the gore |
| 4 | No connection of the gore to the end line of the body as the gore will be knit afterwards |

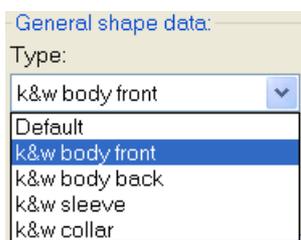
15.2.3 Create shape: Raglan with neck gore

I. Generate a front and back in the Shape Editor:



The shape elements and the k&w file (shape with k&w Arrangements) must be saved in the same directory.

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".



- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Insert the entry field for edge lines with the "Add new line at end" button.
- 7) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -200 | 0 | -60 | 0 | -60 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 100 | 16 | 30 | 5 | 6 | 1 | 5 | 0 | 0 | 0 | Narrowing |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 100 | -16 | 30 | -5 | 6 | -1 | 5 | 0 | 0 | 0 | Widening |
| 5 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 6 | | 200 | 100 | 60 | 30 | 2 | 1 | 30 | 0 | 0 | 0 | Narrowing |
| 7 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 8 | | 0 | 100 | 0 | 30 | 0 | 30 | 1 | 0 | 0 | 0 | |

- 8) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".



Generate a shape for the back with the same specifications as for the front.

II. Insert the neck gore element in the front:

- 1) Open the **Raglan Front** shape.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the **Gore** entry in the "Type" section list.
- 4) Specify the coordinates for the neck gore.

Neck gore in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | | 0 | -13 | 0 | -4 | 0 | -4 | 1 | 0 | 0 | | 6 | |
| 2 | | 40 | -80 | 12 | -24 | 12 | -4 | 1 | 0 | 0 | | 6 | |
| 3 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | 6 | |
| 4 | | 0 | 93 | 0 | 28 | 0 | 28 | 1 | 0 | 0 | | | |

- 5) Define the distance to the "base line" or to the "end line".



Do not connect the gore element to the end line.

III. Generate the element for sleeve in the Shape editor:

- 1) Generate a shape for the sleeve.

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -93 | 0 | -28 | 0 | -28 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 266 | -26 | 80 | -8 | 10 | -1 | 8 | 0 | 0 | 0 | Widening |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 200 | 100 | 60 | 30 | 2 | 1 | 30 | 0 | 0 | 0 | Narrowing |
| 5 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 6 | | 0 | 20 | 0 | 6 | 0 | 6 | 1 | 0 | 0 | 0 | |

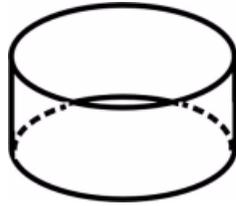
- 2) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".



After the last narrowing, at least two stitches must still be knit, otherwise the last narrowing will not be performed.

IV. Generate the element for the collar in the Shape Editor:

Stand-up or turtleneck collar



Front of Collar / Back of Collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 0 | -33 | 0 | -10 | 0 | -10 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 73 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | 0 | Link-off |

- 1) Allocate **bind-off** to the end line under "Function" in the "General" tab.
- 2) Allocate the single-jersey knitting mode in accordance with the collar shape "cut-out" or "fast cut-out".
- 3) Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".



You have to save all shape elements in the same directory.

15.2.4 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back, sleeve and collar in the "Shapewizard" into a **Raglan with neck gore.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
⇒ The "Open" dialog box appears in order to select a shape file.
- 3) Select shape.
⇒ The shape will be loaded and the name will be displayed under "Body front".



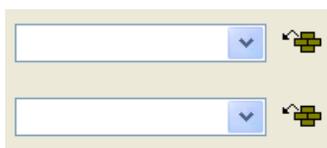
You can remove the shape for sleeve and collar with the  button again.

You can call-up the shape editor in order to correct the loaded shape with the  button.



Load the shape elements for **Body back, Sleeve and Collar** using the same procedure.

- 4) Specify the knitting mode for the front / back of the collar in the selection menu.



For the collar element pay attention to:

- The collar width should match the module width used.
- The collar width is dependent on the docking points.
- This means that the end width of the sleeve and body must be matched to the module width used.



If you change outer dimensions of the front, then you must adapt the back.

5) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|--|--|
| B1-Type 1 (no connection L0-L1) | Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |
| B1-Type 1 TC-T (no connection L0-L1) | Knitting cycle for patterns of the CMS machine with additional beds. Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |
| B8 Connection of trousers | |
| B5 Type 1 with gore (L0) no connection L0-L1 | Knitting cycle for pullover with Fair Isle and gore below the sleeve-body connection |
| B6 Type 1 with gore (L0+L1) no connection L0-L1 | Knitting cycle for pullover with Fair Isle and gore below the sleeve-body connection |
| B2 Type 1 with opening (L0) no connection L0-L1 | |
| B2-Type 1 TC-T with opening (L0) | |
| B7 Type 1 with opening (L0) no connection L0-L1 Rib | |
| B3-Type1 with gore and opening (L0) and gore and opening (L1) no connection L0-L1 | Knitting cycle for cardigan |
| B4 Type 1 with gore and opening (L0) no connection L0-L1 | Knitting cycle for cardigan |
| I17-Type 1 no connection L0-L1 +I L0 Body | Knitting cycle for intarsia on L0 |

15.2.5 Shapewizard: Determine docking points and k&w Arrangements

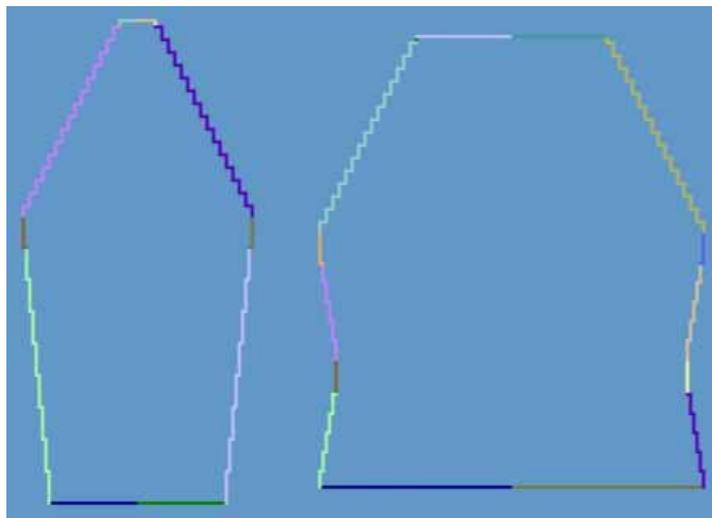
The shape elements are connected by knitting at the docking points.

I. Open the graphical shape display in order to define the docking points:

➔ Open the "Shape View" and the "Docking Points" dialog box with the



icon in the toolbar of the "Shapewizard".



Docking points

Knitting row

| | | Sleeve | Body |
|---------------------|---|----------------------|----------------------|
| Sleeve - body | X | <input type="text"/> | <input type="text"/> |
| Suspend Body | X | <input type="text"/> | <input type="text"/> |
| Suspend Sleeve | X | <input type="text"/> | <input type="text"/> |
| Remaining narrowing | X | <input type="text"/> | <input type="text"/> |
| Difference: | | <input type="text"/> | <input type="text"/> |

Column

| | | Sleeve | Body |
|------------|---|----------------------|----------------------|
| Collar | X | <input type="text"/> | <input type="text"/> |
| right side | | <input type="text"/> | <input type="text"/> |

Rectangle

| | | Columns | Rows |
|-----------|--|----------------------|----------------------|
| Measuring | | <input type="text"/> | <input type="text"/> |

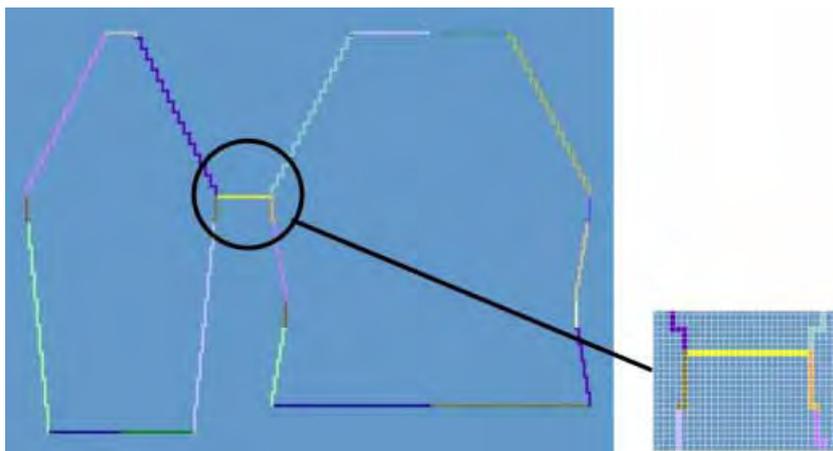
Deleting all lines

| Element | Function |
|-----------------------|--|
| "Sleeve - body" | Set the docking point "sleeve - body". The connection line is the first knitting row after the sleeve-body connection. |
| "Suspend body" | Set the docking point "Suspend body". Compensation of the length difference in the case of a sleeve longer than the body. Example: saddle shoulder |
| "Suspend sleeve" | Set the docking point "Suspend sleeve". Compensation of the length difference in the case of a body longer than the sleeve. Example: Inserted sleeve |
| "Remaining Narrowing" | Set the docking point "Remaining Narrowing". Connection of the stitches remaining at the end of the sleeve to the body. Example: Inserted sleeve |
| "Difference" | The difference of rows will be displayed when setting the connecting lines. |

| Element | Function |
|---|--|
| "Display field for the name of the knitting cycles" | If the cursor is placed in the graphical presentation of the shape display after determining the knitting cycles, then the name of the respective knitting cycle is shown. |
| "Collar" | Set the docking point "Collar". The collar element is set to corresponding width by the connection. |
| "Measuring" | You can measure a distance within a shape element with the "Measuring" button and the left mouse button pressed. The result is displayed in "Columns" and "Rows". |
| "Delete all lines" | Deletes all specified docking points. |

II. Define the docking point for sleeve-body:

The docking points form a connection line between sleeve and body and determine the first continuous knitting row after the sleeve-body connection.



- 1) Click in the pattern with the left mouse button and hold it.
- 2) Move the cursor in the element to be connected and specify the end position of the connection, then release the left mouse button.
- 3) Change the position by a manual entry in the "Docking Points" dialog box in order to correct a docking point.

- or -

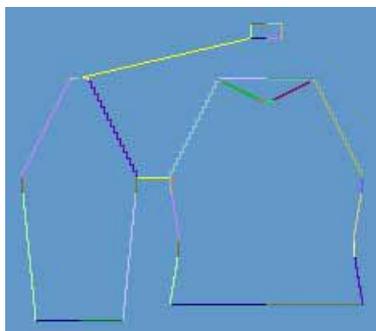
➔ Press  to delete a connection.

i

Press the "Ctrl" key while specifying the docking points, in order to jump with the cursor automatically to the nearest edge start or edge end.

III. Set the docking point for the collar:

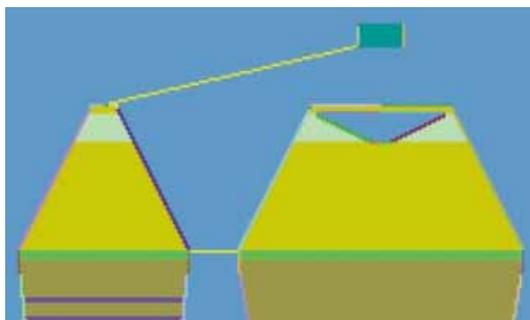
1) Define the "Collar" docking points in the "Docking Points" dialog box.



- Always set the connecting line on the left collar side.
- The same position is automatically applied for the right side.
- If the collar is to be positioned asymmetrically, then you can overwrite the positions.

IV. Generate a k&w shape for raglan with neck gore:

1) Press "Determine k&w Arrangements".



The determined k&w Arrangements are represented color coded in the graphical Shape Display.

| Key | Function |
|------------------------------|--|
| "Determine k&w Arrangements" | By pressing the "Determine k&w Arrangements" button, the shapes are checked and the sequences required for technical processing are determined. |
| "Initialize" | The determined k&w Arrangements are deleted and the shapes are reloaded. A redetermination of the k&w Arrangements is required for further editing. |

2) Save the shape as kaw file via the "File" / "Save" menu or via  after editing.



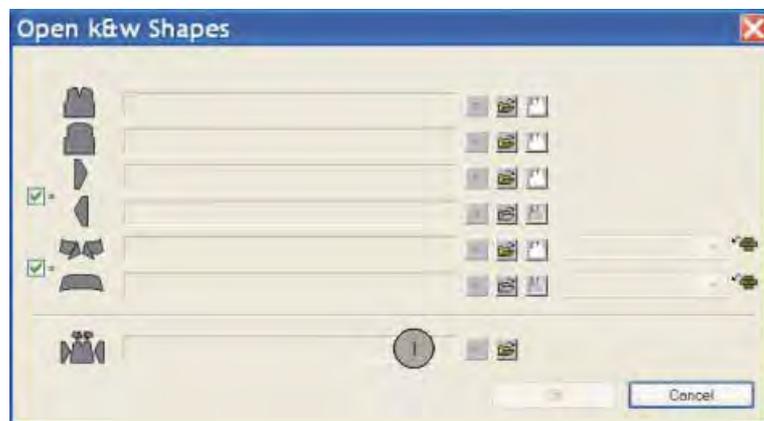
The elements of the shape (front, back, sleeve and collar) and the **kaw** file must all be located in the same directory.

- 3) Close the "Shapewizard" dialog box.

15.2.6 Open shape

Lay the created k&w file onto the basic pattern

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
- 3) Confirm the selection with "OK" and lay the shape elements onto the basic motif.

15.2.7 Position and cut-out the shape and expand the pattern

I. Position the shape:

▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".

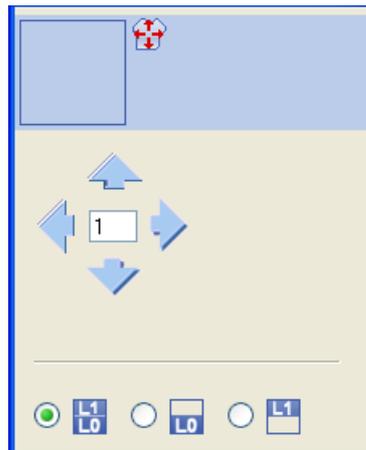
1) Position the shape elements **Sleeve** and / or **Body with collar** on the motif with the  symbol selected and the left mouse button pressed.

- or -

➔ Select the desired shape element with the  symbol selected. Position the selected shape element with the arrow keys of the keyboard.

- or -

➔ using the "Tool properties" dialog box



Settings in the "Tool properties" dialog box for the Drawing Tool :

| Symbol | Function |
|---|---|
|  | Move front layer (L0) and back layer (L1) |
|  | Move front layer (L0) only |
|  | Move back layer (L1) only |

2) Select the desired "Pattern Presentations k&w":

| Symbol | Function | |
|---|----------------------------|---|
|  | Display Pattern Cut-out | <p>k&w preview only possible in the processing step </p> <p>Result: The positioned shape will be displayed cut out with structure and color in the Symbol view.</p> <p>i: Allocation of CA and MA.</p> |
|  | Display Pattern Folded out | <p>Presentation of the shape with shape attributes (narrowing, fade-out, aligning symbols) and sleeves folded out.</p> <p>i: Presentation is recommended for modifying the steppings at the outer edges.</p> |
|  | Display Pattern Collapsed | <p>Presentation of the shape with shape attributes without the Suspend symbols.</p> <p>i: The symbol  will automatically get active.</p> |

II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm the settings in the dialog box with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm the settings with "OK".
⇒ The start module and the information of the k&w Arrangements will be applied to the pattern.

III. Expand the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "OK".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.

15.2.8 Complete the pattern

I. Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

15.3 Shapewizard: Saddle shoulder with 2x2 rib

| | | |
|---|--|-----|
|  | | |
| Pattern name | Sattelschulter | |
| Pattern size: | Width: | 250 |
| | Height: | 250 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | 2x2 | |
| Basic pattern: | 2x2 Rib | |
| Knitting technique | knit and wear | |
| Description of pattern: |  <p>The saddle shoulder shape contains a flat-shaped shoulder in the front and back. This requires frequent narrowings carried out in short intervals. On the other hand, the sleeve keeps running straight. This part of the sleeve lies on the flat-shaped shoulder.</p> | |

15.3.1 Generate Pattern without Shape

Generate knit and wear pattern:

1) Select "File" / "New" from the menu bar.

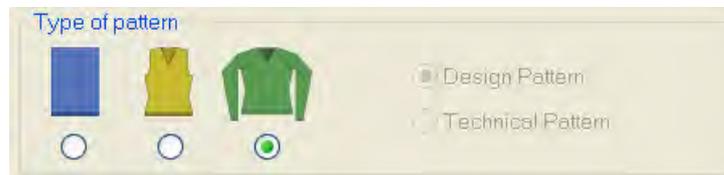
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select k&w pattern.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field.

Width: 250

Height: 250

6) Select the knitting mode: "2x2 RL rib" in the selection list "Basic pattern".



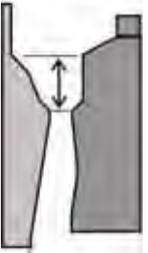
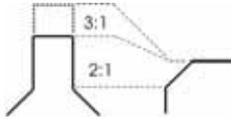
The "k&w_2x2 rib" start will be inserted during the **Cut-out shape** step of processing.

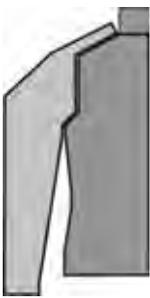
7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

15.3.2 Rules for generating a shape: saddle shoulder

Rules for knit and wear saddle shoulder

| Rule | Presentation | Description |
|------|---|--|
| 1 |  | Normally with a saddle shoulder the shape of the sleeve is longer than the shape of the body. The length differences between sleeve and body will automatically be compensated in all the shapes until the sleeve-body connection. |
| 2 |  | From sleeve-body connection up to the shoulder edge in the body, the row number in the sleeve and in the body has to be the same. |
| 3 |  | Specification of the row number for the saddle: The row number for the saddle (2) can be two or three times the number of rows of the shoulder edge in the body (1). |
| 4 |  | Row compensation 3:1 or 2:1 A 3:1 row compensation is used by default. If a 2:1 compensation is used, then "Saddle shoulder with 2:1 compensation" should be activated in the ShapeWizard. |

| Rule | Presentation | Description |
|------|---|---|
| 5 |  | <p>The saddle adjusts to the shoulder by means of the different number of knitting rows.</p> <p>The row ratios between the saddle and the body:</p> <p>The shoulder edge in the body should contain in each row a narrowing by three stitches.</p> <p>Recommendation: Narrow only by 2 stitches with 2x2 rib.</p> |

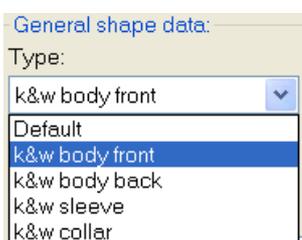
| Further possibility | | |
|---------------------|---|---|
| 1 |  | <p>Saddle shoulder inserted straight</p> <p>The stepping of the saddle shoulder of the back shall have a narrowing of three stitches every two rows.</p> |
| 2 |  | <p>The row compensation is in the back sleeve: 2:2 front sleeve: 2:0.</p> |

15.3.3 Create shape: Saddle shoulder with 2x2 rib

I. Generate a front and back in the Shape Editor:

i All the shape elements and the k&w file (shape with k&w Arrangements) must be saved in the same directory.

- 1) Open the "Shape editor" via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w... entry under "General shape data".



- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Create the table under "Left Lines" and enter the values for the **front and the back**.

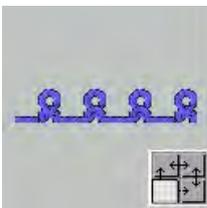
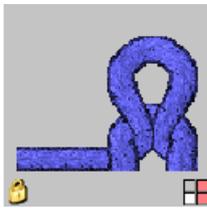
Front / Back element

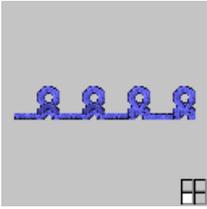
| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -64 | 0 | -64 | 1 | 0 | 0 | | | Basis |
| 2 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 3 | ✓ | 22 | 8 | 0 | 0 | 0 | 0 | 0 | | | Narrowing |
| 4 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 5 | | 42 | -7 | 6 | -1 | 7 | 0 | 0 | | | Widening |
| 6 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 7 | ✓ | 12 | 16 | 0 | 0 | 0 | 0 | 0 | | | Narrowing |
| 8 | | 40 | 0 | 40 | 0 | 1 | 0 | 0 | | | |
| 9 | | 12 | 24 | 1 | 2 | 12 | 0 | 0 | | | Narrowing |
| 10 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | | |
| 11 | | 0 | 23 | 0 | 23 | 1 | 0 | 0 | | | |

| Line Editor Line 3 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 22 | 8 | | | |
| 2 | 1 | 10 | 2 | 1 | | |
| 0 | 1 | 1 | 2 | 1 | | |

| Line Editor Line 7 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-------------|-------------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width - - - | Width \ \ \ |
| | | 12 | 16 | | | |
| 4 | 1 | 2 | 2 | 1 | | |
| 0 | 1 | 1 | 2 | 1 | | |

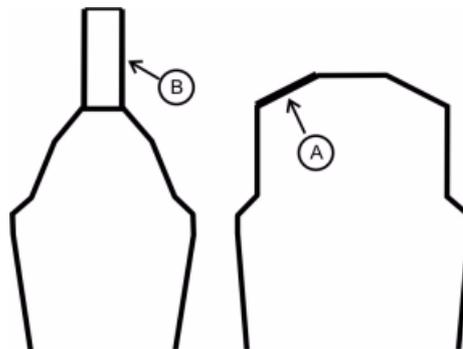
7) Allocate the desired attributes **Narrowing** and **Widening** to the edges under "Function".

| Adjustments | | | |
|------------------|-------------------|------------------|--|
| Line 3 | | | |
| Narrowing | Fade-out width | 5 (odd-numbered) |  |
| | Fade-out type | "2x2 RL rib" | |
| | Narrowing width | 5 (odd-numbered) |  |
| | Type of narrowing | Body-rib | |
| Line 5 | | | |
| Widening | Fade-out width | 1 |  |
| | Fade-out type | Jersey | |
| | Widening width | 1 | |
| | Widening type | Standard | |

| Adjustments | | | |
|------------------|-------------------|---|--|
| Line 7 | | | |
| Narrowing | Fade-out width | 4 (even-numbered) |  |
| | Fade-out type | Private Fade-out module "2x2-Rib-^^v" | |
| | Narrowing width | 4 (even-numbered) |  |
| | Type of narrowing | Body Rib Layers apart | |

8) Allocate the **Narrowing** function to the shoulder edge (A) under "Function" in the "General" tab.

| Setting | | |
|------------------|-------------------|------------------------------------|
| Line 9 | | |
| Narrowing | Fade-out width | 0 |
| | Narrowing width | 0 |
| | Type of narrowing | Perform narrowing in sleeve |



i

Generate a shape for the back with the same specifications as for the front without the gore element.

II. Generate the neck gore element in the Shape editor:

- 1) Open the shape **Saddle shoulder-2x2 front part**.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the **Gore** entry in the "Type" section list.
- 4) Set the coordinates for the gore.

Gore in front element

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | | 0 | -2 | 0 | -2 | 1 | 0 | 0 | | 0 | |
| 2 | | 6 | -12 | 1 | -2 | 6 | 0 | 0 | | 0 | |
| 3 | | 4 | 0 | 4 | 0 | 1 | 0 | 0 | | 0 | |
| 4 | | 0 | 14 | 0 | 14 | 1 | 0 | 0 | | | |

- 5) Define the distance to the "base line" or to the "end line".



Do not connect the gore element to the end line.

III. Generate the element for the sleeve in the Shape Editor:

- 1) Open the shape editor via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w Sleeve** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values in the table.

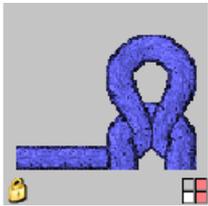
Sleeve

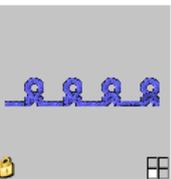
| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -36 | 0 | -36 | 1 | 0 | 0 | | | Basis |
| 2 | | 102 | -17 | 6 | -1 | 17 | 0 | 0 | | | Widening |
| 3 | | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | | |
| 4 | ✓ | 16 | 16 | 0 | 0 | 0 | 0 | 0 | | | Narrowing |
| 5 | ✓ | 36 | 24 | 0 | 0 | 0 | 0 | 0 | | | Narrowing |
| 6 | | 24 | 0 | 24 | 0 | 1 | 0 | 0 | | | Narrowing |
| 7 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | | |
| 8 | | 0 | 13 | 0 | 13 | 1 | 0 | 0 | | | |

| Line Editor Line 4 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 12 | 16 | | | |
| 4 | 1 | 2 | 2 | 1 | | |
| 0 | 1 | 1 | 2 | 1 | | |

| Line Editor Line 5 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 36 | 24 | | | |
| 6 | 1 | 5 | 2 | 1 | | |
| 0 | 1 | 1 | 2 | 1 | | |

4) Allocate the attribute for **Narrowing** and **Widening** under "Function".

| Adjustments | | | |
|-----------------|----------------|----------|---|
| Line 2 | | | |
| Widening | Widening width | 1 |  |
| | Widening type | Standard | |
| Fade out | Fade-out width | 1 | |
| | Fade-out type | Jersey | |

| Line 4 + line 5 | | | |
|------------------|-------------------|-------------------------|---|
| Narrowing | Fade-out width | 6 (even-numbered) |  |
| | Fade-out type | 2x2 RL- rib (vv^) | |
| | Narrowing width | 6 (even-numbered) |  |
| | Type of narrowing | Sleeve Rib Layers apart | |

- 5) Allocate the **Narrowing** function to the sleeve element on the saddle edge (B) under "Function" in the "General" tab.

| | | |
|------------------|-------------------|--|
| Line 6 | | |
| Narrowing | Fade-out type | no |
| | Fade-out width | 0 |
| | Type of narrowing | <ul style="list-style-type: none"> ▪ Sleeve underneath ▪ Sleeve underneath Layers apart |
| | Narrowing width | Narrow entire width of sleeve |

III. Generate the Collar shape element:

- 1) Open the shape editor via "Shape" / "Generate/Edit Shape...".
- 2) Select the **k&w collar** entry in the "Type" selection menu under "General shape data".
- 3) Specify the information for the collar under "Left Lines".

Collar

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width /// | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------------|
| 1 | | 0 | -10 | 0 | -10 | 1 | 0 | 0 | | | Basis |
| 2 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 3 | | 0 | 10 | 0 | 10 | 1 | 0 | 0 | | | <i>Bind-off</i> |

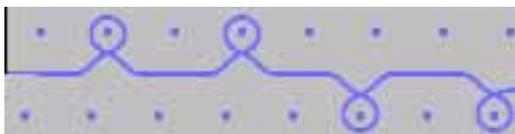
- 4) Set **bind-off** for the end line and allocate the attributes under "Function" in the "General" tab.

| | | |
|-----------------|---------------|--|
| Adjustments | | |
| Line 1-3 | | |
| Fade out | No fading-out | |
| Line 3 | | |
| Binding-off | Directory | Standard |
| | Module | <ul style="list-style-type: none"> ▪ "Neckline" ▪ "Fast cut-out" |

15.3.4 Generate your own container module mirroring for fading out

I. Generate k&w fade-out module:

- 1) Call up the "New module" dialog box via the "Module" / "New" / "Module ... " menu.
- 2) Make settings:
 - Module names: xxx_0<
 - k&w option
 - Specify width / height in stitches.
 - Basic pattern
 - ⇒ **Result:**
The module will be presented in k&w technique: The **width** in 1x1 technique and the **height** in complete rows.
- 3) Confirm settings with "OK".
- ⇒ The "Properties of: XX" dialog box appears.
- 4) Open the ones of the "Technique" tab and make settings:
- 5) Confirm the settings in the dialog box with "OK".
- 6) Draw the desired structure with "knit and wear binding elements" for layer L0 in the "Module editor".



- ⇒ When drawing with the "knit and wear binding elements", the knitting and the column layer are automatically taken into account.
- 7) Close the Module Editor with .
 - ⇒ The module is saved under "New Modules" in the "Module Explorer of Database".

II. Generate Container Module Mirror:

- 1) Call up via the "Module" / "New" / "Container Module Mirroring..." menu.
⇒ The New container module mirroring is displayed.



- 2) Drag a generated structure module onto the **lower left** position of the "New container module" container using Drag & Drop.



Only "Non-mirrored" modules that are saved in the Module Explorer of Database can be inserted.

- Only the original module is saved in the Module Explorer of Database.
 - The other modules are automatically generated and displayed in the mirrored positions.
 - If the original module contains the name ending _0<, the name endings for the automatically generated modules will be generated automatically.
 - Mirrored modules are automatically marked with the A symbol.
- 3) Click the "OK" button.
⇒ The module is saved to the "New Modules" module group of the "Module Explorer of Database".

15.3.5 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back, sleeve and collar in the "Shapewizard" into a **Saddle shoulder 2x2.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
- 3) Select shape.



Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.

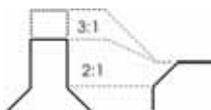
- 4) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|--|--|
| B1-Type 1 (no connection L0-L1) | Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |

- 5) Activate the "Saddle shoulder with 2:1 compensation" checkbox.



The 3:1 standard ratio will be used automatically.



- 6) Activate the "Use k&w Arrangements for Rib" checkbox.

15.3.6 Shapewizard: Determine docking points and k&w Arrangements

I. Open ShapeWizard and set docking points:

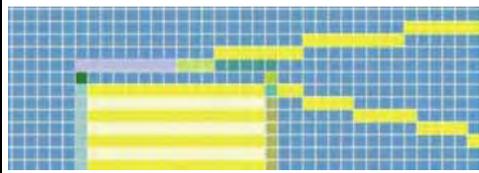
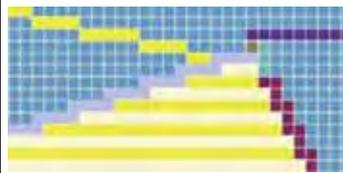
- 1) Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.
- 2) Open the "Docking Points" dialog box with the  icon in the toolbar of the "Shapewizard".
- 3) Set the docking point for "sleeve-body".



- 4) Docking point "Suspend Body".
From the last but two row of the arm to the last but two row of the body.



To create this connection, use the "Ctrl" key.

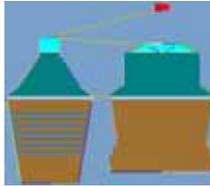
| Docking point Suspend Body | |
|--|---|
| Sleeve - saddle | Body - shoulder |
|  |  |



- 5) Set the docking point "Collar".
⇒ The width of the collar element is adjusted by the docking point.

II. Determine k&w Arrangements:

- 1) Press "Determine k&w Arrangements".



The determined k&w Arrangements can be deleted with the "Initialize" button.

- 2) Save the k&w Arrangements as kaw file via the "File" / "Save" or "Save as".



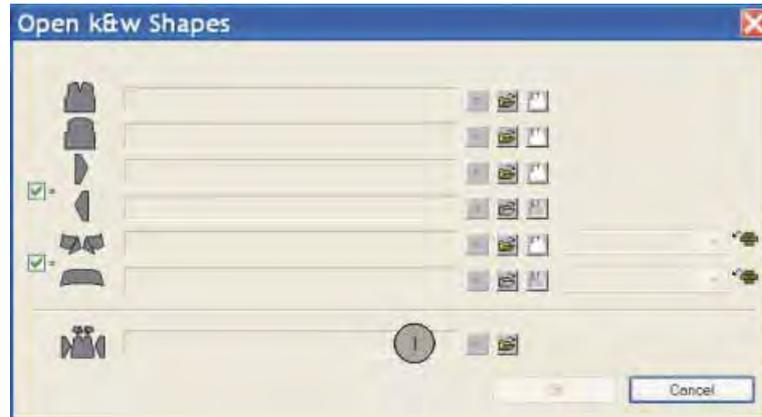
The elements of the shape (front, back, sleeve and collar) and the kaw file must all be located in the same directory.

- 3) Close the "Shapewizard" dialog box.

15.3.7 Open shape

Lay the kaw file onto the basic pattern:

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the selection with "OK".
- ⇒ The kaw file lies on the basic pattern.

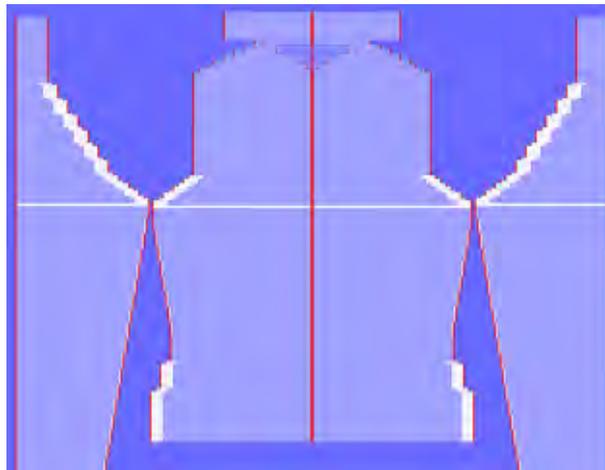
15.3.8 Position and cut-out the shape and expand the pattern

I. Position the shape:

▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".

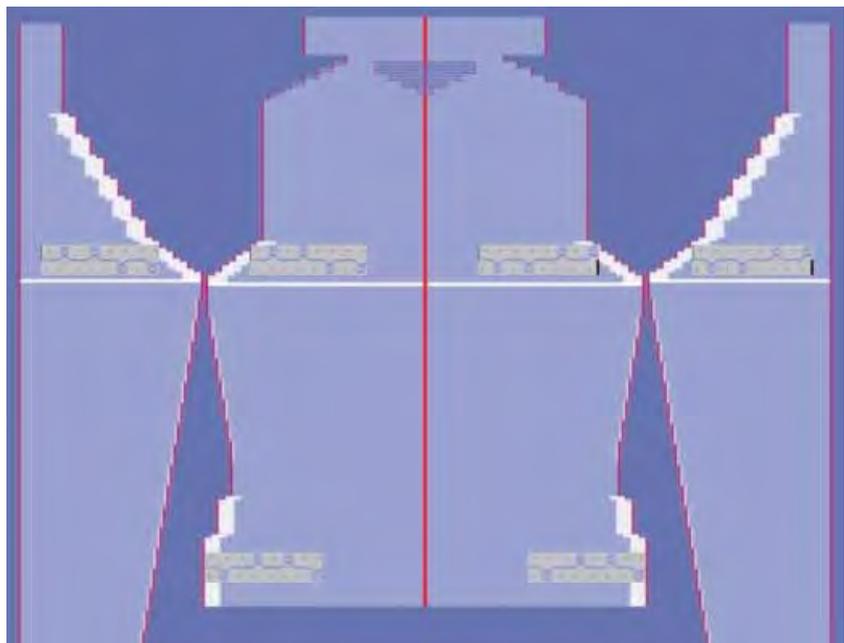
1) Position the elements **sleeve** vertically on the motif with the selected

icon  and the left mouse button pressed.



2) Position the elements **body** and **sleeve** horizontally in the basic pattern.

⇒ The 2x2-RL rib runs continuously from the body to the sleeves.



II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select a "k&w_2x2" start.
- 4) Confirm with "OK".

III. Expand the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.

15.3.9 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

15.4 Shapewizard: Cardigan with inserted sleeve



| | | |
|-------------------------|--|-----|
| | | |
| Pattern name: | Jacke mit eingesetztem Arm | |
| Pattern size: | Width: | 280 |
| | Height: | 280 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | 1X1 - Rib | |
| Basic pattern: | Jersey | |
| Knitting technique | knit and wear | |
| Description of pattern: | k&w shape cardigan with inserted sleeve | |

15.4.1 Generate Pattern without Shape

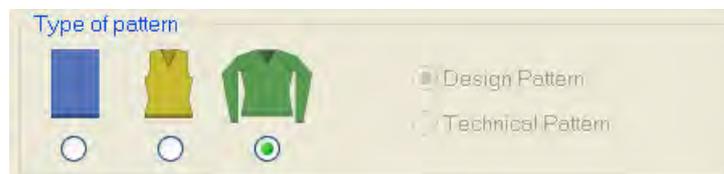
Generate knit and wear pattern:

- 1) Select "File" / "New" from the menu bar.

- or -

➔ Click the  icon.

- 2) Enter a pattern name.
- 3) Select machine.
- 4) Type of pattern: Select **k&w pattern** type.



- 5) Enter height and width of the pattern field.
Width: 280
Height: 280
- 6) Select "Jersey" for the basic pattern via the selection list.



The start will be inserted with the **Cut-out shape** step of processing.

- 7) Confirm the settings with the "Generate Design Pattern" button.
⇒ Symbol View [Basic] in k&w presentation appears.

15.4.2 Rules for generating a shape: Inserted sleeve

Rules for knit and wear with inserted sleeve

| Rules for the inserted sleeve: | |
|--|--|
|  | |
| 1 | Length difference between sleeve and body has to be divisible by two. (e.g. 2, 4, 6 etc.) |
| 2 | No widening or narrowing below the sleeve cross-over (6 rows). |
| 3 | The shoulder gore is to be at least 6 rows high and divisible by 2. |
| 4 | The end line of the sleeve has to be divisible by the "Stitch number for remaining narrowing" set. (1, 2 or 1-2) |
| 5 | The sleeve between sleeve-body connection and the shoulder start has to be shorter than the body. |

Rules for knit and wear cardigan with inserted sleeve

| Rules for a cardigan with inserted sleeve | |
|---|---|
|  | |
| 1 | Front with separation over the entire height |
| 2 | Front collar with separation over the entire height |
| | Docking points in the body onto even row number |

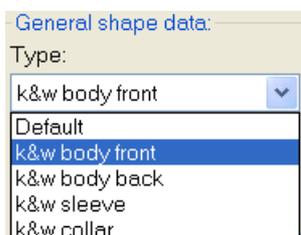
15.4.3 Create shape: Cardigan with inserted sleeve

I. Generate a front and back in the Shape Editor:



For the shape of a cardigan, the elements **opening** and **gore** have to be inserted in the Front shape element.

- 1) Open the "Shape editor" via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w... entry under "General shape data".



- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Open the table with "Left Lines" and enter the values for the front and the back.

II. Variants for working out the shoulder:

- **Gored shoulder with binding-off**

Front / Back

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -60 | 0 | -60 | 1 | 0 | 0 | | | Basis |
| 2 | | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | | |
| 3 | | 30 | 5 | 6 | 1 | 5 | 0 | 0 | | | Narrowing |
| 4 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 5 | | 30 | -5 | 6 | -1 | 5 | 0 | 0 | | | Widening |
| 6 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 7 | | 12 | 12 | 2 | 2 | 6 | 0 | 0 | | | Narrowing |
| 8 | | 38 | 0 | 38 | 0 | 1 | 0 | 0 | | | |
| 9 | | 10 | 30 | 1 | 3 | 10 | 0 | 0 | | | Gore |
| 10 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | | |
| 11 | | 0 | 18 | 0 | 18 | 1 | 0 | 0 | | | |

- 1) Allocate the necessary settings to the shape edges.
- 2) Allocate the **gore** cycle to the shoulder edge (No. 8) under "Function" in the "General" tab.
- 3) Specify the type of binding-off in the "Bind-off" tab.

i The shoulder will be done in gore technique and then knit-off and bound-off.

- 4) Select the module of the desired type of binding-off in the "Standard" directory

| | | |
|------------------------|-----------------------------------|----------------------|
| Standard binding-off | Simultaneous shoulder binding-off | Function |
| "Shoulder standard 01" | "Shoulder simultaneous 01" | Narrow shoulder seam |
| "Shoulder standard 02" | "Shoulder simultaneous 02" | Wide shoulder seam |

i Create the shape for the back following the same procedure and make the same settings.

▪ **Narrowed shoulder**

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -200 | 0 | -60 | 0 | -60 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 100 | 16 | 30 | 5 | 6 | 1 | 5 | 0 | 0 | 0 | Narrowing |
| 3 | | 39 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 100 | -16 | 30 | -5 | 6 | -1 | 5 | 0 | 0 | 0 | Widening |
| 5 | | 39 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 6 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | 0 | 0 | Narrowing |
| 7 | | 126 | 0 | 39 | 0 | 39 | 0 | 1 | 0 | 0 | 0 | |
| 8 | | 53 | 106 | 16 | 32 | 1 | 2 | 16 | 0 | 0 | 0 | Narrowing |
| 9 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 10 | | 0 | 53 | 0 | 16 | 0 | 16 | 1 | 0 | 0 | 0 | |

- 5) Allocate the necessary settings to the shape edges.
- 6) Allocate **narrowing** for the shoulder edge (No. 8) under "Function" in the "General" tab.
- 7) Set the narrowing type **Shoulder** in the "Narrowing" tab under "Module".
- 8) Also activate the "k&w-Shoulder narrowing [FRONT]" checkbox in the "Connections" tab.

i Create the shape for the back following the same procedure and make the same settings. However, the "k&w- Shoulder narrowing" checkbox needs not be activated.

III. Generate the neck gore element in the Shape editor:

- 1) Open the shape **Inserted sleeve cardigan front**.
- 2) Generate a new element in the "Shape Editor" via .
- 3) Select the **Gore** entry in the "Type" section list.
- 4) Specify the values for the neck gore under "Left Lines".

Gore in front element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | | 0 | -6 | 0 | -2 | 0 | -2 | 1 | 0 | 0 | | 0 | |
| 2 | | 20 | -40 | 6 | -12 | 1 | -2 | 6 | 0 | 0 | | 0 | |
| 3 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | | 0 | |
| 4 | | 0 | 46 | 0 | 14 | 0 | 14 | 1 | 0 | 0 | | | |

- 5) Specify the "Distance to the end line" (**2** at minimum) for the **gore** element.



IV. Insert Opening element in the front:



The cardigan shape is not knitted continuously in the front.

- 1) Create a new element for the opening of the cardigan in the front with .
- 2) Select the **Opening** entry in the "Type" section list.
- 3) Insert a new line and specify the height for the opening under "Left Lines".



The height of the opening corresponds to the total height of the front piece.

Opening element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 193 | 0 | 148 | 0 | 148 | 0 | 1 | 0 | 0 | 0 | |



Further settings are not necessary for the opening element.

- 4) Save shape.

V. Generate the shape element for the sleeve in the Shape Editor:

With the shape with inserted sleeve the remaining stitches will be connected to the body by **Remaining Narrowing** (Narrowing without knitting).

Sleeve element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -93 | 0 | -28 | 0 | -28 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 266 | -33 | 80 | -10 | 8 | -1 | -10 | 0 | 0 | 0 | Widening |
| 3 | | 30 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 53 | 26 | 16 | 8 | 2 | 1 | 8 | 0 | 0 | 0 | Narrowing |
| 5 | | 66 | 66 | 20 | 20 | 1 | 1 | 20 | 0 | 0 | 0 | Narrowing |
| 6 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 7 | | 0 | 32 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | 0 | Narrowing |

- 1) Assign **Narrowing** to the end line under "Function" in the "General" tab.
- 2) Select "Remaining narrowing" in the selection list under "Module" of the **Narrowing** tab .



The "Narrow entire width of sleeve" checkbox will be activated automatically.

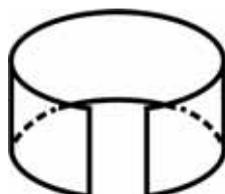
- 3) In the "Connections" tab activate **k&w Remaining Narrowing (SLEEVE-END)**.
- 4) Specify the desired number of stitches in the "Bind-off number of stitches with shoulder gore" input field of the "Narrowing" tab.
 - ⇒ The specified number of stitches will be bind-off together with the shoulder.
 - **No specification:**
All the stitches will be narrowed during the remaining narrowing. A small hole results at the transition.
 - **Specification:**
The specified number of stitches will **not** be narrowed during the remaining narrowing.
No hole results at the transition.
- 5) Confirm entry with "OK".
 - ⇒ The sleeve element is saved.

VI. Generate the element for the collar in the Shape Editor:



The cardigan shape requires a collar element with opening.

Collar with opening



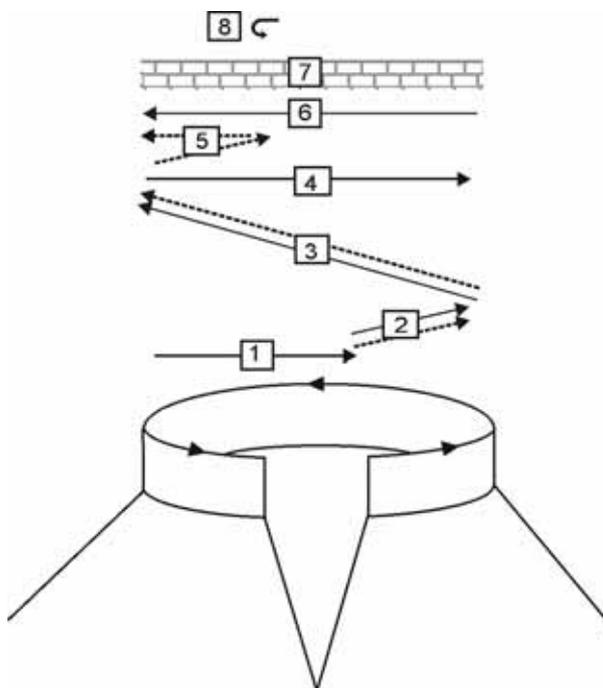
- 1) Open the shape editor via "Shape" / "Generate/Edit Shape...".
- 2) Select the **k&w collar** entry in the "Type" selection menu under "General shape data".
- 3) Specify the information for the collar under "Left Lines".

Collar front and back basic element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 0 | -33 | 0 | -10 | 0 | -10 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 33 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | 0 | Link-off |

- 4) Set **bind-off** for the end line under "Function" in the "General" tab.
- 5) Select "Standard" under directory in the "Bind-off" tab.
- 6) Set "Fast cut-out" for the binding-off type "Neckline open L0" under "Module".

Binding-off cycle for the polo collar (Neckline open L0)



| | Description |
|---|---|
| 1 | Knit in draw thread layer 0 (front). |
| 2 | Bind off layer 0 the draw thread is carried along. |
| 3 | Bind-off layer 1 (back) the draw thread is carried along. |
| 4 | Knit draw thread to the right. |
| 5 | Bind off layer 0. |
| 6 | Knit draw thread to the left. |
| 7 | Protection rows. |
| 8 | Fix the bind-off stitch. |



Generate a shape for the back collar with the same specifications as for the front without the **opening** element.

VII. Insert Opening element in the front of the collar:

- 1) Create a new element under Elements with the  key.
- 2) Set the **Opening** entry in the "Type" section list.
- 3) Specify the height (= height of collar) for the opening under "Left lines".
- 4) Save shape.

15.4.4 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back, sleeve and collar in the "Shapewizard" into a **Cardigan with inserted sleeve.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
 - ⇒ The "Open" dialog box appears in order to select a shape file.
- 3) Select shape.
 - ⇒ The shape will be loaded and the name will be displayed und "Body front".



Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.

- 4) Specify the knitting mode of the collar in the selection menu under front/back collar.
e.g.: "1X1 Collar".



For the collar element pay attention to:

- The collar width matches the width of the module used.
- The collar width is dependent on the docking points.
- The end width of the sleeve and body matches the width of the module used.

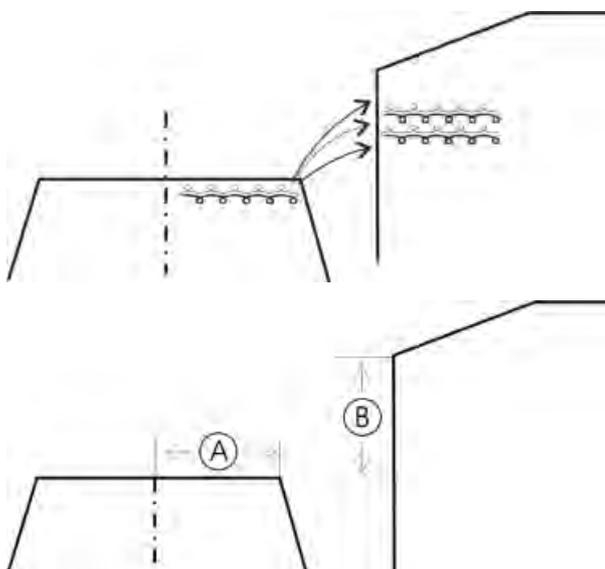


If you change outer dimensions of the front, then you must adapt the back.

- 5) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|---------------------------------------|--|
| B2 Type 1 with opening | With non-continuous stitch rows (cardigan, vest, V-neck, neck gore). |
| B2-Type 1 TC-T with opening L0 | With non-continuous stitch rows (cardigan, vest, V-neck, neck gore). Use for k&w patterns knitted with all the needles. |

6) Specify the number of stitches and rows for **remaining narrowing**.



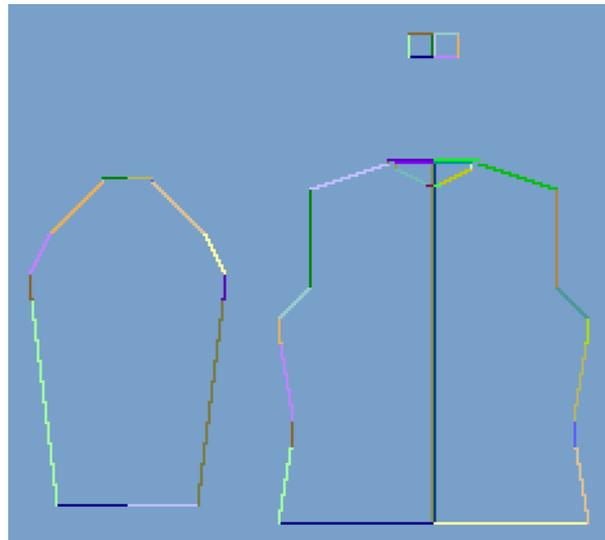
Possible settings for remaining narrowing

| Stitches (A) | Rows (B) | Function |
|--------------|----------|--|
| 1 | 1 | With the remaining narrowing 1 row in the body is knitted on L0 and then 1 stitch (L0+L1) is narrowed from the sleeve. The ratio between sleeve (A) and body (B) is 1:1 . |
| 1 | 2 | With the remaining narrowing 2 rows in the body are knitted on L0 and then 1 stitch (L0+L1) is narrowed from the sleeve. The ratio between sleeve (A) and body (B) is 1:2 . |
| 2 | 1 | With the remaining narrowing 1 row in the body is knitted on L0 and then 2 stitches (L0+L1) are narrowed from the sleeve. The ratio between sleeve (A) and body (B) is 2:1 . |
| 2 | 2 | With the remaining narrowing 2 rows in the body are knitted on L0 and then 2 stitches (L0+L1) are narrowed from the sleeve. The ratio between sleeve (A) and body (B) is 2:1 (=1:1) . |

15.4.5 Shapewizard: Determine docking points and k&w Arrangements

I. Open ShapeWizard and set docking points:

- 1) Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.
- 2) Open the "Docking Points" dialog box with the  icon in the toolbar of the "Shapewizard".



- 3) Set the docking points for "sleeve-body".

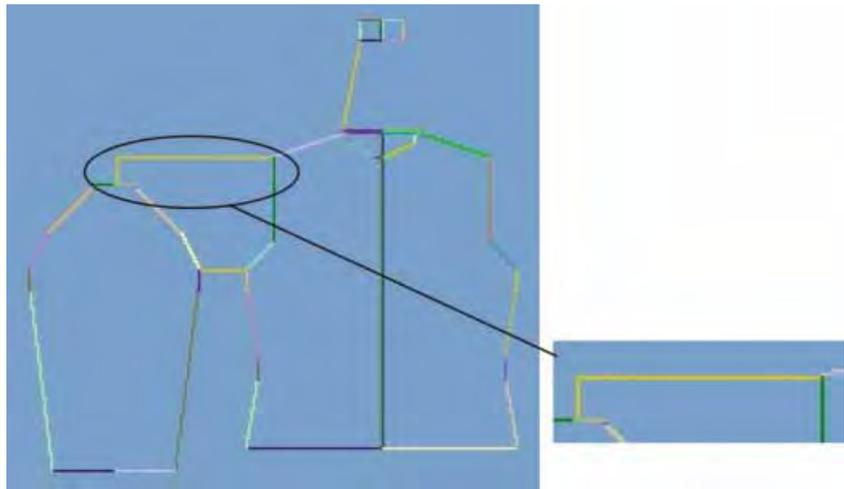


If the "Ctrl" key is pressed while specifying the docking points, then the cursor automatically jumps to the nearest edge start or edge end.

- 4) Set "remaining narrowing" docking point:
⇒ The **Remaining narrowing** connects the stitches remaining at the end of the sleeve to the body.



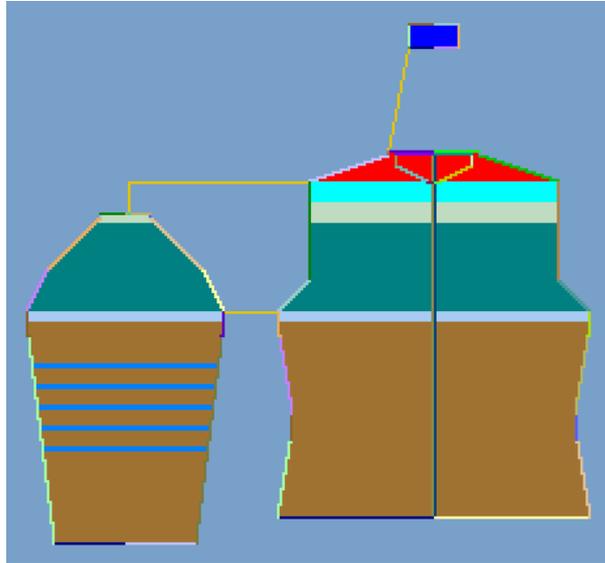
If the **remaining narrowing** docking point is specified, then the **Suspend sleeve** docking point will be calculated automatically.



- 5) Set the number of stitches and rows for the remaining narrowing in the "ShapeWizard" dialog box.
 - 6) Set the docking point "Collar".
 - Always set the connecting line on the left collar side.
 - The same position is automatically applied for the right side.
 - Overwrite the position for the right side in the "Docking points" dialog box if you wish the collar to be positioned asymmetrically.
- ⇒ **Result:**
The width of the collar element is adjusted by the docking point.

II. Determine k&w Arrangements:

- 1) Press "Determine k&w Arrangements".



You can delete the determined k&w Arrangements with the "Initialize" button.

- 2) Exchange k&w Arrangements:
Select the k&w Arrangement in the "ShapeWizard" dialog box by double click.
⇒ A window with alternative k&w Arrangements appears.
- 3) Select the desired k&w Arrangement.
- 4) Close the dialog box with the "OK" button.
⇒ The selected k&w Arrangement is inserted.



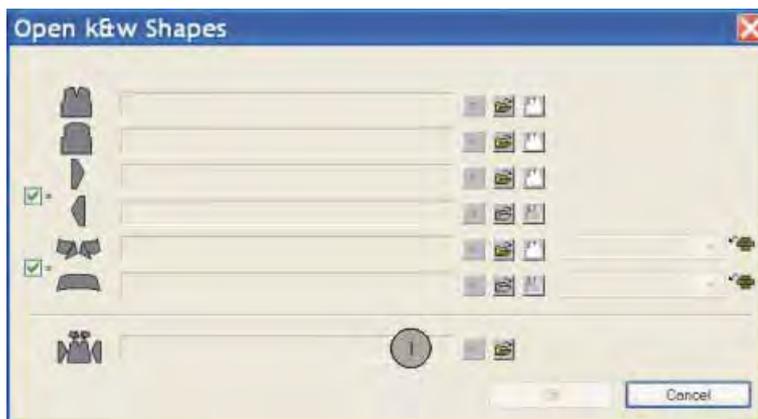
The elements of the shape (front, back, sleeve and collar) and the **kaw** file must all be located in the same directory.

- 5) Close the "Shapewizard" dialog box.

15.4.6 Lay shape on

Lay the kaw file onto the basic pattern:

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the selection with "OK".
- ⇒ The kaw file lies on the basic pattern.

15.4.7 Position and cut-out the shape and expand the pattern

I. Position the shape:

- ▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".
- 1) Position the shape elements **Sleeve** and / or **Body with collar** on the motif with the  symbol selected and the left mouse button pressed.
- 2) Select the desired k&w presentation.

II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
- ⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm with "OK".
- ⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm with "OK".

III. Expand the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
- ⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
- ⇒ The shape edges with the **Widening** attribute are corrected
The bind-off module for the collar is inserted.

15.4.8 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

15.5 Working with the Shape View

You can carry out different corrections in the Shape view after the shape is laid on.

15.5.1 Presentation in the Shape View

I. Change presentation in shape preview:

▷ The shape with k&w Arrangements is located on the pattern after "Open and Position Shape...".

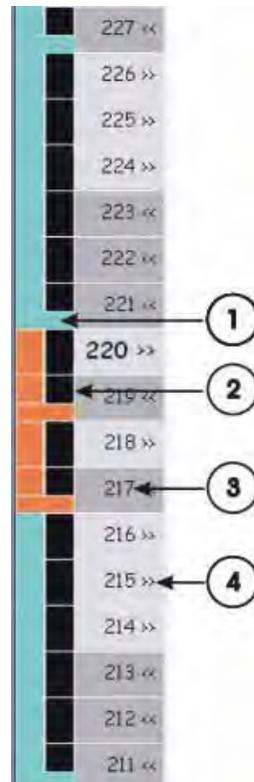
1) Call up the shape view with the  button.

⇒ The shape with the determined k&w Arrangements in 1x1 presentation is displayed.

2) Select the desired view and knitting layer in the "Pattern Presentations k&w" dialog box of the toolbar:

| Property | | |
|---|---|---|
|  | All layers | Presentation of the front L0 and the back L1 layer. |
|  | Knitting layer L0 | Presentation of the layer L0 with all needles (1x1 technique) |
|  | Knitting layer L1 | Presentation of the layer L1 with all needles (1x1 technique) |
|  | Display the columns of the knitting layer L0 only | Presentation of the knitting needles of the front layer L0. |
|  | Display the columns of the knitting layer L1 only | Presentation of the knitting needles of the back layer L1 |
| <hr/> | | |
|  | Display Pattern Cut-out | k&w preview only possible in the state of pattern  Result: The positioned shape will be displayed cut out with structure and color in the Symbol view . i : Allocate CA and MA. |
|  | Display Pattern Folded out | Presentation of the shape with shape attributes (narrowing, fade-out, aligning symbols) and sleeves folded out. i : Modify the steppings at the outer edges. |
|  | Display Pattern Collapsed | Presentation of the shape with shape attributes without the Suspend symbols. i : The symbol  will automatically get active. |

II. Presentation of the k&w Arrangements in the control column of the shape view:



| No. | Meaning |
|-----|---|
| 1 | The k&w Arrangements will be presented with different colors. <ul style="list-style-type: none"> ▪ The horizontal color mark shows the beginning of a k&w Arrangement. ▪ The vertical color mark shows the total height of a k&w Arrangement. |
| 2 | The Color Arrangements will be presented with different colors. <ul style="list-style-type: none"> ▪ Black color entry: No Color Arrangement is allocated. ▪ Color entry: A Color Arrangement is allocated |
| 3 | Pattern rows with numbering |
| 4 | Carriage direction of the k&w Arrangements |

III. Context menu in the control column of the shape view:

- 1) Place the cursor on the desired pattern row.
- or -
- ➔ Create row selection.
- 2) Call up the context menu with the right mouse button.
- 3) Make the desired changes.

| Selection | Function |
|---|---|
| Carriage direction to the left Carriage direction to the right | Carriage direction can be modified |
| Reverse carriage direction | The carriage direction is reversed |
| Allocate a Color Arrangement from the k&w Arrangement | A Color Arrangement is generated from k&w Arrangement. |
| Undetermined | The allocated CA is removed |
| List with allocated CAs | The allocated CAs with the corresponding color are listed |

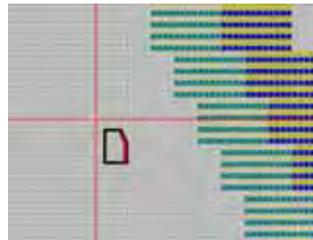
IV. Presentation of the shape part color in the shape view:

- ▷ The processing step  has to be performed for presenting the shape part colors.
- 1) Deactivate .
 - 2) Activate the presentation of the shape part colors with  or .

15.5.2 Shape tools in the shape view

I. Cursor presentation in the different shape parts:

When positioning the cursor in the different shape parts, the graphic presentation of the cursor is changed.

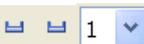


II. The Shape Attributes toolbar:



| | Name | Properties and function |
|---|--|--|
|  | Outside shape | During processing step  : Symbol not active. After processing step  : Symbol active. |
|  | Shape part color (within shape) | <ul style="list-style-type: none"> Selection from list and / or direct allocation of shape part colors. For changing the size of a shape part Locate shape edge to be moved and press and hold down "LMB". Move the cursor  to specify the row selection. The selection is moved by the movement . |
|  | Shape edge | <ul style="list-style-type: none"> Selection from list and / or direct allocation of shape edge color. For changing a shape edge color |
|  | Markings | Selection from list and / or direct allocation of shape marking colors. During processing step  : Symbol not active. After processing step  : Symbol active. |
|  | Gore | Non-knitting areas (suspension) can be changed into gore areas. A binding is inserted in the gore areas during the processing step Expanding . With the "LMB" pressed, move the cursor or click in a field with the "LMB" to fill the area. |
|  | Narrowing | Change the narrowing width. Position the cursor on the desired narrowing edge and move the cursor  or/ and  with the "LMB" pressed. <ul style="list-style-type: none">  Change the narrowing width  Select narrowing edges "Shift" + "LMB": Unequal narrowing actions are set to the cursor position. |

| | Name | Properties and function |
|---|---|---|
|  | Fade out | <p>Change fade-out width.</p> <p>Position the cursor on the desired fade-out edge and move the cursor  or / and  with the "LMB" pressed.</p> <ul style="list-style-type: none"> ▪  Change fade-out width ▪  Select fade-out edges <p>"Shift" + "LMB": Unequal fade-out widths are set to the cursor position.</p> |
|  | Separation | <p>During processing step : Symbol not active.</p> <p>After processing step : Symbol active.</p> |
|  | Binding-off | <p>Change binding-off width.</p> <p>Position the cursor on the desired binding-off edge and move the cursor  or / and  with the "LMB" pressed.</p> <ul style="list-style-type: none"> ▪  Change the binding-off width ▪  Select the binding-off edges <p>"Shift" + "LMB": Unequal link-off widths are set to the cursor position.</p> |
|  | Stitch length change | Use different stitch lengths on shape edge (PTS) |
|  | Aligning within Shape Part to the Left | <p>During processing step : Symbol not active.</p> <p>After processing step : Symbol active.</p> <p>Enter symbols within a shape.</p> <p>: The area on the right of the symbol will be moved to the left.</p> |
|  | Aligning within Shape Part to the Right | <p>During processing step : Symbol not active.</p> <p>After processing step : Symbol active.</p> <p>Enter symbols within a shape.</p> <p>: The area on the left of the symbol will be moved to the right.</p> |
|  | Aligning outside Shape Part to the Left | <p>During processing step : Symbol not active.</p> <p>After processing step : Symbol active.</p> <p>Enter the symbols outside of a shape part.</p> <p>The shape part on the right of the symbol will be tilted to the left.</p> |
|  | Aligning outside Shape Part to the Right | <p>During processing step : Symbol not active.</p> <p>After processing step : Symbol active.</p> <p>Enter the symbols outside of a shape part</p> <p>: The shape part on the left of the symbol will be tilted to the right.</p> |

| | Name | Properties and function |
|---|---------------------------------------|--|
|  | Suspension downward | <p>Non-knitting rows above the sleeve body connection.</p> <p>During processing step : Symbol not active.</p> <p>After processing step : Symbol active.</p> <p>Enter symbols within and above the sleeve body connection of a shape part</p> <p>↩: The rows with the symbol will be tilted downwards during the presentation .</p> |
|  | Suspension upwards | <p>Non-knitting rows below the sleeve body connection.</p> <p>During processing step : Symbol not active.</p> <p>After processing step : Symbol active.</p> <p>Enter symbols within and below the sleeve body connection of a shape part</p> <p>↩ The rows with the symbol will be tilted upwards with the  presentation.</p> |
|  | k&w suspend | <p>Non-knitting areas (gore) can be changed into suspending areas.</p> <p>No binding is inserted in the suspending areas during the processing step Expanding.</p> <p>With the "LMB" pressed, move the cursor or click in the field with the "LMB" to fill the area.</p> <p>i: Only during the processing step : Symbol active.</p> |
|  | k&w Separation of layers | <p>Use at the shape selvedge to avoid a connection between the layers.</p> <p>Move the cursor  with the "LMB" pressed and draw-in the "Separation of layers" symbol at the most outer needle of the edge.</p> <p>↩: The yarn fields are influenced by the symbol and the layers L0 and L1 are knitted with separate yarn carriers.</p> <p>Example: Sleeve opening for tank top / waistcoat or remaining narrowing.</p> |
|  | Multi-step narrowing | <p>Set markings for multi-step narrowing selecting different cover widths.</p> <p>i: Use only possible for narrowing type "Multi-step narrowing".</p> <p>Example: Fair Isle technique</p> |
|  | Remove single shape attributes | Shape Attributes = Narrowing, gore, fade-out, etc. can be deleted separately. |
|  | Remove all shape attributes | Delete shape attributes together. |
|  | Move lines | <p>Moving knitting rows within areas with suspension.</p> <p>↩: For changing a used k&w Arrangement.</p> <p>Move the cursor  with the "LMB" pressed.</p> <p>i: Knitting rows can only be moved within a layer.</p> |

| | Name | Properties and function |
|---|---|--|
|  | Selection | <p>Generating a selection for copying steps.</p> <p>Move the cursor  or / and  with the "LMB" pressed.</p> <p>Copy the selection ("Ctrl C") and insert  or insert mirrored  the selection hanging on the cursor.</p> <p>Additional possibility: Open the dialog box with the "ENTER" key before inserting:</p> <ul style="list-style-type: none"> ▪ Stepping: ▪ Actions: ▪ Edge numbers: <p>i: The selection Steppings has to be activated . The other selection options can be activated / deactivated as desired.</p> |
|  | Fixed step 1 | Changing the step width. |
| | Fixed step 2 | Define the end position with the "LMB" on the starting position and by moving the cursor. |
| | Fixed step 3 |  : The selected stepping is applied to the edges. In the process an uneven upward slope (step height) may result. |
| | Fixed step 4 | Possibility: |
| | Fixed step 5 | "Shift" + "LMB": The step width and the step height are inserted regularly. In the process a residual height without stepping may result. |
| | Fixed step 6 | |
|  | Automatic step with copied area. | <p>Change stepping with copied area.</p> <ol style="list-style-type: none"> 1. Create a selection with  and with the "LMB" pressed. 2. Copy the selection with "Ctrl+C". 3. Select . 4. Insert the selection hanging on the cursor with "LMB". |
|  | Use on both sides | <p>Changes are also carried out on the opposite shape edge.</p> <p>i: The key has to be activated additionally to the selected function.</p> |

- Simultaneous selection of several shape attributes is possible e.g.:
 - Fade out and narrowing
 - Fade out and link off

i The color edge picked up additionally has no effect when drawing in.

- With the "F6" key, the edge color can be picked up.
- Pick up the k&w Arrangement existing at the cursor position with the "F5" key.

15.5.3 Edit shape in the shape view.

I. Insert columns:

- 1) In the shape view, position the cursor in the shape element in which you want to insert the column.
- 2) Press the "Ins" key on the keyboard.
- ⇒ The "Insert columns" dialog box appears and automatically shows the shape part in which the cursor is located when opening the dialog box.
- 3) Specify the number of columns to be inserted.



Only an even number of columns can be inserted.

- 4) Modify the specified shape part via the selection box if necessary.
 - Body left or body right
 - Left sleeve or right sleeve
- 5) Confirm the entry with "OK".
- ⇒ The specified number of columns is inserted in the selected shape part.

II. Delete columns:

- 1) In the shape view, position the cursor on the shape element in which you want to delete columns.
- 2) Press the "Del" key on the keyboard.
- ⇒ The "Delete Columns" dialog box appears and automatically shows the shape part in which the cursor is located when opening the dialog box.
- 3) Specify the number of columns to be deleted.



Only an even number of columns can be deleted.

- 4) Confirm the entry with "OK".
- ⇒ The specified number of columns is deleted in the selected shape part.



When entering an impermissible number of columns the allowed number of columns at the maximum appears.

III. Insert rows or k&w Arrangements:

▷ Both layers are active.

1) Select a row in the row bar of the shape view.



Insert rows always between k&w Arrangements, not within a k&w Arrangements.

2) Press the "Ins" key on the keyboard.

⇒ The "Insert rows" dialog box appears.



3) Select the type of rows to be inserted:

- **Knit:** Insert knitting rows
- **Suspend:** Insert non-knitting rows

4) Select "Shape element / Elements", in which are to be inserted rows.

- Left body
- Right body
- Sleeve on the left
- Sleeve on the right



Select always the left and right element so that the shape remains symmetrical.

5) Specify the number of the rows to be inserted.

6) Specify the row under "Line", from which the number of rows is to be inserted.



The row number of the previously selected row is entered by default.

- 7) Activate  "before" or  "after".
- 8) Confirm entries with "OK".



Insert manually the corresponding k&w Arrangements in the inserted rows.

IV. Delete rows or k&w Arrangements:

- 1) Select one row or several rows in the row bar of the shape view.
 - 2) Press the "Del" key on the keyboard.
- ⇒ The selected rows will be deleted.

15.6 Shapewizard: Waistcoat with V-neck



| | | |
|-------------------------|-----------------------|-----|
| Pattern name: | Weste | |
| Pattern size: | Width: | 150 |
| | Height: | 200 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | 1X1 - Rib | |
| Basic pattern: | Jersey | |
| Knitting technique | knit and wear | |
| Description of pattern: | Waistcoat with V-neck | |

15.6.1 Generate Pattern without Shape

I. Generate knit and wear pattern:

1) Select "File" / "New" from the menu bar.

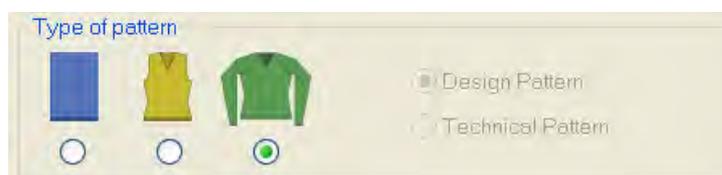
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select **k&w pattern** type.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field:

Width: 150

Height: 200



With k&w the size of the pattern field is automatically doubled in height and width.

6) Select "Jersey" for the basic pattern via the selection list.



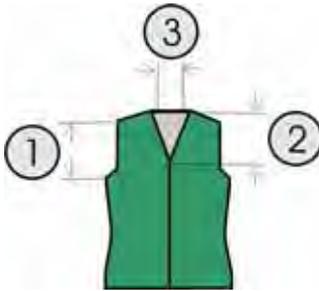
The start will be inserted with the **Cut-out shape** step of processing.

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

15.6.2 Rules for generating a shape: Waistcoat with V-neck

Rules for knit and wear waistcoat with V-neck

| Rules for waistcoat with V-neck | |
|---|--|
|  | |
| 1 | Height must be even-numbered from start of sleeve narrowing to start of shoulder. Basis: Sleeve cut-out open on side. |
| 2 | Height of the V-neck even-numbered |
| 3 | End line V-neck left and right side each two stitch rods less than back end line. |

15.6.3 Create shape: Waistcoat with V-neck

I. Generate a front and back in the Shape Editor:

- 1) Open the shape editor via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select in the **k&w body front** selection menu under "General shape data".
- 3) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -60 | 0 | -60 | 1 | 0 | 0 | | | Basis |
| 2 | | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | | |
| 3 | | 30 | 5 | 6 | 1 | 5 | 0 | 0 | | | Narrowing |
| 4 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 5 | | 30 | -5 | 6 | -1 | 5 | 0 | 0 | | | Widening |
| 6 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 7 | | 12 | 12 | 2 | 2 | 6 | 0 | 0 | | | Narrowing |
| 8 | | 38 | 0 | 38 | 0 | 1 | 0 | 0 | | | |
| 9 | | 10 | 30 | 1 | 3 | 10 | 0 | 0 | | | Gore |
| 10 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | | |
| 11 | | 0 | 18 | 0 | 18 | 1 | 0 | 0 | | | |

- 4) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".

i

From the sleeve-body connection up to the beginning of the shoulder, the front and the back may not have any connection laterally.

The following setting is to be made in the front and the back.

- 5) Activate for the shape edge no. 6 and 7 (arm hole) under the "Function" in the "Connections" tab the checkbox "k&w outer edge open e.g. tank top [FRONT/BACK]".
- 6) For the shape edge (no.8) of the shoulder, select the type **Gore** under "Function".
- 7) Specify the type of binding-off in the "Bind-off" tab:
 - "Shoulder standard - 01"
 - "Shoulder standard - 02"
- 8) Save shape.

II. Insert Neck element in the front:

▷ The front shape element is open in the Shape editor

- 1) Generate a new element in the Shape Editor with .
- 2) Select the entry **Neck opening** in the "Type" selection list.
- 3) Create the table under "Left Lines" and enter the values for the neck opening.

V-neck opening

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 106 | -53 | 32 | -16 | 2 | -1 | 16 | 0 | 0 | 0 | Narrowing |
| 2 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 53 | 0 | 16 | 0 | 16 | 1 | 0 | 0 | 0 | |

- 4) Assign **narrowing** to the base line (No.1) under "Function" in the "General" tab.
- 5) Specify the narrowing type in the "Narrowing" tab under "Module".
 - "V-neck above"
 - "V-neck underneath"
- 6) Specify the position of the V-neck via "Distance to end line".
- 7) Save shape.

III. Insert Opening element in the front:

i So that the vest can be opened, it is not knit along the entire length in the front.

▷ The front shape element is open in the Shape editor

- 1) Generate a new element in the Shape Editor with .
- 2) Select the **Opening** entry in the "Type" section list.
- 3) Create the table under "Left Lines" and enter the values for the opening.

i The height of the opening corresponds to the total height of the front piece.

Opening element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 493 | 0 | 148 | 0 | 148 | 0 | 1 | 0 | 0 | 0 | |

- 4) Save shape.

Further information

 Narrowing, widening and binding-off types [-> 73]

15.6.4 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front and back in the "ShapeWizard" into a **waistcoat.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
 - ⇒ The "Open" dialog box appears in order to select a shape file.
- 3) Select shape.
 - ⇒ The shape will be loaded and the name will be displayed und "Body front".



Load the shape elements for "Body back" following the same procedure.

- 4) Open the dialog box with the  key in the toolbar of the "ShapeWizard".
 - ⇒ The "Docking points" dialog box and "Shape display" are opened.

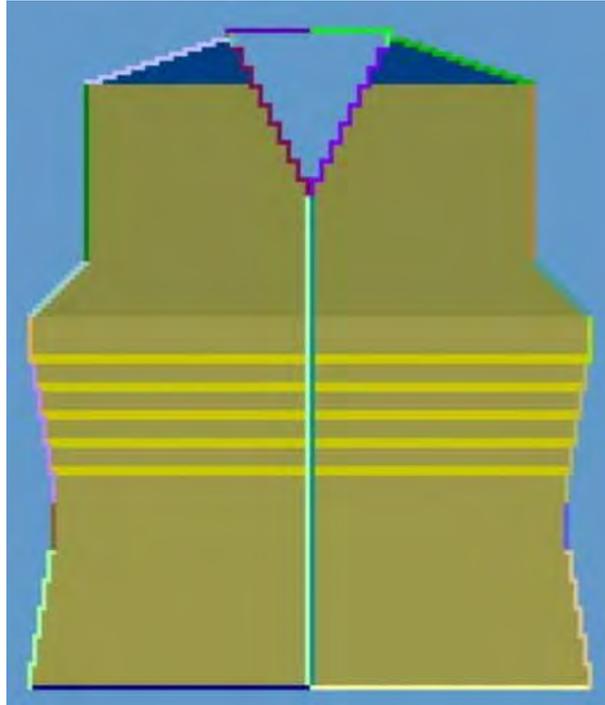


For knitting pieces **without** sleeve and collar you do not need to specify any docking points or make further settings in the "ShapeWizard" dialog box.

15.6.5 Shapewizard: Determine k&w Arrangements

Determine k&w Arrangements:

- ▷ The front and back shape elements are loaded.
- 1) Press "Determine k&w Arrangements".



You can delete the determined k&w Arrangements with the "Initialize" button.



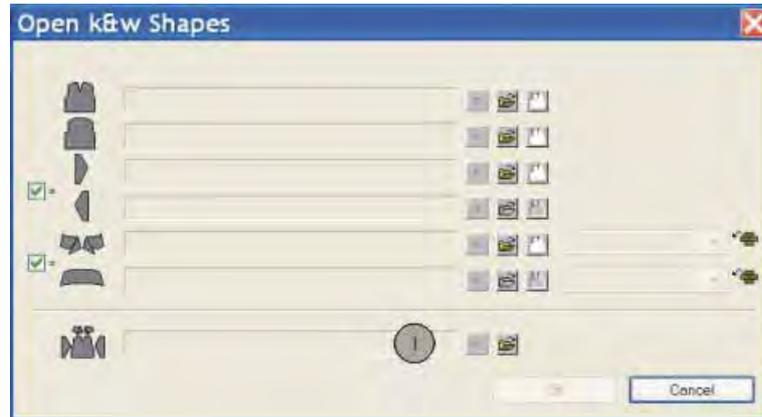
The elements of the shape (front and back) and the **kaw** file must all be located in the same directory.

- 2) Close the "Shapewizard" dialog box.

15.6.6 Open shape

Lay k&w file onto the basic pattern:

1) Call up the "Shape" / "Open and Position Shape..." menu.



2) Load the shape with the .kaw extension via  (1).

3) Confirm the selection with "OK".

⇒ The kaw file lies on the basic pattern.

15.6.7 Position and cut-out the shape and expand the pattern

I. Position the shape:

- ▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".
- 1) Position the **front** / **back** shape elements on the motif with the selected icon  and the left mouse button pressed.
- 2) Select the desired k&w presentation.

II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
- ⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm the settings in the dialog box with "OK".
- ⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm the settings with "OK".

III. Expand the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
- ⇒ The bind-off module for the collar is inserted.

15.6.8 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

15.7 Shapewizard: Short sleeve with V-neck



| | |
|-------------------------|--|
| Pattern name: | Kurzarm mit V-Ausschnitt |
| Pattern size: | Width: 280 Height: 280 |
| Machine type: | CMS 822 k&w |
| Gauge: | E 6.2 |
| Start: | 1X1 - Rib |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | <p>Pullover with short sleeve and V-neck</p> <ul style="list-style-type: none"> ▪ Own fade-out module in V-neck ▪ Own fade-out module in the narrowing area after sleeve body connection |

15.7.1 Generate Pattern without Shape

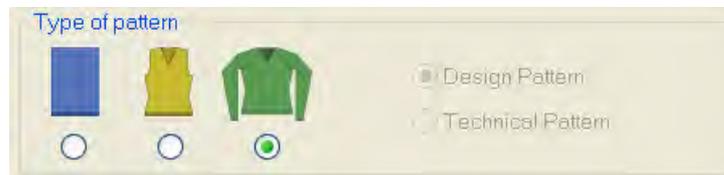
Generate knit and wear pattern:

- 1) Select "File" / "New" from the menu bar.

- or -

➔ Click the  icon.

- 2) Enter a pattern name.
- 3) Select machine.
- 4) Type of pattern: Select **k&w pattern** type.



- 5) Enter height and width of the pattern field.
Width: 280
Height: 280
- 6) Select "Jersey" for the basic pattern via the selection list.



The start will be inserted with the **Cut-out shape** step of processing.

- 7) Confirm the settings with the "Generate Design Pattern" button.
⇒ Symbol View [Basic] in k&w presentation appears.

15.7.2 Rules for generating a shape: Inserted short sleeve

Rules for knit and wear with inserted short sleeve

| Rules for short sleeve with V-neck: | | |
|-------------------------------------|---|---|
| | | |
| 1 | A | Even-numbered total height of the V-neck. |
| | B | Even-numbered height from the start of the V-neck to the start of the shoulder. |
| | C | Even-numbered height from the start to the end of the shoulder. |
| 2 | The end line of V-neck on left and right side must have two wales less than the end line of back. | |
| 3 | Even-numbered length difference between sleeve and body with a minimum of 20 rows. | |

15.7.3 Create shape: Short sleeve with V-neck

I. Generate a front in the Shape Editor:

- 1) Open the "Shape editor" via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Create the table under "Left Lines" and enter the values for the front.

Front / back with gored shoulder

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -60 | 0 | -60 | 1 | 0 | 0 | | | Basis |
| 2 | | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | | |
| 3 | | 30 | 5 | 6 | 1 | 5 | 0 | 0 | | | Narrowing |
| 4 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 5 | | 30 | -5 | 6 | -1 | 5 | 0 | 0 | | | Widening |
| 6 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 7 | | 12 | 12 | 2 | 2 | 6 | 0 | 0 | | | Narrowing |
| 8 | | 38 | 0 | 38 | 0 | 1 | 0 | 0 | | | |
| 9 | | 10 | 30 | 1 | 3 | 10 | 0 | 0 | | | Gore |
| 10 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | | |
| 11 | | 0 | 18 | 0 | 18 | 1 | 0 | 0 | | | |

- 7) "Mirrored" checkbox: Deactivate .
- ⇒ Different fade-out modules can be allocated to the shape edges of left and right shape part.
- 8) Allocate "Fade out" and "Narrowing" in the tabs under "Function" to the shape edges (no. 8 + 9):
 - **Fade-out module**
 - **Fade-out width:** 12 stitches (= width of the fade-out module)
 - **Type of narrowing**
 - **Narrowing width:** 8 stitches (minimum of 6 stitches (half the width of the fade-out module))
- 9) Allocate the **gore** cycle to the shoulder edge (No. 9) under "Function" in the "General" tab.
- 10) Specify the type of binding-off in the "Bind-off" tab:
 - "Shoulder standard-01 / Shoulder simultaneous 01"
 - "Shoulder standard-02 / Shoulder simultaneous 02"



The shoulder will be done in gore technique and then knit-off and bound-off.

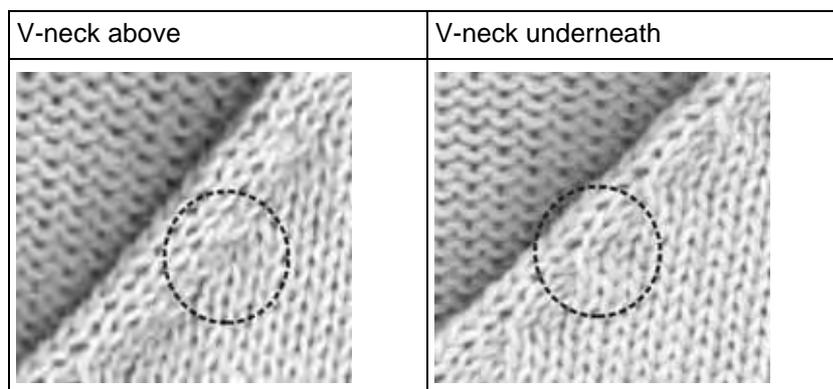
II. Insert the V-neck element in the front:

- 1) Open the shape editor via "k&w Shape" / "Shape Editor (Generate/Edit Shape)...".
- 2) Load the shape **short sleeve front** with "File"/"Open .shp shape (stitches)".
- 3) Generate a new element in the "Shape Editor" with the  key.
- 4) Select the entry **Neck opening** in the "Type" selection list.
- 5) Generate the values for a V-neck under "Left lines".

Neck opening element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 106 | -53 | 32 | -16 | 2 | -1 | 16 | 0 | 0 | 0 | Narrowing |
| 2 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 53 | 0 | 16 | 0 | 16 | 1 | 0 | 0 | 0 | |

- 6) Allocate "Narrowing" to the edge under "Function" in the "General" tab.
- 7) **Mirrored** checkbox: Deactivate .
 - ⇒ Different fade-out modules can be allocated to the shape edges of left and right shape part.
- 8) Allocate "Fade out" and "Narrowing" in the tabs under "Function" to the shape edges (no. 1 + 2):
 - **Fade-out module**
 - **Fade-out width:** 12 stitches (= width of the fade-out module)
 - **Type of narrowing**
 - "V-neck above"
 - "V-neck underneath"
 - **Narrowing width:** 8 stitches (minimum of 6 stitches (half the width of the fade-out module))



Insert a start module at the start of the V-neck:

- 9) Select the element **Neck opening** in the shape editor.
- 10) Click on the  symbol.
 - ⇒ The "Neck opening properties..." dialog box appears.
- 11) Enter the "Structure single jersey V2" module in the "Start" tab.
- 12) Specify Horizontal **0** und Vertical **-1** under "Offset".



The module "Structure single jersey V1" can be used with V-neck start with one needle.

- 13) Enter the value **0** under "Distance to end line".
 - ⇒ The neck is positioned on the front.

III. Generate a back in the Shape editor:



The end line of the back will be bind-off as the shape has no collar.

- ▷ The "Shape editor" dialog box is opened.



Create the shape for the back following the same procedure as for the front and make the same settings.

- 1) Select the end line in the back.
- 2) Allocate "Binding-off" to the edge under "Function" in the "General" tab.
- 3) Select "Neck with draw thread" in the selection list in the "Bind-off" tab under "Module".
- 4) Save shape.

IV. Generate a short sleeve in the Shape editor:

- ▷ The "Shape editor" dialog box is opened.
- 1) Create the table under "Left Lines" and enter the values for the sleeve.

Sleeve element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -110 | 0 | -33 | 0 | -33 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 100 | -16 | 30 | -5 | 6 | -1 | 5 | 0 | 0 | 0 | Widening |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 53 | 28 | 16 | 8 | 2 | 1 | 8 | 0 | 0 | 0 | Narrowing |
| 5 | | 66 | 66 | 20 | 20 | 1 | 1 | 20 | 0 | 0 | 0 | Narrowing |
| 6 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 7 | | 0 | 33 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | 0 | Narrowing |

- 2) Select end line.
- 3) Make the **Narrowing** setting under "Function" in the "General" tab.
- 4) Select "Remaining narrowing" in the selection list under "Allocated modules" of the **Narrowing** tab .



The "Narrow entire width of sleeve" checkbox will be activated automatically.

- 5) Activate the checkbox "k&w Remaining Narrowing (SLEEVE-END)" in the "Connections" tab.
- 6) Specify the number of stitches in the "Bind off number of stitches with shoulder gore" input field.
- ⇒ The specified stitch number will be bind-off with the shoulder. This way the transition is closed.
- 7) Save shape.

15.7.4 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back and sleeve in the "Shapewizard" into a **Raglan.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
 - ⇒ The "Open" dialog box appears in order to select a shape file.
- 3) Select shape.
 - ⇒ The shape will be loaded and the name will be displayed und "Body front".



Load the shape elements for "Body back" and "Sleeve" following the same procedure.

- 4) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|---|--|
| B1-Type 1 (no connection L0-L1) | Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |
| B1-Type 1 TC-T (no connection L0-L1) | Knitting cycle for patterns of the CMS machine with additional beds. Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |

- 5) Specify the number of stitches and rows for **remaining narrowing**.
- 6) Activate the "Short sleeve/short body" checkbox.
 - ⇒ The length difference is processed with residual yarn if the "Short sleeve/short body" checkbox is activated.

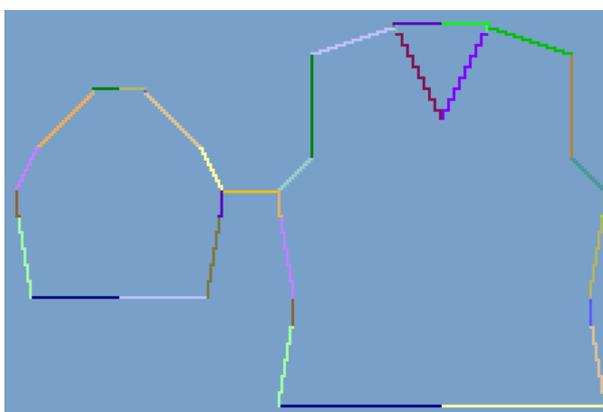


Length differences between the sleeve and the body are compensated with **Suspend** (Do not knit) by default.

15.7.5 Shapewizard: Determine docking points and k&w Arrangements

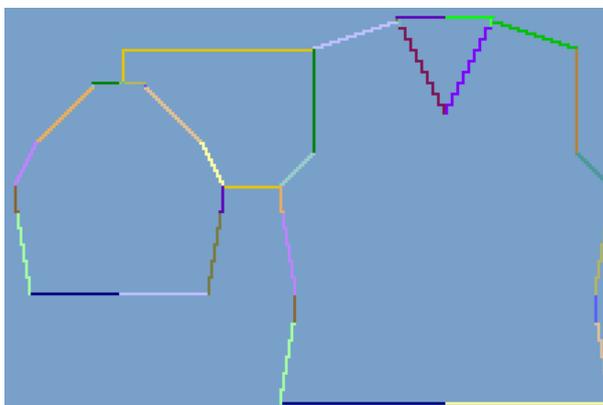
I. Open ShapeWizard and set docking points:

- 1) Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.
- 2) Open the "Docking Points" dialog box with the  icon in the toolbar of the "Shapewizard".
- 3) Set the docking point for "sleeve-body".

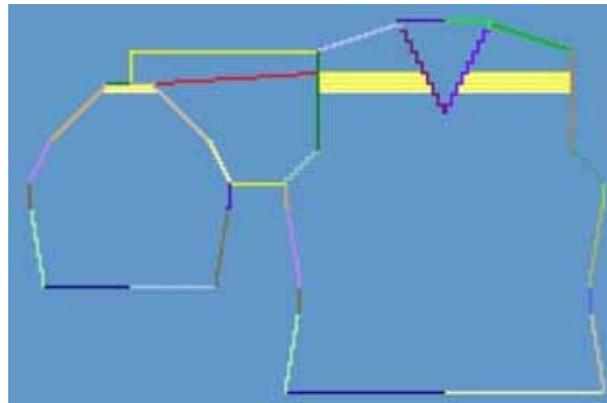


If the "Ctrl" key is pressed while specifying the docking points, then the cursor automatically jumps to the nearest edge start or edge end.

- 4) Set "remaining narrowing" docking point:
 - ⇒ The **Remaining narrowing** connects the stitches remaining at the end of the sleeve to the body.
 - **Remaining narrowing without Suspend Sleeve**



- **Remaining narrowing with Suspend Sleeve**



i

If the **remaining narrowing** docking point is specified, then the **Suspend sleeve** docking point will automatically be calculated based on the row ratio between body and sleeve.

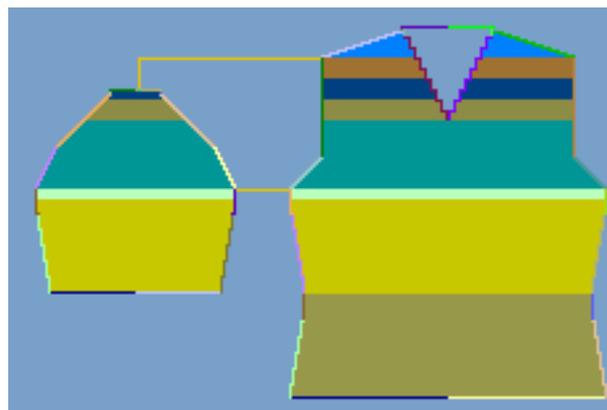
II. Determine k&w Arrangements:

▷ The docking points for **Sleeve-Body** and for **Remaining narrowing** in the "Docking points" dialog box have to be defined.

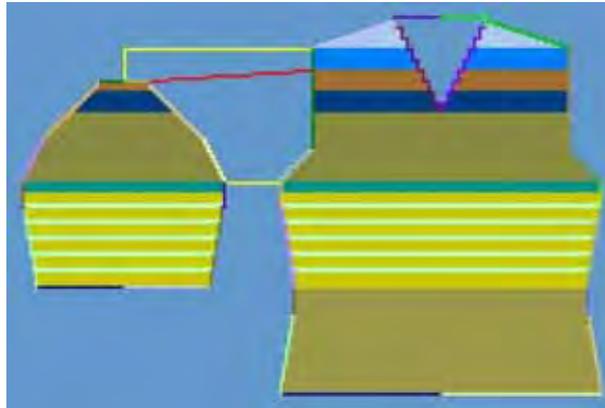
1) Press "Determine k&w Arrangements".

⇒ **Result:**

- **k&w Arrangements without compensation**



▪ **k&w Arrangements with compensation**



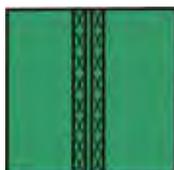
You can delete the determined k&w Arrangements with the "Initialize" button.

- 2) Exchange k&w Arrangements:
Select the k&w Arrangement in the "ShapeWizard" dialog box by double click.
⇒ A window with alternative k&w Arrangements appears.
- 3) Select the desired k&w Arrangement.
- 4) Close the dialog box with the "OK" button.
⇒ The selected k&w Arrangement is inserted.
- 5) Close the "Shapewizard" dialog box.

15.7.6 Draw structure and generate fade-out module

I. Generate basic motif:

Basic pattern with two neighboring and parallel running 2x2 cables with ribs.



Example:

- On the left pattern half, the cable 2x2<
 - On the right pattern half, the cable 2x2<
- 1) Draw the structure for the left and for the right pattern half.
 - 2) Select an area and generate a pattern element / module from selection.
 - 3) Draw-in pattern elements in the entire pattern height.

II. Generate a fading-out module 2x2 Cable with Rib:

- For fading out the V-neck.
- For fading out in the area of the sleeve opening (arm hole) after the sleeve body connection.



- 1) Open the module editor via the "Module" / "New" / "Module..." menu and generate a **new fade-out module** using the "Needle Actions" symbol.

- or -

- ➔ generate a **Fade-out module** based on a selection from the basic pattern.

- 2) Fade-out modules in the "Module Explorer of Database"

- or -

- ➔ save as **local modules** in the "Module Explorer of Pattern".

15.7.7 Open shape

Lay the kaw file onto the basic pattern:

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the entry with "OK".
- ⇒ The kaw file lies on the basic pattern.

15.7.8 Position and cut-out the shape and expand the pattern

I. Position the shape:

- ▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".
- 1) Position the **Sleeve** and / or **Body** shape elements on the motif with the  symbol selected and the left mouse button pressed.
 - ⇒ The "2x2 cable stitch with ribs" structure runs in the center of the front.
- 2) Select the desired k&w presentation.

II. Allocate the fading out modules to the edges of the front:

- 1) Open the "Shape editor", load the front and deactivate "Mirrored".
 - or -
 - ➔ Open the shape view with  and call-up the "Shape Attributes" dialog box.
- 2) Allocate the fade-out modules to the shape edges of the V-neck and the sleeve opening edges with Drag & Drop.
- 3) Adapt fade-out width and narrowing width. (Value settings correspond to stitches).



No fading out might be present in the area of the remaining narrowing.

- 4) Delete manually the fading out in the areas of the remaining narrowing in the "Shape view".

III. Move the fade-out modules at the shape edges:



The positioning of the fade-out modules can only be influenced in the "Shape view" using the **Offset** value.

- 1) Call up the shape view with the  button.
- 2) Select the desired shape edge with "F6".
- 3) Open the "Shape Attributes" dialog box.
- 4) Select the "Fade out" tab.
- 5) Enter the + / - value with offset .
 - ⇒ The fade-out module will be moved by the specified number of stitches.

ches to the right or left.

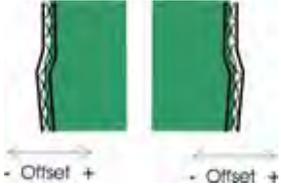
Example:

Fade-out module width: 12 stitches

Narrowing width: 6 stitches

Offset value: -6 / 6

Specifications with offset

| Without offset | With offset | |
|---|---|--|
|  |  <p style="text-align: center;">Left edge / Right edge</p> | |
| <p>The edge of the module is placed at the fabric edge so that the module is always completely positioned within the shape.</p> | <p>Negative value: Moving the module to the left</p> | <p>Positive value: Moving the module to the right</p> |

- 6) Click on the "Apply in shape view" button.
⇒ The changed attributes are applied to the shape view.



Save the changes as shk file so that the changes do not get lost when removing the shape.

- 7) Close the "Shape attributes" dialog box and the "Shape view".
- 8) Save the changes via the "Shape" / "Save Shape As..." menu.
⇒ A shk file is generated.

IV. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm with "OK".
⇒ The "Replace modules cut into" dialog box is opened.
- 3) Select the desired knitting mode for the front layer and the back layer.

- 4) Confirm the specifications in the dialog box with "Replace" or "Do not replace".
 ⇒ The Insert/Replace k&w Start dialog box appears.



- 5) Make the setting for **Short sleeve**:
- "Minimum waist height"
 - "Start-width"
 - "Suspend"
- 6) Select the desired start for body and sleeve.
 7) Confirm with "OK".
 ⇒ The selected starts are inserted.

V. Expand the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
 ⇒ The Correction of Widening dialog box appears.
- 2) Confirm with "Yes".
 ⇒ The shape edges with the **Widening** attribute are corrected.
 The bind-off modules for binding-off the shoulder and the neck are inserted.

15.7.9 Complete the pattern

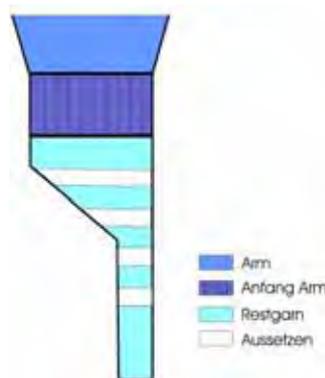
Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

15.8 Short sleeve/short body

Possible settings in the "Insert / Replace k&w Start" dialog box:

| Setting | Meaning |
|--|---|
| Minimum waist height | The length cycle of the start of the short sleeve or short body will be inserted n-times into the pattern. |
| Starting width for short sleeve | Number of stitches at the knitting start of short sleeve with residual yarn. ⇒ : Economizing yarn and knitting time |
| Suspension for short sleeve | Percentage of stitch rows suspended in the area of the residual yarn in short sleeve or short body. ⇒ : stronger take-down in the shorter part |



Cycle switches used in start:

| Cycle counter | Function |
|---------------|---|
| RS1 | Length control for start in body. |
| RS2 | Length control for start in sleeve. |
| RS10 | Length control with residual yarn between comb elastic and draw thread. |
| #90 - #94 | Auxiliary counter for calculating the length difference between rib height body and sleeve. |

15.9 Shapewizard: short body with inserted and linked sleeve



| | |
|-------------------------|--|
| Pattern name: | Kurzleib mit angeketteltem +eingesetztem Arm |
| Pattern size: | Width: 280 Height: 280 |
| Machine type: | CMS 822 k&w |
| Gauge: | E 6.2 |
| Start: | 1X1 - Rib |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | Pullover with short body and round neck <ul style="list-style-type: none"> ▪ The sleeve opening starts with binding-off |

15.9.1 Generate Pattern without Shape

Generate knit and wear pattern:

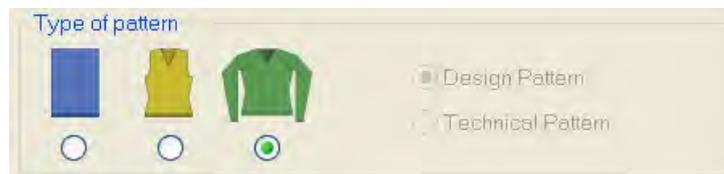
1) Select "File" / "New" from the menu bar.

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select **k&w pattern** type.



5) Enter height and width of the pattern field.

Width: 280

Height: 280

6) Select "Jersey" for the basic pattern via the selection list.



The start will be inserted with the **Cut-out shape** step of processing.

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

15.9.2 Rules for generating a shape: Short body

Rules for knit and wear short body with inserted sleeve

| Rules for short body with round neck | |
|---|--|
|  | |
| 1 | Even-numbered height from the connection of sleeve and body to the start of the shoulder. Even-numbered height from the start to the end of the shoulder. |
| 2 | The end line of the round neck must have on each of both sides two stitch rods less than the end line of the back. |
| 3 | Even-numbered height of the neck. |
| 4 | The length difference between sleeve and body must be even-numbered and of 20 rows at last. |

15.9.3 Create shape: short body with inserted and linked sleeve

I. Generate a front in the Shape Editor:

- 1) Open the "Shape editor" via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Create the table under "Left Lines" and enter the values for the front.

Front / back with gored shoulder

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function | Comment |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-------------|---------|
| 1 | | 0 | -200 | 0 | -60 | 0 | -60 | 1 | 0 | 0 | 0 | Basis | |
| 2 | | 16 | 0 | 5 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | | |
| 3 | | 66 | 16 | 20 | 5 | 4 | 1 | 5 | 0 | 0 | 0 | Narrowing | |
| 4 | | 16 | 0 | 5 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | | |
| 5 | | 66 | -16 | 20 | -5 | 4 | -1 | 5 | 0 | 0 | 0 | Widening | |
| 6 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | | |
| 7 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | 0 | 0 | Narrowing * | |
| 8 | | 166 | 0 | 50 | 0 | 50 | 0 | 1 | 0 | 0 | 0 | | |
| 9 | | 33 | 100 | 10 | 30 | 1 | 3 | 10 | 0 | 0 | 0 | Gore | |
| 10 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | | |
| 11 | | 0 | -60 | 0 | 16 | 0 | 16 | 1 | 0 | 0 | 0 | | |

- 7) Allocate the desired attributes to the shape edges under "Function" in the "Fade out" and "Narrowing" tabs.



The shape with linked sleeve will not be narrowed in the body but in the sleeve.

- 8) Allocate the following attributes to the shape edge (no.7).

| Adjustments | | | |
|---------------|---|---|---|
| Line 7 | "General information" | Activate <input checked="" type="checkbox"/> Do not knit | |
| | "Narrowing" | Fade-out width | 0 |
| | | Narrowing width | 0 |
| | | Type of narrowing | <ul style="list-style-type: none"> ▪ "Body underneath/above" ▪ "Body underneath/above Layers apart" |
| | Activate <input checked="" type="checkbox"/> Perform narrowing in sleeve | | |

II. Insert the round neck element in the front:

- 1) Open the shape editor via "k&w Shape" / "Shape Editor (Generate/Edit Shape)...".
- 2) Call-up the shape **short body front** via "File" / "Open .shp shape (stitches)".
- 3) Generate a new element in the "Shape Editor" with the  key.
- 4) Select the entry **Neck opening** in the "Type" selection list.
- 5) Generate the values for a V-neck under "Left lines".

Element Neck opening: Round neck

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -26 | 0 | -8 | 0 | -3 | 1 | 0 | 0 | 0 | Link-off |
| 2 | | 53 | -26 | 16 | -8 | 2 | -1 | 3 | 0 | 0 | 0 | Narrowing |
| 3 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 1 | 53 | 0 | 16 | 0 | 16 | 1 | 0 | 0 | 0 | |

| Adjustments | | | |
|---------------|----------------------------|--------------------|-------------------------|
| Line 1 | General information | Binding-off | |
| | Binding-off | Binding-off type | "V-neck start L0IL1" |
| Line 2 | Narrowing | Fade-out width | As desired |
| | | Narrowing width | As desired |
| | | Type of narrowing | V-neck underneath/above |

- 6) Specify the value **0** for "Distance to end line".
⇒ The element Neck opening (round neck) will be positioned in the front without distance to end line.
- 7) Save shape.

III. Generate a back in the Shape editor:



Create the shape for the back in the same way as with the front.

- 1) Open the "General" tab in the end line (edge no.11) under "Function" and enter "Binding-off".
- 2) Select "Neck with draw thread" in the selection list in the "Bind-off" tab under Module.
- 3) Save shape.

IV. Generate a sleeve in the Shape editor:

▷ The "Shape editor" dialog box is opened.

1) Create the table under "Left Lines" and enter the values for the sleeve.

Sleeve element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -93 | 0 | -28 | 0 | -28 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 366 | -33 | 80 | -10 | 8 | -1 | 10 | 0 | 0 | 0 | Widening |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 40 | 0 | 12 | 0 | 12 | 0 | 1 | 0 | 0 | 0 | Narrowing |
| 5 | | 53 | 25 | 16 | 8 | 2 | 1 | 8 | 0 | 0 | 0 | Narrowing |
| 6 | | 66 | 66 | 20 | 20 | 1 | 1 | 20 | 0 | 0 | 0 | Narrowing |
| 7 | | 8 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 8 | | 0 | 33 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | 0 | Narrowing |

| Adjustments | | |
|-----------------|----------------------------|--|
| Line 4 | General information | Define Narrowing |
| | Narrowing | Activate <input checked="" type="checkbox"/> Narrow entire width of sleeve |
| End line | General information | Define Narrowing |
| | Narrowing | Select the "Remaining narrowing" module |
| | connections | <input checked="" type="checkbox"/> Activate "k&w remaining narrowing (SLEEVE-END)" |

15.9.4 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back and sleeve in the "Shapewizard" into a **short body with linked sleeve.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
⇒ The "Open" dialog box appears in order to select a shape file.
- 3) Select shape.
⇒ The shape will be loaded and the name will be displayed und "Body front".



Load the shape elements for "Body back" and "Sleeve" following the same procedure.

- 4) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|---|--|
| B1-Type 1 (no connection L0-L1) | Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |
| B1-Type 1 TC-T (no connection L0-L1) | Knitting cycle for patterns of the CMS machine with additional beds. Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |

- 5) Specify the number of stitches and rows for **remaining narrowing**.
 - Stitch number for remaining narrowing: **2**
 - Row number with remaining narrowing: **2**
- 6) Activate the "Short sleeve/short body" checkbox.
⇒ The length difference is processed with residual yarn if the "Short sleeve/short body" checkbox is activated.



Length differences between the sleeve and the body are compensated with **Suspend** (Do not knit) by default.

15.9.5 Shapewizard: Determine docking points and k&w Arrangements

I. Open ShapeWizard and set docking points:

- 1) Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.
- 2) Open the "Docking Points" dialog box with the  icon in the toolbar of the "Shapewizard".
- 3) Set the docking point for "sleeve-body".
- 4) Set "remaining narrowing" docking point:
⇒ The **Remaining narrowing** connects the stitches remaining at the end of the sleeve to the body.

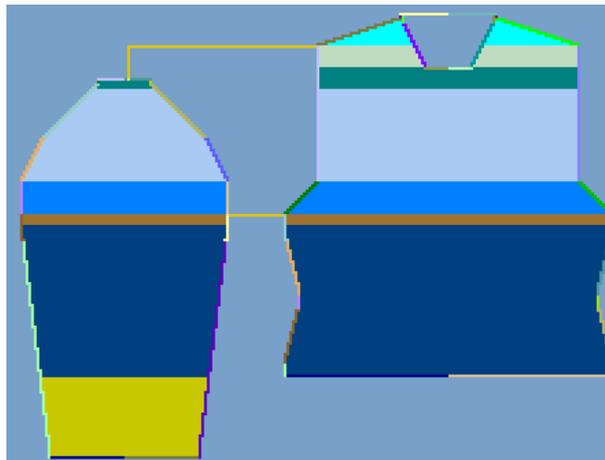


II. Determine k&w Arrangements:

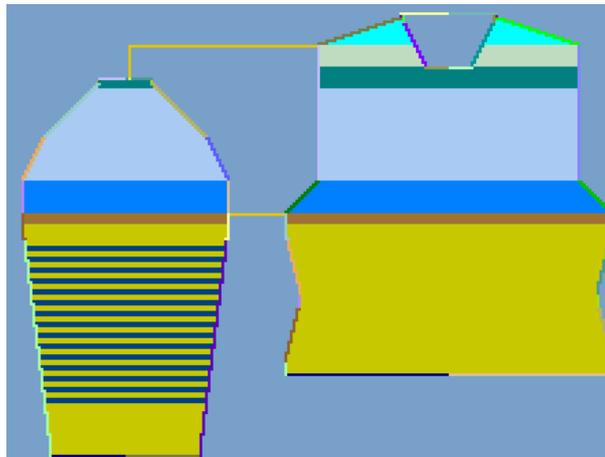
▷ The docking points for **Sleeve-Body** and for **Remaining narrowing** in the "Docking points" dialog box have to be defined.

1) Press "Determine k&w Arrangements".

▪ k&w Arrangements without compensation



▪ k&w Arrangements with compensation



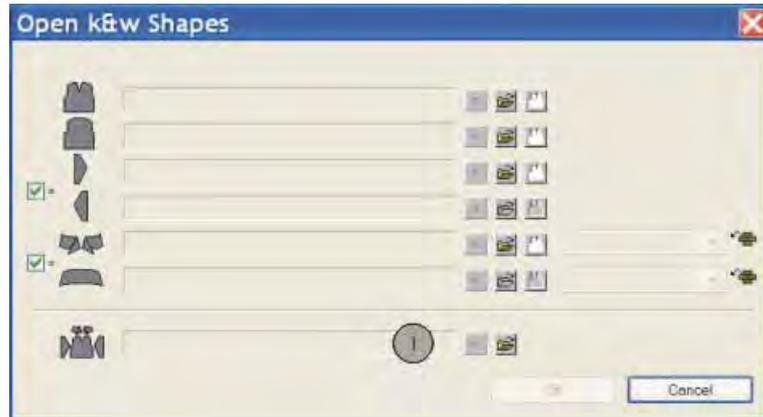
2) Close the "Shapewizard" dialog box.

⇒ The shape will be saved as kaw file.

15.9.6 Open shape

Lay the kaw file onto the basic pattern:

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the entry with "OK".
- ⇒ The kaw file lies on the basic pattern.

15.9.7 Position and cut-out the shape and expand the pattern

I. Position the shape:

▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".

1) Position the **Sleeve** and / or **Body** shape elements on the motif with the



symbol selected and the left mouse button pressed.

2) Select the desired k&w presentation.

II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.

2) Confirm with "OK".
⇒ The Insert/Replace k&w Start dialog box appears.

3) Make the setting for **Short body**:

- Minimum waist height
- Start-width
- Suspend

4) Select the desired start **short body** and **sleeve**.

5) Confirm with "OK".

⇒ The selected starts are inserted.

III. Expand the pattern:

1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The Correction of Widening dialog box appears.

2) Confirm with "Yes".

⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off modules for binding-off the sleeve, the shoulder and the neck are inserted.

15.9.8 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

15.10 Shapewizard: F-Shoulder Sleeve

| | |
|---|---|
|  | |
| Pattern name | Französische Schulter |
| Pattern size: | Width: 400 Height: 400 |
| Machine type: | CMS 822 k&w |
| Gauge: | E 6.2 |
| Start: | 1x1 |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | The shape French shoulder contains a flat-shaped shoulder in the back. The front is knitted straight upward. |

15.10.1 Generate Pattern without Shape

Generate knit and wear pattern:

1) Select "File" / "New" from the menu bar.

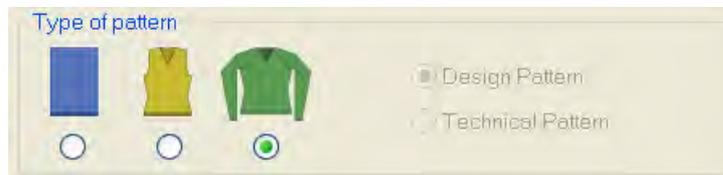
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select k&w pattern.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field.

Width: 400

Height: 400

6) Select the knitting mode: "Face stitch" in the selection list "Basic pattern".

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

15.10.2 Rules for generating a shape: F-Shoulder Sleeve

The **French shoulder** shape does not contain any shoulder gore in the front.

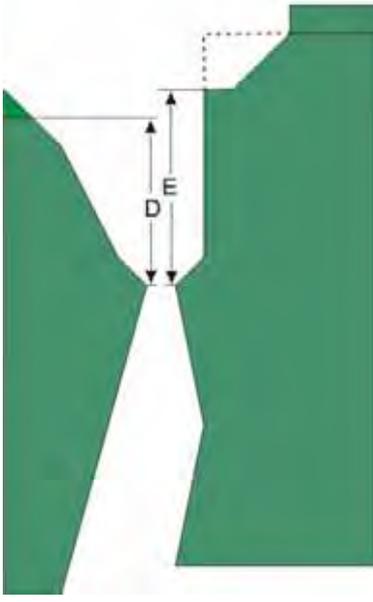
As a result, the longer front gets over the shoulder to the back.



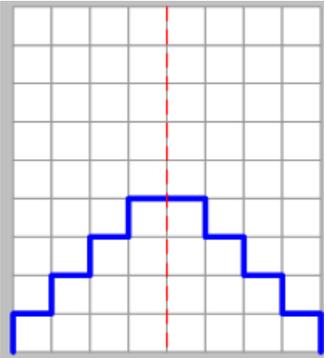
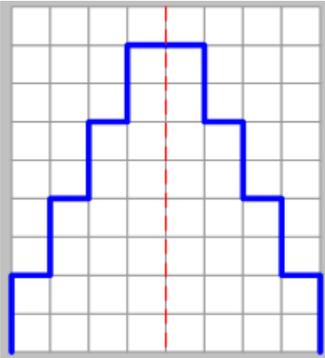
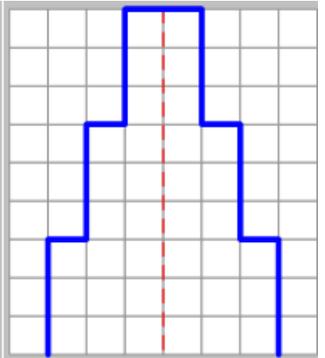
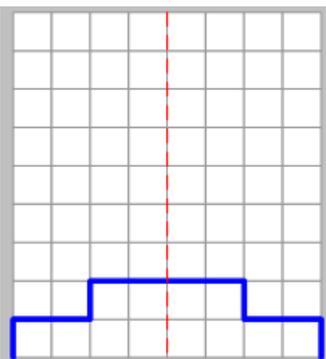
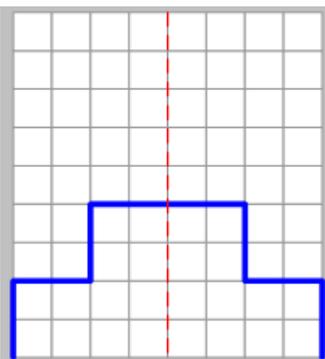
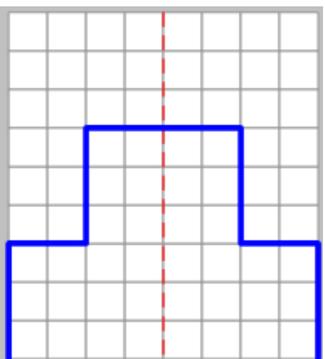
Rules for knit and wear French shoulder

| Rule | Presentation | Description |
|------|--------------|---|
| 1 | | <p>Front: no gore existing</p> <p>Back: with shoulder gore. gore height (A) has to be even-numbered.</p> |

| Rule | Presentation | Description |
|------|--|---|
| 2 |  | <p>Requirement: Row number with remaining narrowing (A): 1 or 2 rows Ratio between the height of the shoulder gore (A) and the height of the non-knitting area in the sleeve (B) is 2:1 i: ratio = Row number body to stitch number sleeve</p> |
| 3 |  | <p>Requirement: Row number with remaining narrowing (A): 1 - 2 Rows in alternation Ratio between the height of the shoulder gore (A) and the height of the non-knitting area in the sleeve (B) is 1:1 i: ratio = Row number body to stitch number sleeve</p> |

| Rule | Presentation | Description |
|------|--|---|
| 4 |  <p>The diagram shows a green sleeve cap and a white shoulder gore. A vertical double-headed arrow labeled 'C' indicates the difference in height between the sleeve end (without non-knitting area) and the beginning of the shoulder gore.</p> | <p>The difference (C) between the sleeve end (without non-knitting area) and the beginning of the shoulder gore must be even-numbered.</p> |
| 5 |  <p>The diagram shows a green sleeve cap and a white shoulder gore. Two vertical double-headed arrows are shown: 'D' indicates the sleeve cap height, and 'E' indicates the body height up to the beginning of the shoulder gore.</p> | <p>Rule 1: Sleeve cap height (D) may not be higher than the body height up to the beginning of the shoulder gore (E)</p> <p>Rule 2: Sleeve cap height (D) may not be smaller than half the body height up to the beginning of the shoulder gore (E)</p> |

| Rule | Presentation | Description |
|------|--|--|
| 6 |  | <p>The first step of the shoulder gore on L1 (F) starts with step height 0 and with step width 5.</p> <p>i: The width depends on the width of the bind-off tape for binding-off the shoulder gore and generally amounts 5 stitches.</p> |

| Remaining Narrowing | | | |
|---------------------|--|---|---|
| | Number of rows 1 | Number of rows 2 | Number of rows 1-2 |
| Stitch number 1 |  |  |  |
| | <p>Ratio in the shape: 1:1 One stitch of the sleeve is narrowed after each knitting row in the body on L0 .</p> | <p>Ratio in the shape: 2:1 One stitch of the sleeve is narrowed after each second knitting row in the body on L0 .</p> | <p>Ratio in the shape: 3:1 One stitch of the sleeve is narrowed alternating after 1 to 2 knitting rows in the body L0 .</p> |
| Stitch number 2 |  |  |  |
| | <p>Ratio in the shape: 1:2 Two stitches of the sleeve are narrowed after each knitting row in the body on L0.</p> | <p>Ratio in the shape: 2:2 Two stitches of the sleeve are narrowed after each second knitting row in the body on L0.</p> | <p>Ratio in the shape: 3:2 Two stitches of the sleeve are narrowed alternating after 1 to 2 knitting rows in the body on L0.</p> |

i

Ratio = Number of rows in the body / number of stitches in the sleeve

15.10.3 Create shape: F-Shoulder Sleeve

I. Generate a front in the Shape Editor:

- 1) Open the "Shape editor" via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w body front** entry in the "Type" selection list under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Create the table under "Left Lines" and enter the values for the front.

Basic element Front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -205 | 0 | -74 | 0 | -74 | 1 | 0 | 0 | | | Basis |
| 2 | | 200 | 11 | 96 | 4 | 48 | 2 | 2 | 0 | 0 | 4 | 6 | Narrowing |
| 3 | | 10 | 0 | 5 | 0 | 5 | 0 | 1 | 0 | 0 | | 6 | |
| 4 | | 133 | -22 | 64 | -8 | 8 | -1 | 8 | 0 | 0 | | 6 | Widening |
| 5 | | 20 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | 6 | |
| 6 | | 16 | 11 | 8 | 4 | 4 | 2 | 2 | 0 | 0 | 6 | 8 | Narrowing |
| 7 | | 8 | 5 | 4 | 2 | 4 | 2 | 1 | 0 | 0 | 6 | 8 | Narrowing |
| 8 | | 125 | 0 | 60 | 0 | 60 | 0 | 1 | 0 | 0 | | 6 | |
| 9 | | 66 | 0 | 32 | 0 | 32 | 0 | 1 | 0 | 0 | | 6 | Gore |
| 10 | | 0 | 100 | 0 | 36 | 0 | 36 | 1 | 0 | 0 | | | Gore |
| 11 | | 2 | 100 | 1 | 36 | 1 | 36 | 1 | 0 | 0 | | | |
| 12 | | 0 | 100 | 0 | 36 | 0 | 36 | 1 | 0 | 0 | | | |

- 7) Allocate the desired attributes "Narrowing" and "Widening" to the edges under "Function".
- 8) Allocate the **Goring** function to the edges (no.9+10) under "Function" in the "General" tab.
- 9) Allocate the following attributes to the edges (no. 9+10) under "Function" in the "Bind-off" tab.

| | | |
|-------------|-----------|--|
| Setting | | |
| Line 9+ 10 | | |
| Binding-off | Directory | Standard |
| | Module | <ul style="list-style-type: none"> ▪ "French shoulder above " ▪ "French shoulder underneath" |

- 10) Save shape.

II. Insert the gore element in the front:

▷ The shape **French shoulder Front** is open in the Shape editor.

- 1) Generate a new element in the Shape Editor with .
- 2) Select the **Gore** entry in the "Type" section list.
- 3) Create the table under "Left Lines" and enter the values for the element.

Gore element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|-------------------------------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | <input checked="" type="checkbox"/> | 54 | -97 | 26 | -35 | 0 | 0 | 0 | 0 | 0 | | | |
| 2 | <input type="checkbox"/> | 4 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | 0 | |
| 3 | <input type="checkbox"/> | 0 | 97 | 0 | 35 | 0 | 35 | 1 | 0 | 0 | | | |

| Line Editor Line 1 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 26 | -35 | | | |
| 1 | 0 | 0 | -4 | 1 | | |
| 1 | 0 | 2 | -4 | 1 | | |
| 1 | 0 | 2 | -3 | 5 | | |
| 1 | 0 | 2 | -2 | 5 | | |
| 1 | 0 | 2 | -1 | 2 | | |

- 4) Enter the distance to the end line under "y-distance to...": **1**
- 5) Save shape.

III. Generate a back in the Shape editor:

- 1) Open the "Shape editor" via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w body back** entry in the "Type" selection menu under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Deactivate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Create the table under "Left Lines" and enter the values for the left back.

Basic element left back

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -74 | 0 | -74 | 1 | 0 | 0 | | | Basis |
| 2 | | 96 | 4 | 48 | 2 | 2 | 0 | 0 | 4 | 6 | Narrowing |
| 3 | | 5 | 0 | 5 | 0 | 1 | 0 | 0 | | 6 | |
| 4 | | 64 | -8 | 8 | -1 | 8 | 0 | 0 | | 6 | Widening |
| 5 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | 6 | |
| 6 | | 8 | 4 | 4 | 2 | 2 | 0 | 0 | 6 | 8 | Narrowing |
| 7 | | 4 | 2 | 4 | 2 | 1 | 0 | 0 | 6 | 8 | Narrowing |
| 8 | | 60 | 0 | 60 | 0 | 1 | 0 | 0 | | 6 | |
| 9 | | 0 | 6 | 0 | 6 | 1 | 0 | 0 | | 0 | Gore |
| 10 | | 30 | 30 | 2 | 2 | 15 | 0 | 0 | | | Gore |
| 11 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | 6 | Gore |
| 12 | | 1 | 36 | 1 | 36 | 1 | 0 | 0 | | | |
| 13 | | 0 | 36 | 0 | 36 | 1 | 0 | 0 | | | |

7) Create the table under "Right Lines" and enter the values for the right back.

Basic element right back

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | 74 | 0 | 74 | 1 | 0 | 0 | | | Basis |
| 2 | | 96 | -4 | 48 | -2 | 2 | 0 | 0 | 4 | 6 | Narrowing |
| 3 | | 5 | 0 | 5 | 0 | 1 | 0 | 0 | | 6 | |
| 4 | | 64 | 8 | 8 | 1 | 8 | 0 | 0 | | 6 | Widening |
| 5 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | 6 | |
| 6 | | 8 | -4 | 4 | -2 | 2 | 0 | 0 | 6 | 8 | Narrowing |
| 7 | | 4 | -2 | 4 | -2 | 1 | 0 | 0 | 6 | 8 | Narrowing |
| 8 | | 60 | 0 | 60 | 0 | 1 | 0 | 0 | | 6 | |
| 9 | | 0 | -6 | 0 | -6 | 1 | 0 | 0 | | 0 | Gore |
| 10 | ✓ | 31 | -30 | 0 | 0 | 0 | 0 | 0 | | | Gore |
| 11 | | 1 | 0 | 1 | 0 | 1 | 0 | 0 | | | Gore |
| 12 | | 1 | -36 | 1 | -36 | 1 | 0 | 0 | | | |
| 13 | | 0 | -36 | 0 | -36 | 1 | 0 | 0 | | | |

| Line Editor Line 10 right | | | | | | |
|---------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 31 | -30 | | | |
| 1 | 0 | 1 | -2 | 1 | | |
| 1 | 0 | 2 | -2 | 14 | | |
| 1 | 0 | 2 | 0 | 1 | | |

8) In the **left and right back** under "Function" allocate the desired attributes to the edges "Narrowing" and "Widening".

9) In the **left and right back** allocate the **Goring** function to the edges (no. 9+10) under "Function" in the "General" tab.

- 10) Allocate the following attributes to the edges (no. 9+10) of the **left and right back** under "Function" in the "Bind-off" tab:

| | | |
|--------------------|-----------|--|
| Setting | | |
| Line 9+ 10 | | |
| Binding-off | Directory | Standard |
| | Module | <ul style="list-style-type: none"> ▪ "French shoulder above " ▪ "French shoulder underneath" |

- 11) In the **left and right back** allocate the **Goring** function to the edge (no. 11) under "Function" in the "General" tab.
- 12) Allocate the following attributes to the edge (no. 11) of the **left back** under "Function" in the "Bind-off" and "Fade out" tab:

| | | |
|---------------------|----------------|--|
| Setting | | |
| Line 11 left | | |
| Binding-off | Directory | Standard |
| | Module | <ul style="list-style-type: none"> ▪ "French shoulder above " ▪ "French shoulder underneath" |
| Fade out | Fade-out width | 6 |
| | Module | <ul style="list-style-type: none"> ▪ "Knitting off Shoulder gore L1 6 stitches not knitting >" |

- 13) Allocate the following attributes to the edge (no. 11) of the **right back** under "Function" in the "Bind-off" and "Fade out" tab:

| | | |
|----------------------|----------------|--|
| Setting | | |
| Line 11 right | | |
| Binding-off | Directory | Standard |
| | Module | <ul style="list-style-type: none"> ▪ "French shoulder above " ▪ "French shoulder underneath" |
| Fade out | Fade-out width | 6 |
| | Module | <ul style="list-style-type: none"> ▪ "Knitting off Shoulder gore L1 6 stitches not knitting <" |

- 14) Save shape.

IV. Insert the gore element in the back:

▷ The shape **French shoulder Back** is open in the Shape editor.

- 1) Generate a new element in the Shape Editor with .
- 2) Select the **Gore** entry in the "Type" section list.
- 3) Create the table under "Left Lines" and enter the values for the element.

Gore element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | ✓ | 16 | -97 | 8 | -35 | 0 | 0 | 0 | 0 | 0 | | | |
| 2 | | 4 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | 0 | |
| 3 | | 0 | 97 | 0 | 35 | 0 | 35 | 1 | 0 | 0 | | | |

| Line Editor Line 1 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 8 | -35 | | | |
| 1 | 0 | 0 | -12 | 1 | | |
| 1 | 0 | 2 | -9 | 1 | | |
| 1 | 0 | 2 | -7 | 5 | | |
| 1 | 0 | 2 | -5 | 5 | | |
| 1 | 0 | 2 | -2 | 2 | | |

- 4) Enter the distance to the end line under "y-distance to...": 1
- 5) Save shape.

V. Generate the element for sleeve in the Shape editor:

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w Sleeve** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values in the table:

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -99 | 0 | -37 | 0 | -37 | 1 | 0 | 0 | | | Basis |
| 2 | | 193 | -24 | 90 | -9 | 10 | -1 | 9 | 0 | 0 | | 6 | Widening |
| 3 | | 189 | -21 | 88 | -8 | 11 | -1 | 8 | 0 | 0 | | 6 | Widening |
| 4 | | 21 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | 6 | |
| 5 | | 38 | 16 | 18 | 6 | 6 | 2 | 3 | 0 | 0 | | 0 | Narrowing |
| 6 | | 60 | 37 | 28 | 14 | 4 | 2 | 7 | 0 | 0 | | 0 | Narrowing |
| 7 | | 55 | 69 | 26 | 26 | 2 | 2 | 13 | 0 | 0 | | 0 | Narrowing |
| 8 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | |
| 9 | | 34 | 21 | 16 | 8 | 2 | 1 | 8 | 0 | 0 | | | Narrowing |

- 4) Allocate the desired attributes in the "Widening" and "Narrowing" tabs to the edges under "Function".
- 5) Allocate the **Narrowing** function to the edge (no.9) under "Function" in the "General" tab.
- 6) Allocate the following attributes to the edge (no. 11) in the "Narrowing" and "Connections" tab.

| | | |
|--------------------|-------------------|---|
| Line 9 | | |
| Narrowing | Fade-out type | no |
| | Fade-out width | 0 |
| | Type of narrowing | ▪ F-Shoulder Sleeve |
| | Narrowing width | Narrow entire width of sleeve |
| connections | | <ul style="list-style-type: none"> ▪ <input checked="" type="checkbox"/> k&w remaining narrowing ▪ <input checked="" type="checkbox"/> k&w Non-knitting |

7) Save shape.

VI. Generate element for the collar:

- 1) Open the shape editor via "Shape" / "Generate/Edit Shape...".
- 2) Select the **k&w collar** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values for the collar in the table under "Left lines".

Collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | | 0 | -100 | 0 | -36 | 0 | -36 | 1 | 0 | 0 | | | Basis |
| 2 | | 29 | 0 | 14 | 0 | 14 | 0 | 1 | 0 | 0 | | | |
| 3 | | 0 | 100 | 0 | 36 | 0 | 36 | 1 | 0 | 0 | | | Bind-off |

- 4) Allocate **bind-off** to the end line under "Function" in the "General" tab.
- 5) Select the "Bind-off" tab and choose the "Neck" **binding-off module**
- 6) Save the element for the **collar**.



You have to save all shape elements in the same directory.

15.10.4 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back, sleeve and collar in the "ShapeWizard" to a **French shoulder.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
- 3) Select shape.



Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.

- 4) Select the desired Rib binding for the collar.
- 5) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|--|--|
| B1-Type 1 (no connection L0-L1) | Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |



Settings for remaining narrowing in the ShapeWizard
The specifications for **stitch number** and **row number with remaining narrowing** do **not have any effect** with the French shoulder shape type.

15.10.5 Shapewizard: Determine docking points and k&w Arrangements

I. Open ShapeWizard and set docking points:

- 1) Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.
- 2) Open the "Docking Points" dialog box with the  icon in the toolbar of the "Shapewizard".
- 3) Set the docking points for "sleeve-body".



If the "Ctrl" key is pressed while specifying the docking points, then the cursor automatically jumps to the nearest edge start or edge end.

- 4) Set "remaining narrowing" docking point:
 - ⇒ The **Remaining narrowing** connects the stitches remaining at the end of the sleeve to the body.
- 5) Set the docking point "Collar".
 - Always set the connecting line on the left collar side.
 - The same position is automatically applied for the right side.
 - Overwrite the position for the right side in the "Docking points" dialog box if you wish the collar to be positioned asymmetrically.

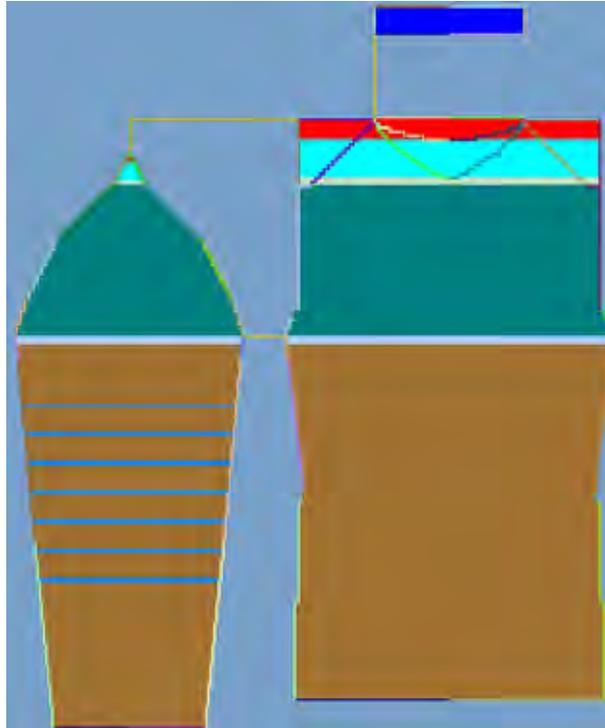
Result: The width of the collar element is adjusted by the docking point.

All docking points:



II. Determine k&w Arrangements:

- 1) Press "Determine k&w Arrangements".



You can delete the determined k&w Arrangements with the "Initialize" button.

- 2) Exchange k&w Arrangements:
Select the k&w Arrangement in the "ShapeWizard" dialog box by double click.
⇒ A window with alternative k&w Arrangements appears.
- 3) Select the desired k&w Arrangement.
- 4) Close the dialog box with the "OK" button.
⇒ The selected k&w Arrangement is inserted.



The elements of the shape (front, back, sleeve and collar) and the kaw file must all be located in the same directory.

- 5) Close the "Shapewizard" dialog box.

15.10.6 Open shape

Lay the kaw file onto the basic pattern:

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the entry with "OK".
- ⇒ The kaw file lies on the basic pattern.

15.10.7 Position and cut-out the shape and expand the pattern

I. Position the shape:

▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".

1) Position the shape elements **body** on the motif with the selected symbol



and the left mouse button pressed.

2) Select the desired k&w presentation.

II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.

2) Confirm the settings in the dialog box with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.

3) Select the desired start.

4) Confirm the settings with "OK".

⇒ The selected start is inserted.

III. Expand the pattern:

1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ Perhaps the "Correction of Widening" dialog box appears.

2) Specify.

3) Confirm the specifications with "OK".

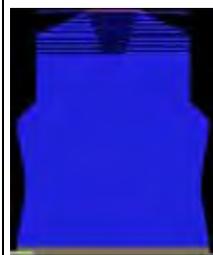
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for binding off the collar is inserted.

15.10.8 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

15.11 Shapewizard: slipover



| | |
|-------------------------|---------------------------|
| Pattern name: | slipover |
| Pattern size: | Width: 150 Height: 200 |
| Machine type: | CMS 822 k&w |
| Gauge: | E 6.2 |
| Start: | 1X1 - Rib |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | Tank top with round neck |

15.11.1 Generate Pattern without Shape

Generate knit and wear pattern:

1) Select "File" / "New" from the menu bar.

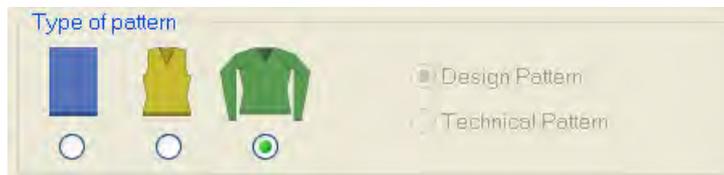
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select **k&w pattern** type.



5) Enter height and width of the pattern field.

Width: 150

Height: 200

6) Select "Jersey" for the basic pattern via the selection list.



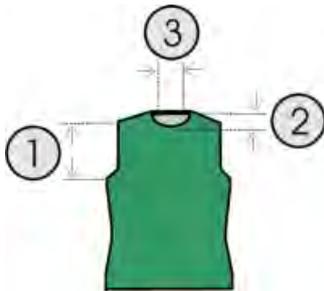
The start will be inserted with the **Cut-out shape** step of processing.

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

15.11.2 Rules for generating a shape: slipover

Rules for knit and wear tank tops

| Rules for tank tops | |
|---|---|
|  | |
| 1 | Even-numbered height from start of sleeve narrowing to start of shoulder Basis: Sleeve cut-out open on side. |
| 2 | Even-numbered height of round neck |
| 3 | End line of round neck on left and right side at least two stitch rods less than back end line. |

15.11.3 Create shape: slipover

I. Generate a front in the Shape Editor:

- 1) Open the "Shape editor" via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Create the table under "Left Lines" and enter the values for the front.

Basic shape Front / Back:

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|------------------|
| 1 | | 0 | -60 | 0 | -60 | 1 | 0 | 0 | | | Basis |
| 2 | | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | | |
| 3 | | 30 | 5 | 6 | 1 | 5 | 0 | 0 | | | Narrowing |
| 4 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 5 | | 30 | -5 | 6 | -1 | 5 | 0 | 0 | | | Widening |
| 6 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | | |
| 7 | | 12 | 12 | 2 | 2 | 6 | 0 | 0 | | | Narrowing |
| 8 | | 38 | 0 | 38 | 0 | 1 | 0 | 0 | | | |
| 9 | | 10 | 30 | 1 | 3 | 10 | 0 | 0 | | | Gore |
| 10 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | | |
| 11 | | 0 | 18 | 0 | 18 | 1 | 0 | 0 | | | |

- 7) Allocate the desired attributes to the shape edges under "Function" in the "Fade out" and "Narrowing" tabs.



From the narrowing in the sleeve area up to the beginning of the shoulder, the front and back piece may not have a side connection.

- 8) Activate "k&w outer edge open e.g. tank top [FRONT/BACK]" for the shape edge (no. 7 and 8) from sleeve-narrowing up to start of shoulder, under "Function" in the "Connections" tab.
 - ⇒ The edges will not be closed (armhole).
- 9) For the shape edge (no.9) of the shoulder, select the type **Gore** under "Function".

10) Specify the type of binding-off in the "Bind-off" tab.

- "Shoulder standard - 01"
- "Shoulder together-01"
- "Shoulder standard - 02"
- "Shoulder simultaneous-02"

II. Insert the round neck element in the front:

- 1) Open the shape editor via "k&w Shape" / "Shape Editor (Generate/Edit Shape)...".
- 2) Call-up the shape **Tank top Front** via "File" / "Open .shp shape (stitches)".
- 3) Generate a new element in the "Shape Editor" with the  key.
- 4) Select the entry **Neck opening** in the "Type" selection list.
- 5) Generate the values for a V-neck under "Left lines".

Element Neck opening: Round neck

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -26 | 0 | -8 | 0 | -8 | 1 | 0 | 0 | 0 | Link-off |
| 2 | | 53 | -26 | 16 | -8 | 2 | -1 | 8 | 0 | 0 | 0 | Narrowing |
| 3 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 0 | 52 | 0 | 15 | 0 | 15 | 1 | 0 | 0 | 0 | |

| Adjustments | | | |
|-------------|---------------------|-------------------|--|
| Line 1 | General information | Binding-off | |
| | Binding-off | Binding-off type | "V-neck start L0/L1" |
| Line 2 | Narrowing | Fade-out width | As desired |
| | | Narrowing width | As desired |
| | | Type of narrowing | <ul style="list-style-type: none"> ▪ "V-neck above" ▪ "V-neck underneath" ▪ "Neckline above Layers apart L0/L1" ▪ "Neckline underneath Layers apart L0/L1" |

- 6) Specify the value **0** for "Distance to end line".
⇒ The element Neck opening (round neck) will be positioned in the front without distance to end line.
- 7) Save shape.

III. Generate a back in the Shape editor:



Create the shape for the back in the same way as with the front.

- 1) Open the "General" tab in the end line (edge no.11) under "Function" and enter "Binding-off".
- 2) Select "Neck with draw thread" in the selection list in the "Bind-off" tab under Module.
- 3) Save shape.

Further information

- Narrowing, widening and binding-off types [-> 73]

15.11.4 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back and sleeve in the "Shapewizard" into a **short body with linked sleeve.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
⇒ The "Open" dialog box appears in order to select a shape file.
- 3) Select shape.
⇒ The shape will be loaded and the name will be displayed und "Body front".



Load the shape elements for "Body back" and "Sleeve" following the same procedure.

- 4) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|---|--|
| B1-Type 1 (no connection L0-L1) | Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |
| B1-Type 1 TC-T (no connection L0-L1) | Knitting cycle for patterns of the CMS machine with additional beds. Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |

- 5) Specify the number of stitches and rows for **remaining narrowing**.
 - Number of stitches with remaining narrowing: **2**
 - Row number with remaining narrowing: **2**
- 6) Activate the "Short sleeve/short body" checkbox.
⇒ The length difference is processed with residual yarn if the "Short sleeve/short body" checkbox is activated.



Length differences between the sleeve and the body are compensated with **Suspend** (Do not knit) by default.

15.11.5 Shapewizard: Determine k&w Arrangements

Open the ShapeWizard and determine k&w Arrangements:

- 1) Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.
- 2) Open the "Docking Points" dialog box with the  icon in the toolbar of the "Shapewizard".
- 3) Press "Determine k&w Arrangements".



- 4) Close the "Shapewizard" dialog box.
- ⇒ The shape will be saved as kaw file.

15.11.6 Open shape

Lay the kaw file onto the basic pattern:

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the entry with "OK".
- ⇒ The kaw file lies on the basic pattern.

15.11.7 Position and cut-out the shape and expand the pattern

I. Position the shape:

- ▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".
- 1) Position the shape elements **body** on the motif with the selected symbol  and the left mouse button pressed.
- 2) Select the desired k&w presentation.

II. Cut-out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
 - ⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm the settings in the dialog box with "OK".
 - ⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm with "OK".
 - ⇒ The selected start is inserted.

III. Expand the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
 - ⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
 - ⇒ The shape edges with the **Widening** attribute are corrected. The bind-off module for binding off the neck is inserted.

15.11.8 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

15.12 Shapewizard: Saddle shoulder with V-neck and narrowed collar



| | | |
|-------------------------|---|-----|
| Pattern name: | Sattelschulter-mit-geminertem-Kragen | |
| Pattern size: | Width: | 250 |
| | Height: | 280 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | 2X1 - Rib | |
| Basic pattern: | Jersey | |
| Knitting technique | knit and wear | |
| Description of pattern: | Pullover with saddle shoulder <ul style="list-style-type: none"> ▪ V-neck with narrowed collar | |

15.12.1 Generate Pattern without Shape

Generate knit and wear pattern:

1) Select "File" / "New" from the menu bar.

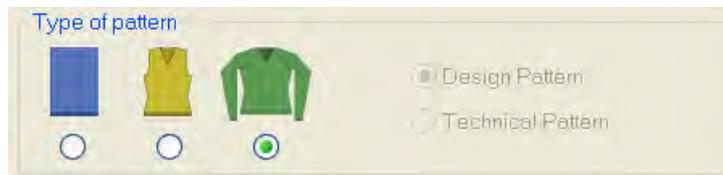
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select k&w pattern.



5) Enter height and width of the pattern field.

Width: 250

Height: 280

6) Select "Jersey" for the basic pattern via the selection list.



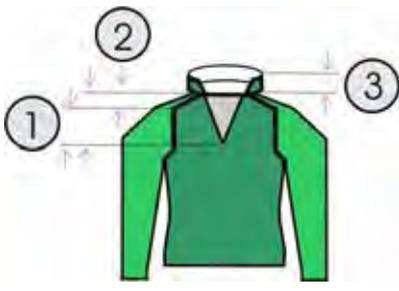
The start will be inserted with the **Cut-out shape** step of processing.

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

15.12.2 Rules for generating a shape: Saddle shoulder with V-neck and collar

Rules for knit and wear saddle shoulder with V-neck and narrowed collar:

| Rules for saddle shoulders with narrowed collar | |
|---|---|
|  | |
| 1 | Even-numbered height from start of V-neck up to start of shoulder Even-numbered total height of V-neck |
| 2 | Even-numbered height from start of shoulder to end of shoulder |
| 3 | Even-numbered collar height |

15.12.3 Create shape: Saddle shoulder with V-neck and narrowed collar

I. Generate a front and back in the Shape Editor:

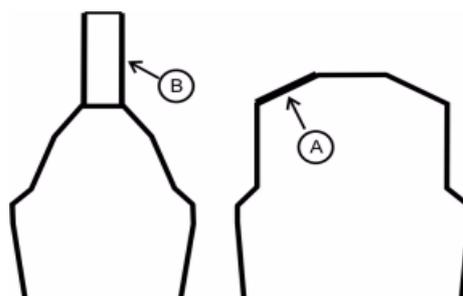
- 1) Open the "Shape editor" via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Create the table under "Left Lines" and enter the values for the front.

Basic element Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -200 | 0 | -60 | 0 | -60 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 100 | 16 | 30 | 5 | 6 | 1 | 5 | 0 | 0 | 0 | Narrowing |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 100 | -16 | 30 | -5 | 6 | -1 | 5 | 0 | 0 | 0 | Widening |
| 5 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 6 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | 0 | 0 | Narrowing |
| 7 | | 126 | 0 | 38 | 0 | 38 | 0 | 1 | 0 | 0 | 0 | |
| 8 | | 33 | 100 | 10 | 30 | 1 | 3 | 10 | 0 | 0 | 0 | Narrowing |
| 9 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 10 | | 0 | 60 | 0 | 18 | 0 | 18 | 1 | 0 | 0 | 0 | |

- 7) Allocate the desired attributes **Narrowing** and **Widening** to the edges under "Function".
- 8) Allocate the **Narrowing** function to the shoulder edge (A) under "Function" in the "General" tab.

| | | |
|------------------|-------------------|------------------------------------|
| Setting | | |
| Line 8 | | |
| Narrowing | Fade-out width | 0 |
| | Narrowing width | 0 |
| | Type of narrowing | Perform narrowing in sleeve |





Generate a shape for the back with the same specifications as for the front but without the neck opening element.

II. Generate the element for the neck opening in the Shape editor:

- 1) Open the shape **Saddle shoulder front part**.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the entry **Neck opening** in the "Type" selection list.
- 4) Create the table under "Left Lines" and enter the values for the neck opening element.

Neck opening element

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 106 | -53 | 32 | -16 | 2 | -1 | 16 | 0 | 0 | 0 | Narrowing |
| 2 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 53 | 0 | 16 | 0 | 16 | 1 | 0 | 0 | 0 | |



The end line of the V-neck has to be shorter than the end line of the front by two stitches at least.

- 5) Assign **narrowing** to the base line (No.1) under "Function" in the "General" tab.
- 6) Specify the narrowing type in the "Narrowing" tab under "Module".
 - "V-neck above"
 - "V-neck underneath"
- 7) Specify the position of the V-neck via "Distance to end line" (Value:0).
 - ⇒ The neck opening element will be placed on the end line of the basic element.
- 8) Save shape.

III. Generate the element for sleeve in the Shape editor:

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w Sleeve** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values in the table:

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -93 | 0 | -28 | 0 | -28 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 266 | -33 | 80 | -10 | 8 | -1 | 10 | 0 | 0 | 0 | Widening |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 133 | 66 | 40 | 20 | 2 | 1 | 20 | 0 | 0 | 0 | Narrowing |
| 5 | | 33 | 33 | 10 | 10 | 1 | 1 | 10 | 0 | 0 | 0 | Narrowing |
| 6 | | 100 | 0 | 30 | 0 | 30 | 0 | 1 | 0 | 0 | 0 | Narrowing |
| 7 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 8 | | 0 | 26 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |

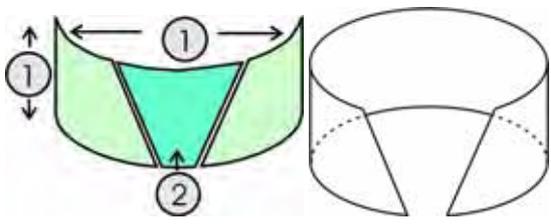
- 4) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".
- 5) Allocate the **Narrowing** function to the saddle edge (no.6) under "Function" in the "General" tab.

| | | |
|------------------|-------------------|--|
| Line 6 | | |
| Narrowing | Fade-out type | no |
| | Fade-out width | 0 |
| | Type of narrowing | <ul style="list-style-type: none"> ▪ Sleeve underneath ▪ Sleeve underneath Layers apart |
| | Narrowing width | Narrow entire width of sleeve |

- 6) Save shape.

IV. Generate the element for a narrowed collar.

i Different collar shapes must be produced for the front and for the back.

| No. | Meaning |
|-----|--|
| |  |
| 1 | Height and width of front and back of the collar are the same |
| 2 | Shape element for front collar as the element Neck Result: Opening in front of collar |

- 1) Open the shape editor via "Shape" / "Generate/Edit Shape...".
- 2) Select the **k&w collar** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values for the collar in the table under "Left lines".

Front of Collar / Back of Collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 0 | -33 | 0 | -10 | 0 | -10 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 40 | 0 | 12 | 0 | 12 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 33 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | 0 | Link-off |

- 4) Allocate **bind-off** to the end line under "Function" in the "General" tab.
- 5) Select the "Bind-off" tab and choose the **Type of binding-off** "Neckline open L0".
- 6) Save the Front of collar elements.

i Create and save the Back of collar element with the same values and attributes.

V. Generate a non-knitting element for front of collar in the Shape editor:

▷ The front of collar element is open in the Shape editor

- 1) Generate a new element in the Shape Editor with .
- 2) Select the entry **Neck opening** in the "Type" selection list.
- 3) Create the table under "Left Lines" and enter the values for the neck opening (2) element.

Neck opening element (non-knitting area)

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -6 | 0 | -2 | 0 | -2 | 1 | 0 | 0 | 0 | |
| 2 | | 26 | -13 | 8 | -4 | 2 | -1 | 4 | 0 | 0 | 0 | Narrowing |
| 3 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 0 | 20 | 0 | 6 | 0 | 6 | 1 | 0 | 0 | 0 | |

i The height of the **Neck opening** element must be the same as the **Collarbasic** element.

- 4) Save front of collar.

i You have to save all shape elements in the same directory.

15.12.4 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back, sleeve and collar in the "ShapeWizard" into a **Saddle shoulder V-neck+collar.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
⇒ The "Open" dialog box appears in order to select a shape file.
- 3) Select shape.
⇒ The shape will be loaded and the name will be displayed und "Body front".



Load the shape elements for "Body back", "Sleeve" and "Front collar" and "Back collar" following the same procedure.

- 4) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|---|--|
| B1-Type 1 (no connection L0-L1) | Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |
| B1-Type 1 TC-T (no connection L0-L1) | Knitting cycle for patterns of the CMS machine with additional beds. Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |



The saddle shoulder is knitted in the 3:1:3 ratio by default. If the 2:1:2 ratio is needed for working out, the "Saddle shoulder 2:1:2" checkbox is to be activated in the ShapeWizard dialog box.

15.12.5 Shapewizard: Determine docking points and k&w Arrangements

I. Open ShapeWizard and set docking points:

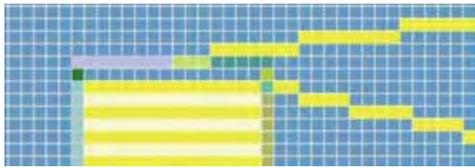
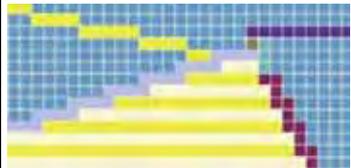
- 1) Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.
- 2) Open the "Docking Points" dialog box with the  icon in the toolbar of the "Shapewizard".
- 3) Set the docking point for "sleeve-body".

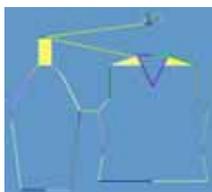


- 4) Docking point "Suspend Body".



To create this connection, use the "Ctrl" key.

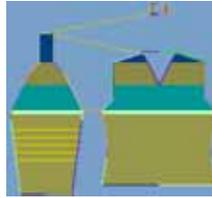
| Docking point Suspend Body | |
|--|---|
| Sleeve - saddle | Body - shoulder |
|  |  |



- 5) Set the docking point "Collar".
- ⇒ The width of the collar element is adjusted by the docking point.

II. Determine k&w Arrangements:

- 1) Press "Determine k&w Arrangements".



The determined k&w Arrangements can be deleted with the "Initialize" button.

- 2) Save the k&w Arrangements as kaw -file via the "File" / "Save" or "Save as".

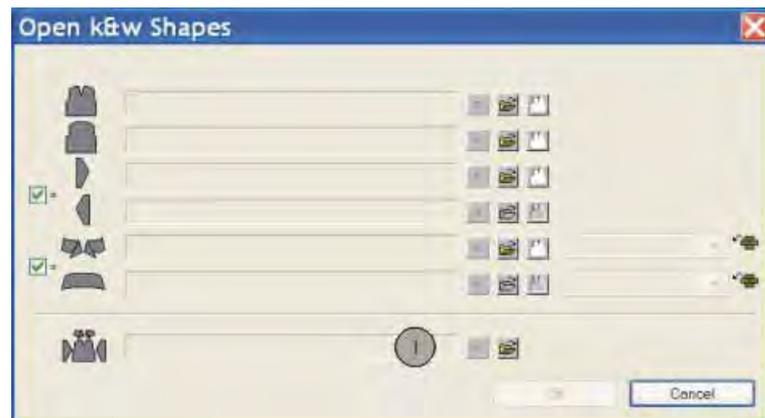


The elements of the shape (front, back, sleeve and collar) and the kaw file must all be located in the same directory.

- 3) Close the "Shapewizard" dialog box.

15.12.6 Open shape**Lay the kaw file onto the basic pattern:**

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the entry with "OK".
- ⇒ The kaw file lies on the basic pattern.

15.12.7 Position and cut-out the shape and expand the pattern

I. Position the shape:

▷ The shape with k&w Arrangements is located on the pattern after "Open k&w shapes".

1) Position the shape elements **body** on the motif with the selected symbol



and the left mouse button pressed.

2) Select the desired k&w presentation.

II. Cut-out the shape:



You can make pattern related settings in the "k&w configuration" dialog box before cutting out.

1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.

2) Confirm with "OK".

⇒ The "Insert/Replace k&w Start" dialog box appears.

3) Select the desired start.

4) Confirm with "OK".

⇒ The selected start is inserted.

III. Expand the pattern:

1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.

2) Confirm with "Yes".

⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for binding off the collar is inserted.

15.12.8 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
 - 2) Confirm the query with "OK".
 - 3) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
- ➔ Start the "Sintral Check" with the  button.

16 Rules for knit and wear® shapes

Use of k&w shapes:

- Use existing shapes from the D:\StollM1plus\x.x.xxx\Shapewriter directory.
- Create your own new shapes and save them in your own directory.

The elements of a k&w shape:

- Front (front layer L0)
- Back (back layer L1)
- Sleeves for sweater or cardigan
- Collar

Rules to generate a k&w shape:

| Shape element | Conditions / requirements |
|--|---|
| Shapes for front and back | same width |
| Starting width of the shape. | Shape width as desired, as independent of start |
| Final width of the shape elements (body and sleeve) | divisible by the cycle width of the knitting mode of the collar |
| Total height of the shape | even or odd numbered |
| The height up to the V-neck start | even or odd numbered |
| The height of a V-neck | by all means even numbered |
| Total height of a gore in the neck area | by all means even numbered the height of a goring step is 2 rows at the maximum. |
| Maximum widening in the shape | by 1 stitch after 2 rows. |
| Widening at front outer edge | after every 2nd row when using a knitting sequence for gore after every fourth row. |
| Length difference between sleeve and body | should not be more than 30%, otherwise length compensation with residual yarn. |
| Front and back layer closed | will always be narrowed simultaneously |
| Maximum narrowing | <ul style="list-style-type: none"> ▪ up to 3 stitches with Stoll modules ▪ from 4 stitches generate your own module |
| Narrowings in body and sleeve | <ul style="list-style-type: none"> ▪ possible at the same height ▪ possible offset in height |

| Shape element | Situation | Possibility |
|--------------------------------------|---|-------------------------------------|
| Narrowing at front outer edge | without V-neck or gore | after each row |
| | with V-neck or gore | after every 2nd row |
| | with V-neck or gore if a stitch ratio of sleeve-body-sleeve of 1-2-1 is present | after every fourth row |
| Narrowings at the sleeve edge | without V-neck or gore. | after each pattern row. |
| | with V-neck or gore. | after every 2nd pattern row |
| Narrowings in body and sleeve | | is possible in the same stitch row. |
| Narrowings at the V-neck | | after each pattern row |



Do not carry out any widening or narrowing in the sleeve or in the body in the 6 rows below the sleeve-body crossover.

17 k&w starts in the overview

knit and wear starts in the Module Explorer of Database:

Stoll

- Sweater / Cardigan / Body
 - **with elastic thread**
 - Pullover
 - Cardigan
 - Body
 - **without elastic thread**
 - Pullover
 - Cardigan
 - Body
- Tank top / Top / Waistcoat
- Trousers
- Short sleeve
- Short body

Private



The **Private** directory has the same structure as the **Stoll** directory.
The directory is used for saving self-generated starts.

"Stoll-TC-T"

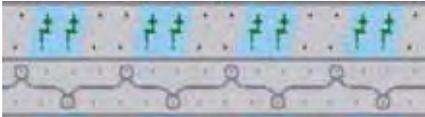
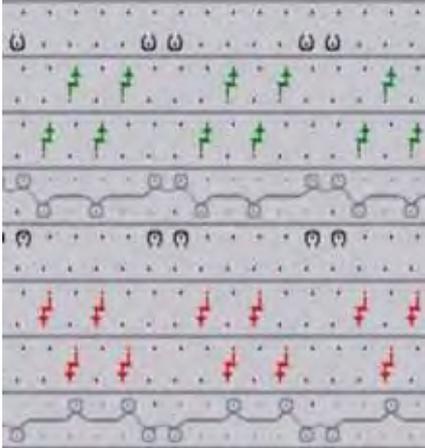
Stoll k&w starts for the machine type with additional beds for knitting k&w articles

"Stoll-x30S"

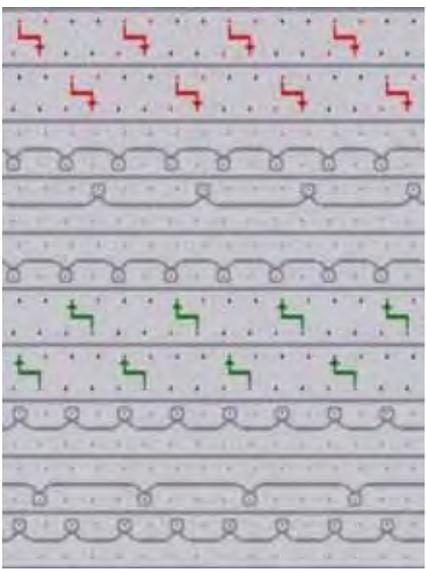
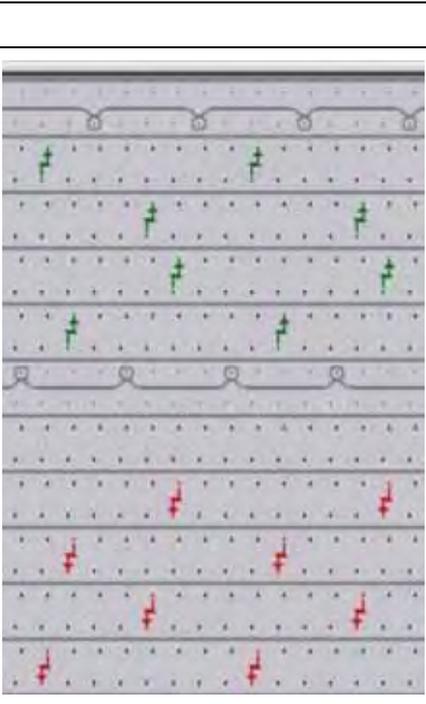
Stoll k&w starts for the machine type CMS 730 S / CMS 830 S



All starts are available with and without elastic thread.

| "k&w-Starts" | Presentation | Function |
|--------------------|---|---|
| "1X1" |  | <p>L0: Knitting in 1x1 on the even numbered needles.</p> <p>L1: Knitting in 1x1 on the odd numbered needles.</p> |
| "1X1_Open" |  | <p>This 1X1 start is laterally open.</p> <p>i: Two yarn carriers are required.</p> <p>⇨ Slit at the outer edges.</p> |
| "1x1_7.2_9.2" | | <p>1x1 start for the Machine gauges E 7.2 and E 9.2.</p> |
| "1x1_Open_7.2_9.2" | | <p>This 1x1 start for the machine gauges E 7.2 and E 9.2 is laterally open.</p> <p>i: Two yarn carriers are required.</p> <p>⇨ Slit at the outer edges.</p> |
| "2X1" |  | <p>L0: Front Needle Bed: Knitting on two neighboring needles and non-knitting on 4 needles. Back Needle Bed: Knitting on the second and fourth needle in the area of the 4 non-knitting needles. Then these stitches will be transferred to the front.</p> <p>L1: Front Needle Bed: Mirror-image knitting regarding L1 Back Needle Bed: Mirror-image knitting regarding L0 and transfer of the needles knitting inside after each knitting.</p> <p>i: The stitches knitting outside will be sunken before knitting to achieve a uniform stitch appearance.</p> |
| "2X1_Open" | | <p>This 2x1 start is laterally open.</p> <p>i: Two yarn carriers are required.</p> <p>⇨ Slit at the outer edges.</p> |

| "k&w-Starts" | Presentation | Function |
|--------------|--------------|---|
| "2X2" | | <p>L0: Knitting in 2x2 on the even numbered needles.</p> <p>L1: Knitting in 2x2 on the odd numbered needles.</p> <p>i: A jersey stitch is always knit at the edges so that the outer stitch is never transferred.</p> |
| "2X2_Open" | | <p>This 2x2 start is laterally open.</p> <p>i: Two yarn carriers are required.</p> <p>⇨ Slit at the outer edges.</p> |
| "Tube" | | <p>L0: Knitting on the outside on even numbered needles and on the inside on the needles 4, 8, 12, etc.</p> <p>L1: Knitting of the outside on odd numbered needles and on the inside on the needles 3, 7, 11, etc.</p> <p>i:</p> <ul style="list-style-type: none"> ▪ The back needle bed is racked one needle to the right (VR1) for the entire cycle. ▪ On the outside is carried out double as much knitting as on the inside; this results in a repeat module with a height of 6 rows. |

| "k&w-Starts" | Presentation | Function |
|---------------------|--|---|
| "Tubular_Open" |  | <p>This tubular start is laterally open.</p> <p>L0 + L1: Knitting L0 of a cycle (3 rows) Transfer Knitting L1 of a cycle (3 rows)</p> <p>i: Two yarn carriers are required.</p> <p>⇒ Slit at the outer edges.</p> |
| "1x1 Basic" |  | <p>Knitting start of the normal 1x1 start and ends after the tubular rows. Then the knitting cycle of the desired start is drawn-in manually.</p> <p>i: Use for special starts (e.g. different ribs, petinet, etc.) Generation the easy way</p> |
| "1x1_Basic_7.2_9.2" | | <p>For special starts for the machine gauges E 7.2 and E 9.2.</p> |

| "k&w-Starts" | Presentation | Function |
|--------------|--------------|---|
| "1x1_Fine" | | <p>Layer L0 L1: Knitting on the outside and the inside on every third needle.</p> <p>i: The needles, which knit on the outside, are opposite to each other, so that two needles remain free between them. These needles are required to transfer the knitting stitches on the inside (spacing).</p> <p>⇨ Due to short floats between the stitches, the 1x1 rib is tighter.</p> |

Combinations of different starts in body and sleeve:

Requirement: The start of the body and the sleeve begin at the same height.

- Tubular start in the body and 1x1 start in the sleeve
- Tubular start in the body and 2x1 start in the sleeve

Starts for short sleeve/short body:

The starts for short sleeve and short body can be combined with each other as desired.

NP settings used in Stoll k&w starts:

| NP setting | Use |
|------------|---|
| 1/11 | External / internal setup row |
| 2/12 | External / internal tubular row |
| 3/13 | External / internal rib |
| 4 | Elastic thread |
| (14/15)* | Front / rear casting off |
| 20 | Interlock after comb thread (Technical row 1+2) |
| 21 | Interlock (Technical row 3+4) and 1x1 with casting off (technical row 7-10) |
| 22 | Knit-in comb thread into tubular |
| 23 | Residual yarn before separating thread |
| 24 | Draw thread |
| 31 | Residual yarn in waist area (short sleeve, short body) |
| 32 | Residual yarn in pattern area (short sleeve, short body) |

| | |
|------------|------------------------------|
| NP setting | Use |
| 33 | Delayed timing |
| 34 | NPJ inside for 1x1 for E9.2 |
| 35 | NPJ outside for 1x1 for E9.2 |

* These values are not fixed and are set on any free NP specification.

NP settings used in k&w starts from "Stoll TC-T":

| | |
|------------|--|
| NP setting | Use |
| 36 | Transition from "1x1 start fine" to all needles in the pattern |
| 37 | Transition from "1x1 start fine" to all needles in the pattern |
| 38 | Loose row before Doubling with TC-T |

Home position of yarn carriers:

| Yarn type | # Yarn | Yarn carriers | Home position | |
|--|---|---------------|---------------|-------|
| Draw thread 1 | 207 | 1 | Left | |
| Draw thread 2 (for short sleeve) | 210 | 1 | Right | |
| Comb thread 1 | 208 | 2 | Left | |
| Elastic yarn 1 (for short sleeve right) | 209 | 2 | Right | |
| Elastic yarn 2 (for short sleeve left) | 212 | 7 | Left | |
| Ground thread | | | | |
| | Rib thread 1 | 201 | 4 | Left |
| | Rib thread 2 | 202 | 5 | Right |
| | Rib thread 3 | 203 | 6 | Right |
| | Rib thread 4 | 204 | 7 | Right |
| | Protection thread 1 | 205 | 8 | Right |
| | Protection thread 2 (for short sleeve) | 206 | 8 | Left |

18 Combine and position the individual shapes to form a k&w shape:

I. Combine individual shape elements to form a k&w shape:

i The individual shapes were generated in the Shape editor and saved in a directory.

➔ Call up the dialog box "Open k&w shapes" via the "Shape"/ "Open and Position Shape..." menu.



| No. | Function | |
|-----|--|---|
| 1 | List of the loaded shape elements. | |
| 2 | <input checked="" type="checkbox"/> | Same elements are used for right / left or for front / back. |
| | <input type="checkbox"/> | Different elements are used for right / left or for front / back. |
| 3 | Delete the shape element loaded. | |
| 4 | Load shape element. | |
| 5 | Open the shape editor with the element loaded. | |
| 6 | Knitting mode for front / back collar | |
| 7 | Load shapes of the .shk and .kaw formats. | |

II. Load and lay-on the shape elements:

- 1) Load e.g. the shape element **Front** via the  key.
⇒ The "Open" dialog box appears.
- 2) Select the directory, in which the shape elements are saved.



The Stoll default shapes are saved under D:/Stoll/M1/Shapesizer/k&w.

- 3) Select the **Front** shape element.
 - 4) Press the "Open" key.
- ⇒ The **Front** shape element is displayed in the dialog box.
-



Load all the other shape elements following the same procedure.

Selection for the Sleeve shape element:

- The sleeve element will automatically be used for both sleeves, left and right.
- Different shape elements can be loaded for the left and right sleeve.

Selection for the Collar shape element:

- The collar element will automatically be used for front and back collar.
 - Different shape elements can be loaded for the front and back collar.
- 5) Close the "Open k&w shapes" dialog box with "OK".
- ⇒ The individual shape elements will be laid onto the pattern.
-



Saving

The shape elements combined this way cannot be saved.

III. Position the shape parts in the basic motif:

1) Position the shape elements **Sleeve** and / or **Body with collar** on the motif with the  symbol selected and the left mouse button pressed.

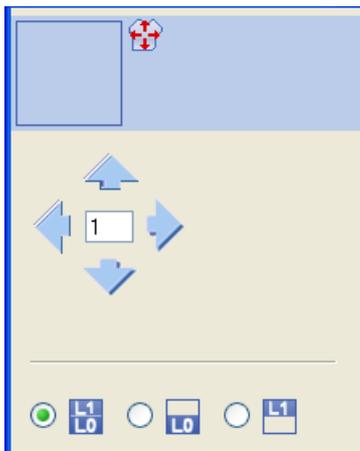
- or -

➔ Select the desired shape element with the  symbol selected. Position the selected shape element with the arrow keys of the keyboard.

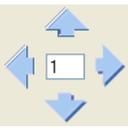


- or -

➔ Position the selected shape element with the arrow keys of the "Tool properties" dialog box.



Settings in the "Tool properties" dialog box for the Drawing Tool :

| Symbol | Function |
|---|---|
|  | Input of a number (factor): Moving the selected element with each click on a direction arrow by the factor entered Direction arrows: Moving the selected element in the different directions |
|  | Move front layer (L0) and back layer (L1) of the selected element |
|  | Move only the front layer (L0) of the selected element |
|  | Move only the back layer (L1) of the selected element |

Selection of shape elements:

- Selection by left clicking in the shape element
- Multiple selection of shape elements with "Ctrl" + left clicking in the individual shape elements.
- Delete the selection left clicking outside a shape element

i

Before selecting the shape elements, the corresponding selection has to be carried out in the "Tool properties" dialog box, which layer / layers of the shape elements are to be moved.

If the pattern is saved with the positioned shape, the positions of the shape parts in the pattern are retained when re-opening.

19 Overview of the k&w Arrangements in the Module Explorer of Database



Yarn carrier colors were used during the generation of the k&w Arrangements of Stoll.

I. Module group "Stoll" / "Private":

- [-] k&w Arrangements
 - [-] Stoll
 - [+] 3 areas
 - [+] 1 area
 - [+] connections
 - [+] 3 tubulars
 - [+] 2 tubulars
 - [+] 1 tubular
 - [+] Collar
 - [+] Intarsia
 - [-] Private
 - [+] 3 areas
 - [+] 1 area
 - [+] connections
 - [+] 3 tubulars
 - [+] 2 tubulars
 - [+] 1 tubular
 - [+] Collar
 - [+] favorites/basic shape types
 - [+] only for automatic

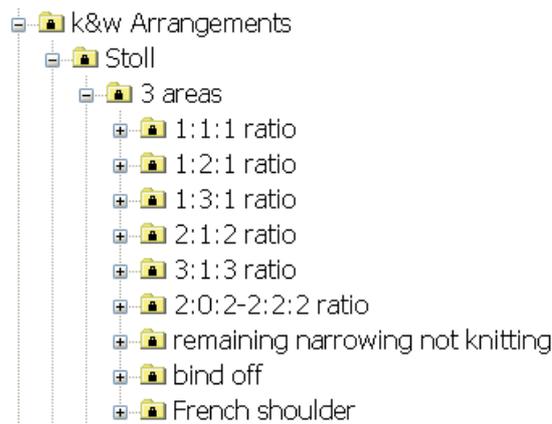
| Designation | k&w Arrangements for | Application |
|---------------|------------------------|---|
| "3 areas" | Sleeve/Body/Sleeve | Above Sleeve-Body connection. |
| "1 area" | - /Body/ - | |
| "connections" | Sleeve-Body connection | Connection of body and sleeves |
| "3 tubulars " | Sleeve/Body/Sleeve | Below sleeve - body connection |
| "2 tubulars" | Sleeve/ - /Sleeve, | |
| "1 tubular" | - /Body/ - | |
| "Collar" | Collar | Collar |
| "Intarsia" | - /Body/ - | Intarsia knitting technique in the body |



The module group "Private" is empty and is used to save the self-generated k&w Arrangements.

The k&w Arrangements of this group have a higher priority than the k&w Arrangements of the module group "Stoll".

II. Subgroups in "3 areas"

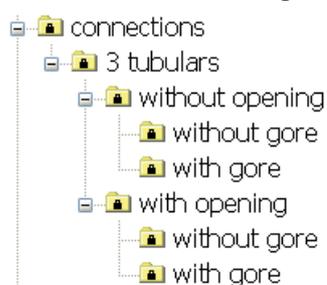


| Designation | Use and stitch ratio | | | | |
|------------------------------------|---|---|------------------|--------------------|--|
| | Stitch rows Sleeve | | Stitch rows Body | Stitch rows Sleeve | Application |
| "1:1:1 " | 1 | | 1 | 1 | |
| "1:2:1 " | 1 | | 2 | 1 | Sleeve length compensation |
| "1:3:1 " | 1 | | 3 | 1 | Sleeve length compensation |
| "2:1:2 " | 2 | | 1 | 2 | Body-saddle shoulder length compensation |
| "3:1:3 " | 3 | | 1 | 3 | Body-saddle shoulder length compensation |
| "2:0:2:- 2:2:2 " | L0 | 2 | 0 | 2 | Sleeve-back body length compensation |
| | L1 | 2 | 2 | 2 | |
| "Remaining narrowing not knitting" | k&w Arrangements for narrowing without knitting for: <ul style="list-style-type: none"> ▪ inserted sleeve ▪ effect of a bind-off sleeve | | | | |
| "Binding-off" | k&w Arrangements for binding-off at the end: <ul style="list-style-type: none"> ▪ with opening ▪ without opening | | | | |
| "F-Shoulder Sleeve" | k&w Arrangements for the French shoulder shape | | | | |

III. "Opening" / "Gore" subgroups

| Designation | | knitting area | k&w Arrangements |
|-------------------|----------------|------------------------|---|
| "without opening" | "without gore" | Sleeve/Body/ Sleeve | Without opening and gore in L0 and/or L1 Example: Pullover without neck gore and collar |
| | "with gore" | | Gore with binding in body in L0 and/or L1 without opening Example: Pullover with neck gore and collar |
| "with opening" | "without gore" | | Opening in body in L0 or L1 Example: Cardigan with V-neck |
| | "with gore" | | Gore with binding and opening in body in L0 and/or L1 Example: Cardigan with neck gore and collar |

IV. "Connections" subgroup



| Designation | | knitting area | k&w Arrangements |
|-------------------|-----------------|------------------------|---|
| "without opening" | "without gore" | Sleeve/Body/ Sleeve | <ul style="list-style-type: none"> ▪ B1-Type1 (no connection L0-L1) ▪ B1-Type1 TC-T (no connection L0-L1) ▪ B8 Connection of trousers |
| | "with gore" | | <ul style="list-style-type: none"> ▪ B5 Type1 with gore (L0) no connection L0-L1 ▪ B6 Type1 with gore (L0+L1) no connection L0-L1 |
| "with opening" | "without gore" | | <ul style="list-style-type: none"> ▪ B2 Type1 with opening (L0) no connection L0-L1 ▪ B2 Type1 TC-T with opening (L0) no connection L0-L1 ▪ B7 Type1 with opening (L0) no connection L0-L1 Rib |
| | "with gore" | | <ul style="list-style-type: none"> ▪ B3-Type1 with gore and opening (L0) and with gore and opening (L1) no connection L0-L1 ▪ B4 Type1 with gore and opening (L0) no connection L0-L1 |
| | "With intarsia" | | <ul style="list-style-type: none"> ▪ I17-Type 1 no connection L0-L1 + I L0 Body |

V. Sub-group "Intarsia"



| Designation | | Application |
|-------------|---------------|--|
| "Body" | | Knitting technique intarsia in the body below the sleeve/body connection |
| | "1 tubular" | with tank top |
| | "3 tubulars" | With pullover |
| | | Knitting technique intarsia in the body above the sleeve/body connection |
| | "1 area" | with tank top |
| | "3 areas" | with pullover |
| | "connections" | Knitting technique intarsia in the area of the sleeve/body connection in the front layer |

VI. "Favorites / Basic Shape Types" module groups



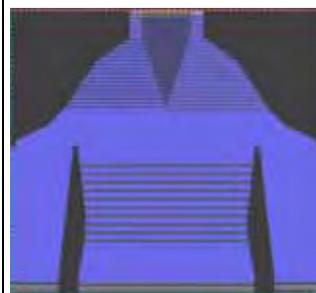
| Standard shape | Contents |
|-------------------------------|--|
| "set in sleeve" | k&w Arrangements for the standard shapes |
| "set in sleeve as cardigan" | |
| "saddle shoulder" | |
| "saddle shoulder as cardigan" | |
| "raglan" | |
| "raglan as cardigan" | |
| "slipover" | |
| "Waistcoat" | |
| "Intarsia" | k&w Arrangements for knitting technique intarsia in the body |

VII. Designation of the k&w Arrangements and their use:

| Designation | k&w Arrangements | knitting area | Application |
|-------------|--------------------------------|------------------------|---|
| "A" | "1 tubular" | - /Body/ - | Below Sleeve-Body connection. |
| | "2 tubulars " | Sleeve/ - /Sleeve | |
| | "3 tubulars" | Sleeve/Body/ Sleeve | |
| "B" | "Connection" | without opening | Sleeve-body connection |
| | | with opening | |
| "C" | "3 areas with or without gore" | | Above the sleeve-body connection to the start of the collar |
| "D" | "Collar and binding-off" | | Neck, shoulder, collar |
| "I" | "1 tubular" | Body | Knitting technique intarsia below sleeve - body connection |
| | "3 tubulars" | Sleeve/Body/ Sleeve | |
| | "Connection" | with opening | Knitting technique intarsia in the area of the sleeve body connection |
| | "1 area with opening" | | Knitting technique Intarsia above the sleeve-body connection up to the collar start |
| | "3 areas with opening" | | |

20 k&w pattern with manual allocation of k&w Arrangements

20.1 Shape view: Raglan with V-neck



| | |
|-------------------------|--|
| Pattern name: | Raglan-V-Ausschnitt |
| Pattern size: | Width: 250 Height: 200 |
| Machine type: | CMS 822 k&w |
| Gauge: | W 6.2 |
| Start: | 1X1 - Rib |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | k&w shape Raglan with V-neck and collar |

20.1.1 Generate Pattern without Shape

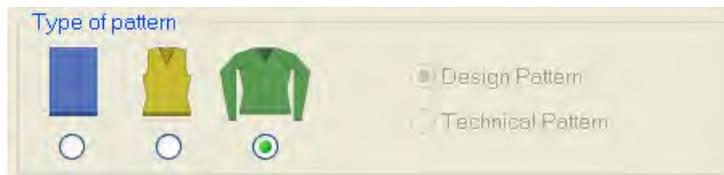
Generate knit and wear pattern:

- 1) Select "File" / "New" from the menu bar.

- or -

➔ Click the  icon.

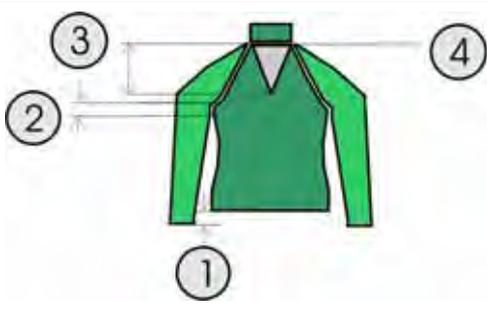
- 2) Enter a pattern name.
- 3) Select machine.
- 4) Type of pattern: Select **k&w pattern** type.



- 5) Enter height and width of the pattern field.
Width: 250
Height: 200
 - 6) Select "Jersey" for the basic pattern via the selection list.
 - 7) Confirm the settings with the "Generate Design Pattern" button.
- ⇒ Symbol View [Basic] in k&w presentation appears.

20.1.2 Rules for generating a shape: raglan

Rules for knit and wear Raglan with V-neck and collar

| Rules for Raglan with V-neck and collar | |
|--|--|
|  | |
| 1 | Length difference between sleeve and body even numbered |
| 2 | Minimum number of rows before sleeve-body crossover: 6 rows (= height of connection module). |
| 3 | Even-numbered height of V-neck |
| 4 | The end lines of V-neck and body are at the same height. |

20.1.3 Create shape: Raglan with V-neck and collar

I. Generate a front and back in the Shape Editor:



The shape elements and the k&w file (shape with k&w Arrangements) must be saved in the same directory.

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Insert the entry field for edge lines with the  "Add new line at end" button.
- 7) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Rem |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----|
| 1 | | 0 | -206 | 0 | -62 | 0 | -62 | 1 | 0 | |
| 2 | | 100 | 16 | 30 | 5 | 6 | 1 | 5 | 0 | |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | |
| 4 | | 100 | -16 | 30 | -5 | 6 | -1 | 5 | 0 | |
| 5 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | |
| 6 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | |
| 7 | | 106 | 53 | 32 | 16 | 2 | 1 | 16 | 0 | |
| 8 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | |
| 9 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | |
| 10 | | 0 | 13 | 0 | 22 | 0 | 22 | 1 | 0 | |



If you change outer dimensions of the front, then you must adapt the back.

- 8) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".



Generate a shape for the back with the same specifications as for the front.

- 9) Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".

II. Insert the neck opening element in the front:

- 1) Open the **Raglan Front** shape.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the entry **Neck opening** in the "Type" selection list.
- 4) Set the coordinates for the **Neck opening**:

Neck opening in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|
| 1 | | 120 | -60 | 36 | -18 | 2 | -1 | 18 | 0 | 0 |
| 2 | | 0 | 60 | 0 | 18 | 0 | 18 | 1 | 0 | 0 |

- 5) Save shape.

III. Generate the shape for the sleeve in the Shape editor:

- 1) Open Shape Editor.
- 2) Generate a new shape / table for the sleeve using the  key.
- 3) Create table with values.

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|
| 1 | | 0 | -113 | 0 | -24 | 0 | -24 | 1 | 0 | 0 |
| 2 | | 300 | -33 | 90 | -10 | 9 | -1 | 10 | 0 | 0 |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 |
| 4 | | 40 | 40 | 12 | 12 | 2 | 2 | 6 | 0 | 0 |
| 5 | | 106 | 53 | 32 | 16 | 4 | 2 | 8 | 0 | 0 |
| 6 | | 40 | 40 | 12 | 12 | 2 | 2 | 6 | 0 | 0 |
| 7 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 |
| 8 | | 0 | 13 | 0 | 4 | 0 | 4 | 1 | 0 | 0 |

- 4) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".
- 5) Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".



After the last narrowing, at least two stitches must still be knit, otherwise the last narrowing will not be performed.

IV. Generate the shape for the collar in the Shape editor:

- 1) Open Shape Editor.
- 2) Generate a new shape / table for the sleeve using the  key.
- 3) Create a table with values for front of collar and back of collar:

Front of Collar / Back of Collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Res |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----|
| 1 | | 0 | -86 | 0 | -26 | 0 | -26 | 1 | 0 | |
| 2 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | |
| 3 | | 0 | 86 | 0 | 26 | 0 | 26 | 1 | 0 | |

- 4) Make the following settings for the end lines in the front and the back of the collar:

| Settings for front and back collar | | |
|------------------------------------|---------------|-----------------------|
| Line of the edge | "General" tab | "Binding-off tab" tab |
| End line | Binding-off | "Open cut out L0" |

- 5) Save the shapes in the directory created beforehand with "File" / "Save" or "Save As..."

The width of the collar:

- is dependent on the cycle width of the module used in the collar 1x1, 2x2 etc.
- must be matched to the end width of front and back, sleeve and V-neck.



If you change the width of the front or back, then you must adjust the front and back of the collar.

V. Insert the opening element in the front of the collar:

- Call-up the **front of collar** shape.
- Generate a new element in the Shape Editor with .
- Select the **Opening** entry in the "Type" section list.
- Specify the coordinates for the **opening** element:

Element for opening in front of collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Res |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----|
| 1 | | 0 | -60 | 0 | -18 | 0 | -18 | 1 | 0 | |
| 2 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | |
| 3 | | 0 | 60 | 0 | 18 | 0 | 18 | 1 | 0 | |

- 5) Save the shapes in the directory created beforehand with "File" / "Save" or "Save As..."



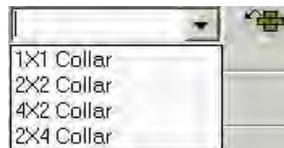
You have to save all shape elements in the same directory.

20.1.4 Load and position the shape elements

I. Open shape elements and position them on the basic pattern:

- 1) Call up the dialog box "Open k&w shapes" via the "Shape"/ "Open and Position Shape..." menu.
- 2) Load the shape elements for body, sleeve and collar in the dialog box using the  key.

- 3) Specify the knitting mode of the collar via the selection menu:

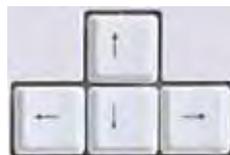


You can select different knitting modes for the front and back collar elements.

- 4) Press the "OK" key.
- ⇒ The individual shape elements will be laid onto the basic pattern.
- 5) Position the shape elements **Sleeve** and / or **Body with collar** on the motif with the  symbol selected and the left mouse button pressed.

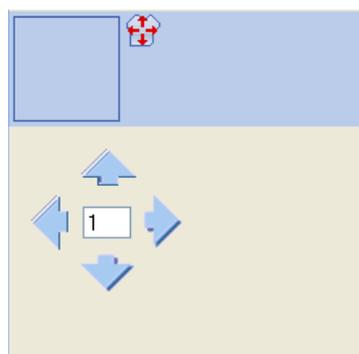
- or -

- ➔ Select the desired shape element with the  symbol selected. Position the selected shape element with the arrow keys of the keyboard.



- or -

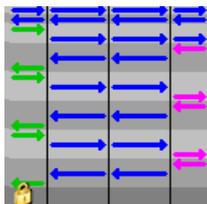
- ➔ using the "Tool properties" dialog box



20.1.5 Draw-in the k&w Arrangements manually: Raglan with V-neck

I. Insert manually k&w Arrangements in the Shape View:

- 1) Open the "Shape view" with the  button.
- 2) Select the  key.
- 3) Position the shape elements relative to one another with the "left mouse button".
- ⇒ The k&w Arrangement sleeve body connection can be inserted.
- 4) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
- 5) Select and insert the desired k&w Arrangement.
- 6) **Sleeve-body connection:**
 - "k&w Arrangements" / "Favorites / Basic Shapes" / "Raglan" / "B1 Type 1 (no connection L0-L1)".

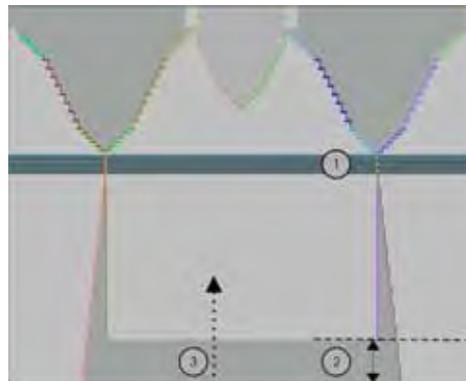


- 7) Insert the k&w Arrangement once in the Shape view at the position of the sleeve body connection.

Watch out the cursor function when inserting the k&w Arrangements:

| Meaning of arrows in insert mode | |
|----------------------------------|--|
| Red arrow | The k&w Arrangement can be inserted in downward arrow direction |
| Green arrow | The k&w Arrangement can be inserted in upward arrow direction |
| Red arrow + Green arrow | "Shift" key + k&w Arrangement The k&w Arrangement can be inserted in upward or downward arrow direction |

Picture 1:

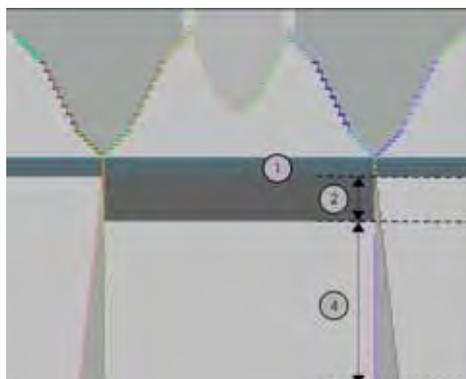


- 8) Move the **length compensation**:
 Move the length compensation (2) between body and sleeve with the following k&w Arrangement from the lower fabric edge (sleeve) to the center of the fabric (see figure 1):

- "k&w Arrangements" / "Stoll" / "X Standard"

| Knitting cycle modules | Name | Function |
|------------------------|-------------|---|
| | "X Default" | All three tubes/areas are processed evenly. |
| Use: | 1 | To move the length adjustment, only select the module. |
| | 2 | For overwriting the previously inserted k&w Arrangements Select "Ctrl" + k&w Arrangement |

Picture 2:



| No. | Function |
|-----|--|
| 1 | Inserted k&w Arrangement: "B1 Type 1 (no connection L0-L1)" |
| 2 | Length difference between body and sleeve is moved upward below the body-sleeve crossover. |
| 4 | Area of the inserted k&w Arrangements: "X Standard". |



The length compensation should not take place immediately at the start of the fabric piece, otherwise this makes it difficult to work with the comb.

Display when inserting the k&w Arrangements in the Shape view:

- A **green line** indicates that the k&w Arrangement is complete in the height and will be inserted.
- A **red line** indicates that the k&w Arrangement is not complete in the height and will not be inserted.

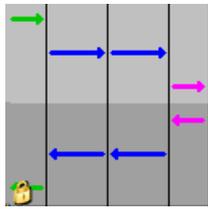
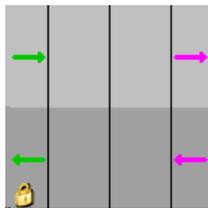
| Button allocations for the insertion of knitting cycles modules | | |
|---|-----------------|--|
| Key | Selection | Function |
| "Ctrl" | k&w Arrangement | Overwrite k&w Arrangement |
| "Shift" | | k&w Arrangement can also be inserted partially. (Insert, even with red line) |
| "Alt"+"Ctrl" | | Inserting between existing k&w Arrangements; additional rows will be inserted. |
| "Alt" | | Inserting with empty rows |
| "Alt"+"Ctrl" + "Shift" | | Inserting between existing k&w Arrangements; additional rows will be inserted. k&w Arrangement can also be inserted partially |

9) Use the following k&w Arrangements for the **length compensation**:

- "k&w Arrangements" / "Favorites / Basic Shapes" / "Raglan" / "A1-3 tubulars".
- "k&w Arrangements" / "Favorites / Basic Shapes" / "Raglan" / "A5-2 Tubular".



Pay attention to the stitch ratio between body and sleeve.

| Knitting cycle modules | Name | Function |
|---|----------------|--|
|  | "A13 tubulars" | Knitting of the body and sleeve elements (= 3 tubulars) below the sleeve-body crossover. |
|  | "A52 tubulars" | Knitting of the sleeve elements (= 2 tubulars) below the sleeve-body crossover. |

10) Fill up uniformly the **length difference** between body and sleeve with the following k&w Arrangements.

⇒ The area with k&w Arrangement "X Standard" will now be overwritten with the above described k&w Arrangements.

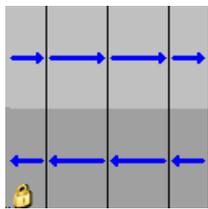


The inserted k&w Arrangements can be selected and copied and pasted with "Ctrl + C" and "Ctrl + V".

11) **From the sleeve-body connection up to the start of the V-neck:**

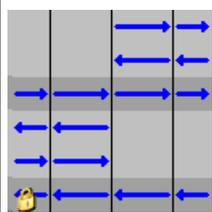
Insert the k&w Arrangement from above the sleeve-body connection to the start of the V-neck:

- "k&w Arrangements" / "Favorites/Basic Shape Types" / "Raglan" / "C37-3 Area 1:1:1"

| Knitting cycle modules | Name | Function |
|---|----------------------|---|
|  | "C37-3 areas -1:1:1" | Knitting of the body and sleeve elements (= 3 areas) after the sleeve-body crossover. |

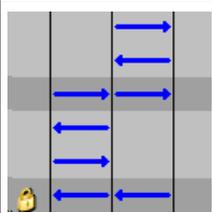
12) Insert the k&w Arrangement **From the start of the V-neck up to the end of the V-neck:**

- "k&w Arrangements" / "Favorites/Basic Shape Types" / "Raglan" / "C112-3 Area 1:1:1 with opening (L0)"

| Knitting cycle modules | Name | Function |
|---|--|--|
|  | "C112-3 Areas with opening (L0)-1:1:1" | Knitting of the body with opening and sleeve (= 3 areas) elements after the sleeve-body crossover. |

13) **Collar:**

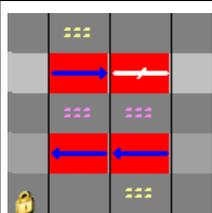
- "k&w Arrangements" / "Stoll" / "Collar" / "with opening" / "without gore" / "D12 collar with opening (L0)"

| Knitting cycle modules | Name | Function |
|--|--------------------------------|--|
|  | "D12 collar with opening (L0)" | Knitting of the collar element with opening. |

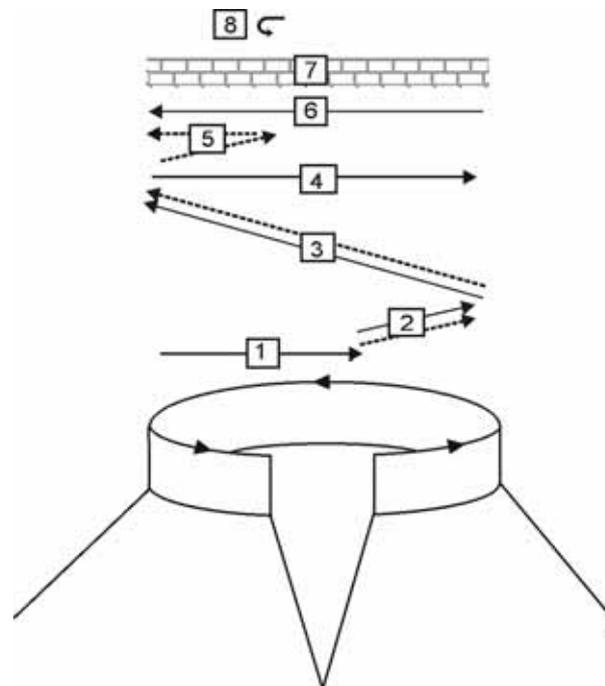
14) Binding-off **collar:**

Select the following k&w Arrangement for binding-off the collar and insert it on the last knitting row of the collar:

- "k&w Arrangements" / "Stoll" / "1 Area" / "bind off collar" / "with opening" / "D10 Binding-off with opening (L0)"

| Knitting cycle modules | Name | Function |
|---|------------------------------------|---|
|  | "D10-neckline front open bind off" | Binding-off the collar element with opening in the front layer. |

Binding-off cycle for collar with opening in layer L0:



| No. | Description |
|-----|---|
| 1 | Knit in draw thread layer 0 (front). |
| 2 | Bind off layer 0 the draw thread is carried along. |
| 3 | Bind-off layer 1 (back) the draw thread is carried along. |
| 4 | Knit draw thread to the right. |
| 5 | Bind off layer 0. |
| 6 | Knit draw thread to the left. |
| 7 | Protection rows. |
| 8 | Fix the bind-off stitch. |

15) Save the shape as shk file with the inserted k&w Arrangements under a new name via the "Shape" / "Save Shape As..." menu.

i If you do not save the shape view with the k&w Arrangements, it is not possible to remove the shape from the pattern. Then the k&w Arrangements have to be inserted again.

16) Close the shape view with .

20.1.6 Cut out the shape and complete the pattern

I. Cut out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm with "OK".
⇒ The start module and the information of the k&w Arrangements will be applied to the pattern.

II. Complete the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.
- 3) Start the technical processing with .
⇒ The query "Generate MC Program" appears.
- 4) Confirm the query with "OK".
- 5) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.

20.2 Shape view: Inserted sleeve with V-neck



| | | |
|-------------------------|---|-----|
| Pattern name: | Eingesetzter Arm mit V-Ausschnitt | |
| Pattern size: | Width: | 250 |
| | Height: | 200 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | 1X1 - Rib | |
| Basic pattern: | Jersey | |
| Knitting technique | knit and wear | |
| Description of pattern: | k&w shape Inserted sleeve V-neck | |

20.2.1 Generate Pattern without Shape

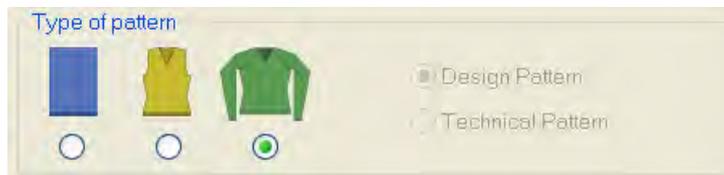
Generate knit and wear pattern:

- 1) Select "File" / "New" from the menu bar.

- or -

➔ Click the  icon.

- 2) Enter a pattern name.
- 3) Select machine.
- 4) Type of pattern: Select **k&w pattern** type.



- 5) Enter height and width of the pattern field.
Width: 250
Height: 200
 - 6) Select "Jersey" for the basic pattern via the selection list.
 - 7) Confirm the settings with the "Generate Design Pattern" button.
- ⇒ Symbol View [Basic] in k&w presentation appears.

20.2.2 Rules for generating a shape: Inserted sleeve

Rules for knit and wear Inserted sleeve with V-neck

| Rules for an inserted sleeve with V-neck | | |
|--|--|---|
| | | |
| 1 | A | Total height of the V-neck even numbered |
| | B | The height from the start of the V-neck up to the start of the shoulder even numbered |
| | C | The height from the start of the shoulder up to the end of the shoulder even numbered |
| 2 | End line of V-neck on the left and right front is two wales less than the end line of the back | |

20.2.3 Create shape: Inserted sleeve with V-neck

I. Generate a front and back in the Shape Editor:

i The shape elements and the k&w file (shape with k&w Arrangements) must be saved in the same directory.

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Insert the entry field for edge lines with the  "Add new line at end" button.
- 7) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -200 | 0 | -60 | 0 | -60 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 100 | 16 | 30 | 5 | 6 | 1 | 5 | 0 | 0 | 0 | Narrowing |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 100 | -16 | 30 | -5 | 6 | -1 | 5 | 0 | 0 | 0 | Widening |
| 5 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 6 | | 40 | 40 | 12 | 12 | 2 | 2 | 6 | 0 | 0 | 0 | Narrowing |
| 7 | | 153 | 0 | 46 | 0 | 46 | 0 | 1 | 0 | 0 | 0 | |
| 8 | | 20 | 80 | 6 | 24 | 1 | 4 | 6 | 0 | 0 | 0 | Gore |
| 9 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 10 | | 0 | 80 | 0 | 24 | 0 | 24 | 1 | 0 | 0 | 0 | Link-off |

i If you change outer dimensions of the front, then you must adapt the back.

- 8) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".

i Generate a shape for the back with the same specifications as for the front.

- 9) Make the following settings for the end line of the back under function in the "General" and "Bind-off" tabs.

| | | |
|------------------|---------------------------|------------------------------|
| Line of the edge | Tab "General information" | Tab "Binding-off" |
| End line | Binding-off | Neck with draw thread |

10) Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".

II. Insert the neck opening element in the front:

- 1) Open the shape **Inserted sleeve front**.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the entry **Neck opening** in the "Type" selection list.
- 4) Set the coordinates for the **Neck opening**:

Neck opening in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | ✓ | 113 | -73 | 34 | -22 | 0 | 0 | 0 | 0 | 0 | 0 | Narrowing |
| 2 | | 0 | 73 | 0 | 22 | 0 | 22 | 1 | 0 | 0 | 0 | |

| Line Editor Line 1 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 34 | -22 | | | |
| | 0 | 2 | -2 | 6 | | |
| | 0 | 4 | -2 | 5 | | |
| | 0 | 2 | 0 | 1 | | |

5) Save shape.

III. Generate the shape for the sleeve in the Shape editor:

- 1) Open Shape Editor.
- 2) Generate a new shape / table for the sleeve using the  key.
- 3) Create table with values.

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | 113 | 0 | -34 | 0 | -34 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 266 | 26 | 80 | -8 | 10 | -1 | 8 | 0 | 0 | 0 | Widening |
| 3 | | 28 | 0 | 8 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 40 | 40 | 12 | 12 | 2 | -2 | 6 | 0 | 0 | 0 | Narrowing |
| 5 | | 106 | 53 | 32 | 16 | 4 | 2 | 8 | 0 | 0 | 0 | Narrowing |
| 6 | | 23 | 46 | 7 | 14 | 1 | 2 | 7 | 0 | 0 | 0 | Narrowing |
| 7 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |

- Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".
- Allocate the following attributes to the **edge line** (no. 6):

| Edge | Tab "General information" | Tab "Narrowing" | Tab "connections" |
|--------------|---------------------------|--|---|
| No. 6 | Narrowing | Remaining Narrowing | <input checked="" type="checkbox"/> k&w-Do not knit |
| | | Narrow entire width of sleeve | <input checked="" type="checkbox"/> k&w remaining narrowing (SLEEVE-END). |
| | | Bind off number of stitches with shoulder gore | |

i The end width of the sleeve and body must be matched to the module width of the collar used.

- Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".

i After the last narrowing in the sleeve, at least two stitches must still be knit, otherwise the last narrowing will not be performed.

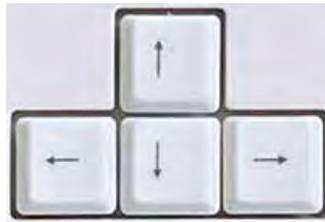
20.2.4 Load and position the shape elements

Open shape elements and position them on the basic pattern:

- 1) Call up the dialog box "Open k&w shapes" via the "Shape"/ "Open and Position Shape..." menu.
 - 2) Load the shape elements for body and sleeve in the dialog box using the  key.
 - 3) Press the "OK" key.
- ⇒ The individual shape elements will be laid onto the basic pattern.
- 4) Position the shape elements **Sleeve** and / or **Body** on the motif with the  symbol selected and the left mouse button pressed.

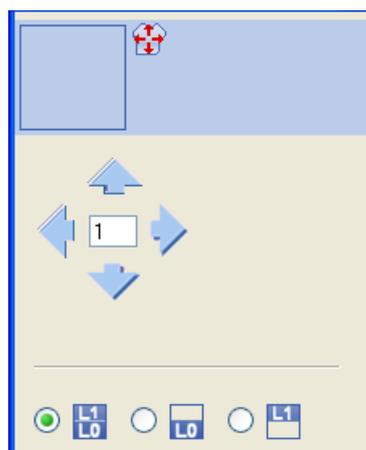
- or -

- ➔ Select the desired shape element with the  symbol selected. Position the selected shape element with the arrow keys of the keyboard.



- or -

- ➔ Using the "Tool properties" dialog box



20.2.5 Draw-in the k&w Arrangements manually: Inserted sleeve with V-neck

Insert k&w Arrangements in the Shape View manually:

- 1) Open the "Shape view" with the  button.
- 2) Select the  key.
- 3) Position the shape elements relative to one another with the "left mouse button".
 - ⇒ The k&w Arrangement sleeve body connection can be inserted.
- 4) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
- 5) Select and insert the desired k&w Arrangement.
- 6) **Sleeve-body connection:**
 - "k&w Arrangements" / "Favorites / Basic Shapes" / "Inserted sleeve" / "B1 Type 1 (no connection L0-L1)".
- 7) Insert the k&w Arrangement once in the Shape view at the position of the sleeve body connection.
- 8) Move the **length compensation:**
Move the length compensation between body and sleeve with the following k&w Arrangement from the lower fabric edge to the center of the fabric.
 - "k&w Arrangements" / "Stoll" / "X Standard"



The length compensation should not take place at the start of the fabric piece, otherwise this makes it difficult to work with the comb.

- 9) Use the following k&w Arrangements for the **length compensation:**
 - "k&w Arrangements" / "Favorites / Basic Shapes" / "Inserted sleeve" / "A1-3 tubulars".
 - "k&w Arrangements" / "Favorites / Basic Shapes" / "Inserted sleeve" / "A5-2 tubulars".
- 10) Fill up uniformly the **length difference** between body and sleeve with k&w Arrangements.
 - ⇒ The area with k&w Arrangement "X Standard" will now be overwritten with the above described k&w Arrangements.

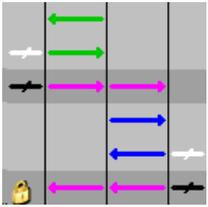
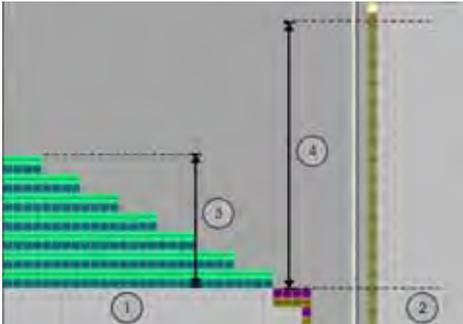
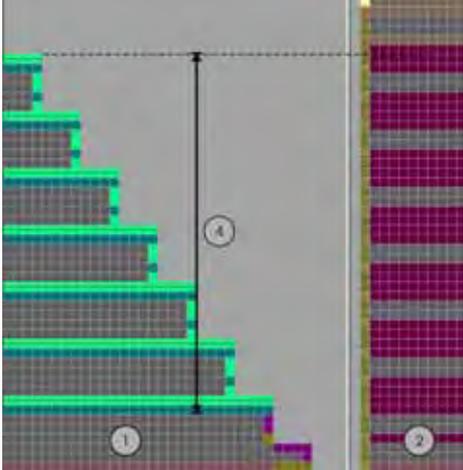


You can select the inserted knitting cycle modules and copy and paste them with "Ctrl + C" and "Ctrl + V".

11) Insert **remaining narrowing**:

Insert a k&w Arrangement for the remaining narrowing of the sleeve from the top to the bottom:

- "k&w Arrangements" / "Stoll" / "3 Areas" / "Remaining narrowing not knitting" / "with opening" / "without gore" / "C51 3 areas with opening (L0) 0:2:0-3Y".

| Designation | Presentation | Function |
|---|--|---|
| k&w Arrangement |  <p>"C51- 3 Areas with opening (L0) 0:2:0-3Y"</p> | The k&w Arrangement connects the 3 areas (sleeve-body-sleeve) by knitting 2 rows in the body and narrowing without knitting the sleeves to the body. with opening (V-neck) |
| Shape view without k&w Arrangement |  | 1 Sleeve |
| | | 2 Body |
| | | 3 Height of the remaining narrowing |
| | | 4 Height of the body = 2 x height of the remaining narrowing |
| Shape view with k&w Arrangement |  | 1 Sleeve |
| | | 2 Body |
| | | 4 Height of the k&w Arrangement in stitch ratio 0:2:0 |
| | | |

12) Insert the k&w Arrangement **below the remaining narrowing up to the start of the V-neck**:

- "k&w Arrangements" / "Favorites / Basic Shapes" / "Inserted sleeve" / "C112- 3 Area with opening (L0)-1:1:1"

13) Insert the k&w Arrangement **between the start of the V-neck and the sleeve-body connection:**

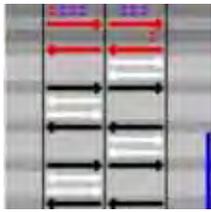
- "k&w Arrangements" / "Favorites/Basic Shape Types" / "Inserted sleeve" / "C 37-3 Areas 1:1:1"

14) Insert **shoulder gore.**

Insert the following k&w Arrangement in the area of the shoulder:

- "k&w Arrangements" / "Stoll" / "1 area" / "shoulder gore" / "with opening" / "without gore" /

"C39-shoulder gore with opening (L0) + shoulder binding-off + neck binding-off 1Y"

| Knitting cycle modules | Name | Function |
|--|--|--|
|  | "C39 Shoulder gore with opening (L0) + binding-off the shoulder + neck binding-off 1Y" | Knitting of the shoulder area (with one yarn carrier) in goring technique and following binding-off of the shoulder and of the neck. |
| | or | |
| | "C69 Shoulder gore with opening (L0) + binding-off the shoulder + neck binding-off-3Y" | Knitting of the shoulder area (with three yarn carriers) in goring technique and following binding-off of the shoulder and of the neck. |

15) Save the shape as shk via the "Shape" / "Save Shape As..." menu.



If you do not save the shape view with the k&w Arrangements, it is not possible to remove the shape from the pattern.

Afterwards you would have to re-insert the k&w Arrangements into the shape view.

16) Close the "Shape View".

20.2.6 Cut out the shape and complete the pattern

I. Cut out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm with "OK".
⇒ The start module and the information of the k&w Arrangements will be applied to the pattern.

II. Complete the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.
- 3) Start the technical processing with .
⇒ The query "Generate MC Program" appears.
- 4) Confirm the query with "OK".
- 5) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.

20.3 Shape view: Saddle shoulder with V-neck



| | | |
|-------------------------|---|-----|
| Pattern name: | Sattelschulter mit V-Ausschnitt | |
| Pattern size: | Width: | 250 |
| | Height: | 280 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | As desired | |
| Basic pattern: | Jersey | |
| Knitting technique | knit and wear | |
| Description of pattern: | Saddle shoulder with V-neck and narrowed collar | |

20.3.1 Generate Pattern without Shape

Generate knit and wear pattern:

1) Select "File" / "New" from the menu bar.

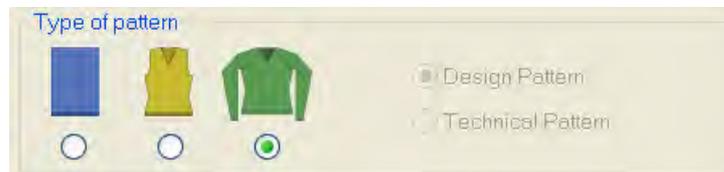
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select **k&w pattern** type.



5) Enter height and width of the pattern field.

Width: 250

Height: 280

6) Select "Jersey" for the basic pattern via the selection list.

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

20.3.2 Rules for generating a shape: Saddle shoulder with V-neck

Rules for knit and wear Saddle shoulder with V-neck

| Rules for saddle shoulder with V-neck | |
|---|---|
|  | |
| 1 | Height from the start of the V-neck up to the start of the shoulder even-numbered. Total height of the V-neck even numbered. |
| 2 | Height from the start to the end of the shoulder even-numbered. |
| 3 | Height of the collar even-numbered. |

20.3.3 Create shape: Saddle shoulder with V-neck

I. Generate a front and back in the Shape Editor:

i The shape elements and the k&w file (shape with k&w Arrangements) must be saved in the same directory.

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Insert the entry field for edge lines with the  "Add new line at end" button.
- 7) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -200 | 0 | -50 | 0 | -50 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 100 | 20 | 30 | 6 | 5 | 1 | 6 | 0 | 0 | 0 | Narrowing |
| 3 | | 100 | -20 | 30 | -6 | 5 | -1 | 6 | 0 | 0 | 0 | Widening |
| 4 | | 26 | 0 | 8 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | |
| 5 | | 40 | 40 | 12 | 12 | 2 | 2 | 6 | 0 | 0 | 0 | Narrowing |
| 6 | | 120 | 0 | 36 | 0 | 36 | 0 | 1 | 0 | 0 | 0 | |
| 7 | | 46 | 93 | 14 | 28 | 1 | 2 | 14 | 0 | 0 | 0 | Narrowing |
| 8 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 9 | | 3 | 66 | 5 | 20 | 0 | 20 | 1 | 5 | 5 | 0 | |

- 8) Make the following settings in the front and back:

| Edge | Tab "General information" | Tab "Narrowing" |
|-------|---------------------------|---|
| No. 5 | Narrowing | <ul style="list-style-type: none"> ▪ "Body above/underneath" ▪ "Body above / underneath Layers apart" |
| No. 7 | Narrowing | No entry for narrowing module Perform narrowing in sleeve |

- 9) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".

i Generate a shape for the back with the same specifications as for the front.

- 10) Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".

II. Insert the neck opening element in the front:

- 1) Open the shape **Saddle shoulder front part**.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the entry **Neck opening** in the "Type" selection list.
- 4) Specify the coordinates for the neck opening:

Neck opening in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 106 | -53 | 32 | -16 | 2 | -1 | 16 | 0 | 0 | 0 | Narrowing |
| 2 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 53 | 0 | 16 | 0 | 16 | 1 | 0 | 0 | 0 | |

- 5) Allocate the desired attributes to the edge (no.1) under "Function".

| Edge | Tab "General information" | Tab "Narrowing" |
|--------------|---------------------------|--|
| No. 1 | Narrowing | <ul style="list-style-type: none"> ▪ "V-neck above/underneath" ▪ "Body above / underneath Layers apart L0/ L1" |

- 6) Save shape.

III. Generate the shape for the sleeve in the Shape editor:

- 1) Open Shape Editor.
- 2) Generate a new shape / table for the sleeve using the  key.
- 3) Create table with values.

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -100 | 0 | -30 | 0 | -30 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 200 | -33 | 60 | -10 | 6 | -1 | 10 | 0 | 0 | 0 | Widening |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 160 | 80 | 48 | 24 | 2 | 1 | 24 | 0 | 0 | 0 | Narrowing |
| 5 | | 140 | 0 | 42 | 0 | 42 | 0 | 1 | 0 | 0 | 0 | Narrowing |
| 6 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 7 | | 0 | 53 | 0 | 16 | 0 | 16 | 1 | 0 | 0 | 0 | |

- 4) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".
- 5) Allocate the following attributes to the edges (no.4+5) under "Function":

| | | |
|-------|------------------------------|---|
| Edge | Tab "General information" | Tab "Narrowing" |
| No. 4 | Narrowing | <ul style="list-style-type: none"> ▪ "Sleeve above / underneath" ▪ "Sleeve above / underneath Layers apart" |
| No. 5 | Narrowing | <ul style="list-style-type: none"> ▪ "Sleeve above / underneath" ▪ "Sleeve above / underneath Layers apart" |
| | | Narrow entire width of sleeve |
| | | Narrowing width: 0 |

- 6) Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".

IV. Generate elements for the narrowed collar:

i Different collar shapes must be produced for the front and for the back.

| No. | Meaning |
|-----|--|
| | |
| 1 | Height and width of front and back of the collar are the same |
| 2 | Shape element for front collar as the element Neck (= non-knitting area) Result: Opening in front of collar |

- 1) Open the shape editor via "Shape" / "Generate/Edit Shape...".
- 2) Select the **k&w collar** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values for the collar in the table under "Left lines".

Front of Collar / Back of Collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 0 | -120 | 0 | -36 | 0 | -36 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 66 | 0 | 20 | 0 | 20 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 120 | 0 | 36 | 0 | 36 | 1 | 0 | 0 | 0 | Link-off |

- 4) Allocate **bind-off** to the end line under "Function" in the "General" tab.
- 5) Select the "Bind-off" tab and choose the **Type of binding-off** "Neckline open L0".

6) Save the Front of collar elements.



Create and save the Back of collar element with the same values and attributes.

V. Generate a non-knitting element for front of collar in the Shape editor:

▷ The front of collar element is open in the Shape editor

- 1) Generate a new element in the Shape Editor with .
- 2) Select the entry **Neck opening** in the "Type" selection list.
- 3) Create the table under "Left Lines" and enter the values for the neck opening (2) element.

Neck opening element (non-knitting area)

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width — | Width xxx | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|---------|-----------|-----------|
| 1 | | 0 | -53 | 0 | -16 | 0 | -16 | 1 | 0 | 0 | 0 | 0 | |
| 2 | | 53 | -26 | 16 | -6 | 2 | -1 | 6 | 0 | 0 | 0 | 0 | Narrowing |
| 3 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | |
| 4 | | 0 | 80 | 0 | 24 | 0 | 24 | 1 | 0 | 0 | 0 | 0 | |

i Note:

- The height of the **Neck opening** element must be the same as the **Collarbasic** element.
 - The end lines of the collar elements **Basic shape** and **Neck opening** therefore do not need to be connected.
 - Only in the case of a different height must a connection be made or the position of the **Neck opening** specified.
- 4) Save the Front of collar element.



Create and save the element **back of collar without non-knitting area** with the same values and attributes.

20.3.4 Load and position the shape elements

Open shape elements and position them on the basic pattern:

- 1) Call up the dialog box "Open k&w shapes" via the "Shape"/ "Open and Position Shape..." menu.
 - 2) Load the shape elements for body, sleeve and collar in the dialog box using the  key.
 - 3) Press the "OK" key.
- ⇒ The individual shape elements will be laid onto the basic pattern.
- 4) Position the shape elements **Sleeve** and / or **Body** on the motif with the  symbol selected and the left mouse button pressed.

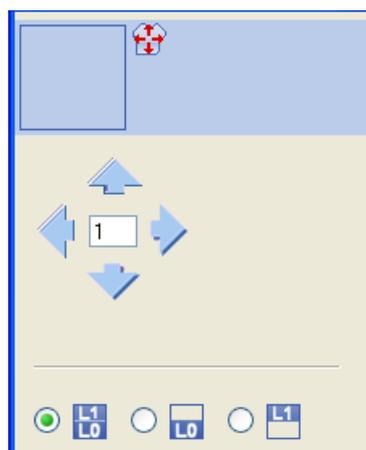
- or -

- ➔ Select the desired shape element with the  symbol selected. Position the selected shape element with the arrow keys of the keyboard.



- or -

- ➔ using the "Tool properties" dialog box



20.3.5 Draw-in the k&w Arrangement manually: Saddle shoulder with V-neck

I. Insert manually k&w Arrangements in the Shape View:

- 1) Open the "Shape view" with the  button.
- 2) Select the  key.
- 3) Position the shape elements relative to one another with the "left mouse button".
 - ⇒ The k&w Arrangement sleeve body connection can be inserted.
- 4) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
- 5) Select and insert the desired k&w Arrangement.
- 6) **Sleeve-body connection:**
 - "k&w Arrangements" / "Favorites / Basic Shapes" / "Saddle shoulder" / "B1 Type 1 (no connection L0-L1)".
- 7) Insert the k&w Arrangement once in the Shape view at the position of the sleeve body connection.
- 8) Move the **length compensation:**
Move the length compensation between body and sleeve with the k&w Arrangement from the lower fabric edge to the center of the fabric.
 - "k&w Arrangements" / "Stoll" / "X Standard"

i The length compensation should not take place at the start of the fabric piece, otherwise this makes it difficult to work with the comb.

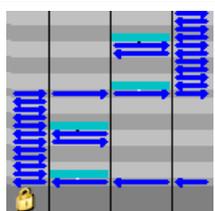
- 9) Use the following k&w Arrangements for the **length compensation:**
 - "k&w Arrangements" / "Favorites / Basic Shapes" / "Saddle shoulder" / "A1-3 tubulars".
 - "k&w Arrangements" / "Favorites / Basic Shapes" / "Saddle shoulder" / "A5-2 tubulars".
- 10) Fill up uniformly the **length difference** between body and sleeve with k&w Arrangements.
 - ⇒ The area with k&w Arrangement "X Standard" will now be overwritten with the above described k&w Arrangements.
- 11) Insert the k&w Arrangement **after the sleeve-body connection up to the start of the V-neck:**
 - "k&w Arrangements" / "Favorites/Basic Shape Types" / "Saddle shoulder" / "C37-3 Area 1:1:1"

12) Insert the k&w Arrangement **subsequently from the V-neck start up to the start of the saddle:**

- "k&w Arrangements" / "Stoll" / "3 areas" / "1:1:1 ratio" / "with opening" / "without gore" / "C112-3 areas 1:1:1 with opening L0"

13) Enter the k&w Arrangement **from the start up to the end of the saddle.**

- "k&w Arrangements" / "Stoll" / "3 areas" / "3:1:3 ratio" / "with opening" / "without gore" / "C68-3 areas 3:1:3 with opening (L0)"

| k&w Arrangement | Name | Function |
|--|---------------------------------------|---|
|  | "C68-3 areas 3:1:3 with opening (L0)" | Knitting of the saddle shoulder in the 3:1:1 ratio between sleeve and body in the area of the V-neck. |

14) **End of the saddle shoulder**

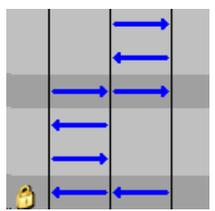
Insert the following k&w Arrangement in the area between the saddle shoulder and the collar start:

- "k&w Arrangements" / "Favorites/Basic Shape Types" / "Saddle shoulder" / "C37-3 Area 1:1:1"

15) **Collar**

Insert the following k&w Arrangement:

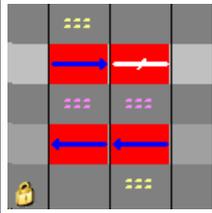
- "k&w Arrangements" / "Stoll" / "Collar" / "with opening" / "without gore" / "D12-collar with opening (L0)"

| Knitting cycle modules | Name | Function |
|---|--------------------------------|---|
|  | "D12-collar with opening (L0)" | Knitting of the collar with opening in front layer. |

16) **Binding-off collar.**

Insert the following k&w Arrangement for the collar on the last knitting row:

- "k&w Arrangements" / "Stoll" / "1 area" / "bind off collar" / "with opening" / "D10-neckline front open bind off"

| Knitting cycle modules | Name | Function |
|---|---|--|
|  | <p>"D10-neckline front open bind off"</p> | <p>Binding-off the collar element with opening in the front layer.</p> |

17) Save the shape as shk via the "Shape" / "Save Shape As..." menu.

18) Close the Shape View.

20.3.6 Cut out the shape and complete the pattern

I. Cut out the shape:



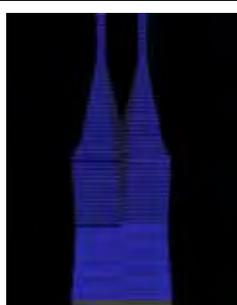
You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm the settings in the dialog box with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm with "OK".
⇒ The start module and the information of the k&w Arrangements will be applied to the pattern.

II. Complete the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.
- 3) Start the technical processing with .
⇒ The query "Generate MC Program" appears.
- 4) Confirm the query with "OK".
- 5) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.

20.4 Shape view: Waistcoat with V-neck



| | | |
|-------------------------|--|-----|
| Pattern name: | Weste | |
| Pattern size: | Width: | 180 |
| | Height: | 200 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | As desired | |
| Basic pattern: | Jersey | |
| Knitting technique | knit and wear | |
| Description of pattern: | Waistcoat with V-neck front layer and back layer | |

20.4.1 Generate Pattern without Shape

Generate knit and wear pattern:

1) Select "File" / "New" from the menu bar.

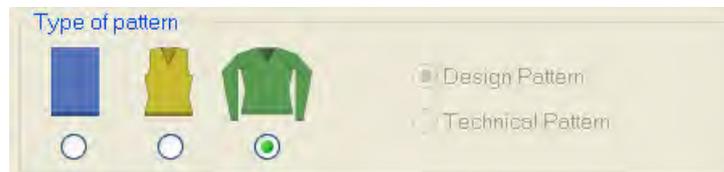
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select **k&w pattern** type.



5) Enter height and width of the pattern field.

Width: 180

Height: 200

6) Select "Jersey" for the basic pattern via the selection list.

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

20.4.2 Rules for generating a shape: Waistcoat with V-neck

Rules for knit and wear waistcoat with V-neck

| Rules for waistcoat with V-neck front layer and back layer | |
|---|---|
|  | |
| 1 | Even-numbered height up to start of neck (front + back) |
| 2 | even-numbered height of the V-necks (front + back). |
| 3 | From start of sleeve narrowing to start of shoulder, the height must be even-numbered, as open on side. |
| 4 | End line of the V-neck at the left and right side: <ul style="list-style-type: none"> ▪ Two wales less than the end line of the back, if you want to bind-off. ▪ One stitch rod less than the end line of the back, if you want to follow with a collar or waste yarn. |

20.4.3 Create shape: Waistcoat with V-neck

I. Generate a front and back in the Shape Editor:

i The shape elements and the k&w file (shape with k&w Arrangements) must be saved in the same directory.

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Insert the entry field for edge lines with the  "Add new line at end" button.
- 7) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width xxx | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -200 | 0 | -60 | 0 | -60 | 1 | 0 | 0 | 0 | 0 | Basis |
| 2 | | 166 | 16 | 50 | 5 | 10 | 1 | 5 | 0 | 0 | 0 | 0 | Narrowing |
| 3 | | 166 | -16 | 50 | -5 | 10 | -1 | 5 | 0 | 0 | 0 | 0 | Widening |
| 4 | | -40 | -40 | 12 | 12 | 1 | 1 | 12 | 0 | 0 | 0 | 0 | Narrowing |
| 5 | / | 160 | 60 | 48 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Narrowing |
| 6 | | 100 | 0 | 30 | 0 | 30 | 0 | 1 | 0 | 0 | 0 | 0 | |
| 7 | | 0 | 100 | 0 | 30 | 0 | -30 | 1 | 0 | 0 | 0 | 0 | Bind-off |

| Line Editor Line 5 left | | | | | | |
|-------------------------|----------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 48 | 18 | | | |
| | 0 | 3 | 1 | 1 | | |
| 5 | 1 | 2 | 1 | 1 | | |
| | 1 | 3 | 1 | 2 | | |
| | 0 | 2 | 1 | 1 | | |
| | 0 | 3 | 1 | 1 | | |

- 8) Make the following settings in the front and back:

| Edge | "General" tab | Tab "Widen / Narrow" | Module | Tab "connections" |
|-----------------|---------------|---|---|--|
| No. 3 | Widening | Widening width: 1 Widening width: as desired | <ul style="list-style-type: none"> "Standard" "Closing-Stitch / Layers apart" | |
| No. 4+5 | Narrowing | Narrowing width: as desired | <ul style="list-style-type: none"> "Body above/underneath" "Body above / underneath Layers apart" | k&w border open (Not necessary if the knitting cycle is inserted manually) |
| End line | Binding-off | | <ul style="list-style-type: none"> "Binding off the shoulder of a top" | |

- 9) Allocate the desired attributes "Widening" and "Narrowing" to the other edges under "Function".



Generate a shape for the back with the same specifications as for the front.

- 10) Save the shapes in the directory created beforehand with "File" / "Save" or "Save As...".

II. Insert the neck opening element in the front:

- 1) Open the **Waistcoat Front** shape.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the entry **Neck opening** in the "Type" selection list.
- 4) Set the coordinates for the **Neck opening**:

Neck opening in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 66 | -66 | 20 | -20 | 1 | -1 | 20 | 0 | 0 | 0 | Narrowing |
| 2 | | 100 | 0 | 30 | 0 | 30 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 66 | 0 | 20 | 0 | 20 | 1 | 0 | 0 | 0 | |

- 5) Allocate the desired attributes to the edge (no.1) under "Function":

| Edge | Tab "General information" | Tab "Narrowing" |
|--------------|---------------------------|---|
| No. 1 | Narrowing | <ul style="list-style-type: none"> "Neckline above Layers apart L0/L1" "Neckline underneath Layers apart L0/L1" |

- 6) Save shape.

II. Enter the opening element in the front:

- 1) Open the **Waistcoat Front** shape.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the **Opening** entry in the "Type" section list.
- 4) Set the coordinates for the **opening**:

Opening element in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 633 | 0 | 190 | 0 | 190 | 0 | 1 | 0 | 0 | 0 | |
| 2 | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |

- 5) Save shape.

III. Insert the neck opening element in the back:

- 1) Open the **Waistcoat Back** shape.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the entry **Neck opening** in the "Type" selection list.
- 4) Set the coordinates for the **Neck opening**:

Neck opening in the back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 266 | -66 | 80 | -20 | 4 | -1 | 20 | 0 | 0 | 0 | Narrowing |
| 2 | | 100 | 0 | 30 | 0 | 30 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 66 | 0 | 20 | 0 | 20 | 1 | 0 | 0 | 0 | |

- 5) Assign the same attributes as in the front to the edge (No.1):

| | | |
|--------------|---------------------------|---|
| Edge | Tab "General information" | Tab "Narrowing" |
| No. 1 | Narrowing | <ul style="list-style-type: none"> ▪ "Neckline above Layers apart L0/L1" ▪ "Neckline underneath Layers apart L0/L1" |



If necessary you can allocate a start module to the opening on the back.
 "k&w-Technique" / "Start V-neck" / "L1_Structure single jersey V2"

- 6) Save shape.

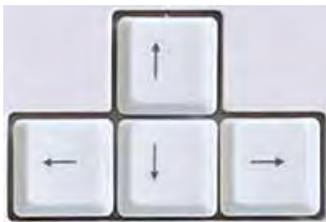
20.4.4 Load and position the shape elements

Open shape elements and position them on the basic pattern:

- 1) Call up the dialog box "Open k&w shapes" via the "Shape"/ "Open and Position Shape..." menu.
- 2) Load the shape elements for front and back with the  key in the dialog box.
- 3) Press the "OK" key.
⇒ The individual shape elements will be laid onto the basic pattern.
- 4) Position the shape elements **Sleeve** and / or **Body** on the motif with the  symbol selected and the left mouse button pressed.

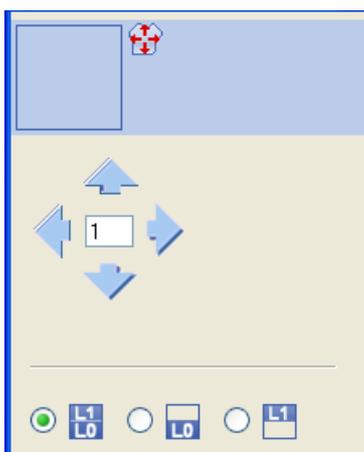
- or -

- ➔ Select the desired shape element with the  symbol selected. Position the selected shape element with the arrow keys of the keyboard.



- or -

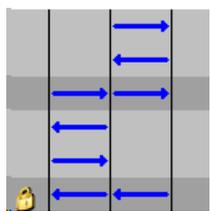
- ➔ using the "Tool properties" dialog box



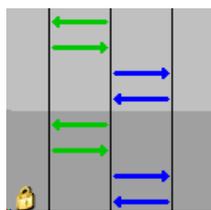
20.4.5 Draw-in the k&w Arrangement manually: Waistcoat with V-neck

Insert k&w Arrangements in the Shape View manually:

- 1) Open the "Shape view" with the  button.
 - "k&w Arrangements" / "Favorites/Basic shapes" / "Waistcoat" / "A3-1 tubular with opening (L0)"
 - "k&w Arrangements" / "Stoll" / "1 tubular" / "with opening" / "without gore" / "A3-1 tubular with opening (L0)"

| Knitting sequence | Name | Function |
|--|----------------------------------|-------------------------------------|
|  | "A3-1 tubular with opening (L0)" | Knit body with opening in the front |

- 2) **Rear start of the neck up to the sleeve narrowing:**
 Insert the following k&w Arrangement up to the start of the narrowing (armhole):
 "k&w Arrangements" / "Stoll" / "1 area" / "Tank top/Top/Skirt" / "with opening" / "without gore" /
 "C76-1 area with opening (L0) and opening (L1)-2Y"

| Knitting sequence | Name | Function |
|---|--|---|
|  | "C76-1 area with opening (L0) and opening (L1)-2Y" | Knit area with: <ul style="list-style-type: none"> ▪ Front opening ▪ Rear V-neck. |

- 3) **From the sleeve narrowing up to the last but one row:**
 For the following area (from the sleeve narrowing) insert the k&w Arrangement up to the last but one complete row before the end of the shape.
- 4) Copy and modify the following k&w Arrangement:
 "k&w Arrangements" / "Stoll" / "1 area" / "Tank top/Top/Skirt" / "with opening" / "without gore" /
 "C76-1 area with opening (L0) and opening (L1)"

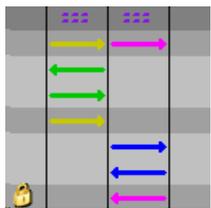
k&w Arrangement

Original

Modified

Enter the following symbol in a row **before** knitting:
Yarn Carrier May Not Change the Layer

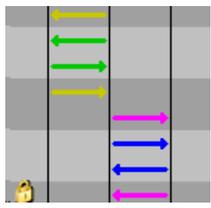
- 5) Draw-in a k&w Arrangement.
 - ⇒ With this modified k&w Arrangement, the waistcoat can be knitted with normal yarn carriers.
- 6) Select the following k&w Arrangement:
 - "k&w Technique" / "Bind-off" / "Standard" / "Shoulder binding-off Top"

| k&w Arrangement | Name | Function |
|---|-------------------------------------|------------------------|
|  | "Binding off the shoulder of a top" | Binding-off the straps |

- 7) Enter the k&w Arrangement into the last two complete rows.
- 8) Save the shape as **shk** via the "Shape" / "Save Shape As..." menu.
- 9) Close the Shape View.

Use alternatively an unchanged k&w Arrangement:

- 1) Draw in the following k&w Arrangement unchanged:
 - "k&w Arrangements" / "Stoll" / "1 area" / "Tank top/Top/Skirt" / "with opening" / "without gore" /
 - "C121-1 area with opening (L0) and opening (L1)-outer edge open-4Y"
 - ⇒ With this k&w Arrangement, the waistcoat has to be knitted with Intarsia yarn carriers.
 - or -
 - The normal yarn carriers have to be kicked.

| Knitting sequence | Name | Function |
|---|---|---|
|  | "C121-1 area with opening (L0) and opening (L1)-outer edge open-4Y" | Knit area: <ul style="list-style-type: none"> ▪ Front opening ▪ Rear V-neck. ▪ Outer edge open (armhole) |

20.4.6 Cut out the shape and complete the pattern

I. Cut out the shape:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm with "OK".
⇒ The start module and the information of the k&w Arrangements will be applied to the pattern.

II. Complete the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.
- 3) Start the technical processing with .
⇒ The query "Generate MC Program" appears.
- 4) Confirm the query with "OK".
- 5) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.

21 k&w Arrangement Editor

I. Use of the editor:

- Modifying an existing k&w Arrangement
- Generating a new k&w Arrangement



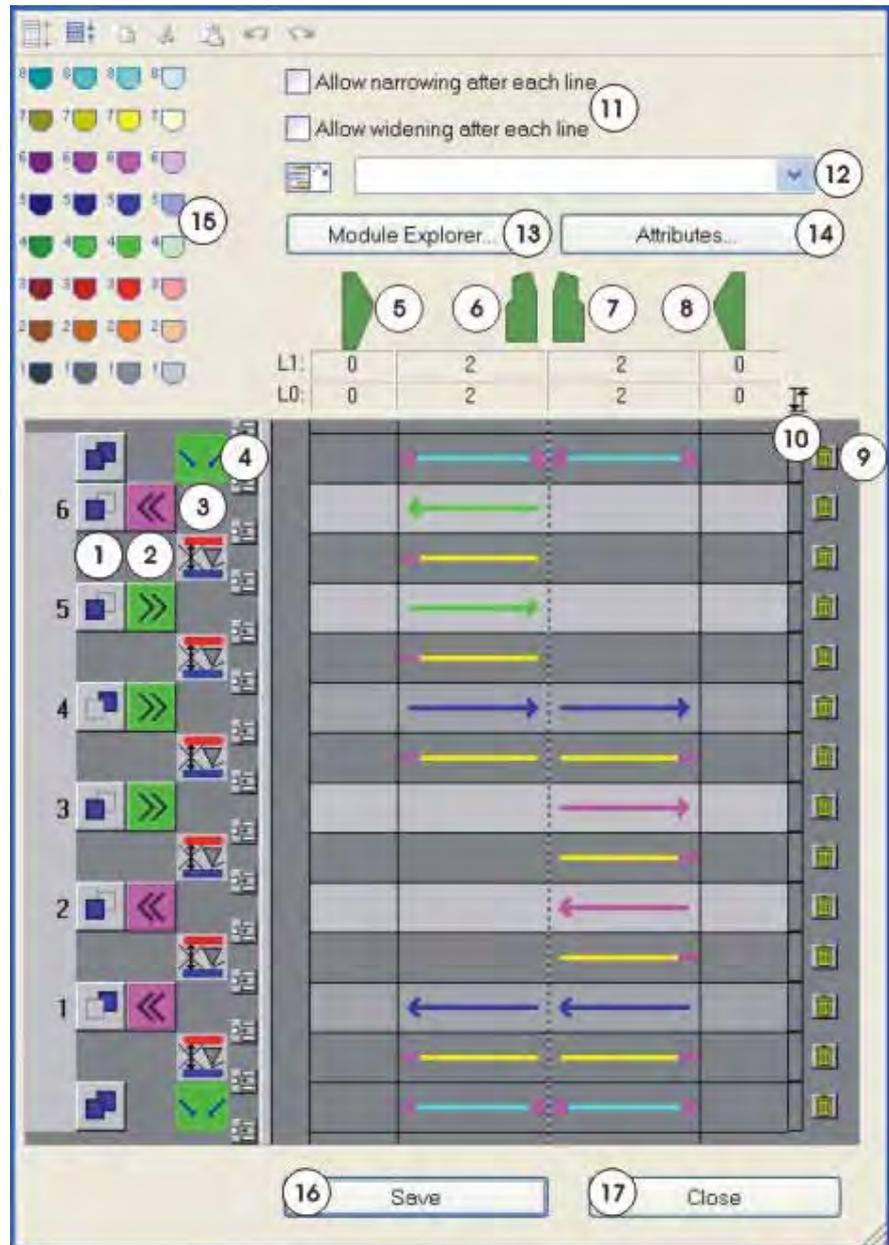
The information of a k&w Arrangement are transferred to the pattern during the Cutting out processing step.

II. Task of a k&w Arrangement:

The k&w Arrangements control the knitting sequence of the yarn carriers and the shape modifications in the shape parts.

III. Call-up the k&w Arrangement Editor:

- 1) Call up the "k&w Arrangement Editor" via the "Module" / "New" / "k&w Arrangements..." menu.
 - ⇒ The "Properties of: <module-name>" dialog box appears.
- 2) Enter a name for the k&w Arrangement under "Group Name".
- 3) Specify a color for the k&w Arrangement under "Module Color".
- 4) Confirm entries with "OK".
 - ⇒ The "k&w Arrangement Editor" appears.



| No. | Presentation | Meaning |
|----------|---|--|
| |  | Display pattern and additional rows. |
| |  | Display pattern rows. |
| |  | Copy one or more selected rows into the paste buffer. |
| |  | Cut one or more selected rows into the paste buffer. |
| |  | Insert rows from the paste buffer via the last selected row. i : If no row is selected, the rows are inserted before the first row. |
| |  | Undo the last action. |
| |  | Restore the undone action. |
| 1 | Definition of layers | |
| |  | Back layer (L1) |
| |  | Front layer (L0) |
| |  | Both layers (L0 + L1) |
| 2 |  | Define the direction of the carriage. |
| |  | |
| 3 | Display for additional rows (Technical row without knitting) | Display icon for additional rows. i : The insertion of additional rows is carried out using the context menu. To call up the context menu, click an empty row with the right mouse button. Positions can be defined with additional rows, e.g. if left narrowing may occur on a specific side of the body part. Symbols for the additional rows. |
| 4 |  | Insert a row. |

| No. | Presentation | Meaning | |
|-----|---|--|---|
| 5 |  | Status information on the knitting zone: For the areas, the current number of knitting rows is displayed for the layer L0 and layer L1 respectively. | |
| 6 |  | | |
| 7 |  | | |
| 8 |  | | |
| 9 |  | Delete rows. | |
| 10 | Button for cycles | Display cycles with two colors. i : The cycles will be set or deleted by clicking the cycle cell. Neighboring cycles are to be set with different colors: <ul style="list-style-type: none"> ▪ First click = blue cycle ▪ Second click = red cycle ▪ Third click = cycle is deleted | |
| 11 | "Allow narrowing after each line" "Allow widening after each line" | <input type="checkbox"/> | Narrowing or widening after each line is not allowed. Narrowing and widening are determined by the k&w Arrangement. |
| | | <input checked="" type="checkbox"/> | Narrowing or widening after each line is allowed. Narrowing and widenings are directly applied from the shape and not influenced by the k&w Arrangement. |
| 12 | List field with Drag & Drop symbol  | Allocate Color Arrangement from the "Modules" toolbar with Drag & Drop. i : Without allocation the CA will be generated based on the k&w Arrangements. | |
| 13 | "Module Explorer" | Open "Module Explorer of Database" | |
| 14 | "Attributes" | Open "k&w Arrangement Attributes" dialog box. Entry of attributes in order to use the k&w Arrangement in the "Shapewizard". | |

| No. | Presentation | Meaning |
|-----|------------------------------|---|
| 15 | Table of yarn carrier colors | <p>Select a yarn carrier color and allocate it to a row.</p> <p>i: The basic colors in the pattern (9 or 23) will be overwritten with the yarn carrier colors from the k&w Arrangement.</p> <p>Yarn carrier colors in the Stoll k&w Arrangements:</p> <ul style="list-style-type: none"> ▪ Left sleeve: <ul style="list-style-type: none">  = yarn carrier 4 at the right ▪ Body: <ul style="list-style-type: none">  = yarn carrier 5 at the right ▪ Right sleeve: <ul style="list-style-type: none">  = yarn carrier 6 at the right |
| 16 | "Save" | Save k&w Arrangement. |
| 17 | "Close" | Close the dialog box. Prompt for saving is following. |

Further possibilities to call up the k&w Arrangement Editor:

- double-click the selected k&w Arrangement in the "Module Explorer".
- click the "Edit" function in the context menu of a selected k&w Arrangement in the "Module Explorer".
- double-click the selected k&w Arrangement in the "Module" toolbar.

21.1 Knitting Rows and Additional Rows in the k&w Arrangement Editor

Specifications in a k&w Arrangement:

- Knitting Rows
- Additional Rows

Insert knitting rows:

- ▷ There is no symbol in column (3).
- 1) Enter knitting information clicking with the left mouse button in the row and in the column of the corresponding shape element.
- 2) Delete the knitting information by clicking again with the left mouse button.

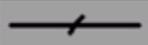
Insert additional rows:

- ▷ There are symbols for the corresponding function in column (3).
- 1) Run the functions for the additional rows via the context menu in column (3).
 - Additional rows **without** position lines and markings:
The setting refers to all shape elements, i.e. the whole row.
 - Additional rows **with** position lines and markings:
The setting refers to a shape element marked by a colored position line. You can set colored markings at the line ends(= shape edges) additionally.
These mark the shape edges at which the additional information is to be carried out.
- 2) Call up the context menu right clicking in the row and column of the desired shape part.
 - Suspend (default setting)
 - Suspend with shape data

21.1.1 Knit

- ▷ No entry (function) is present in column 3.
- 1) Click with the left mouse button in the corresponding row and column (shape part).
- ⇒ The information **Knit** is entered.

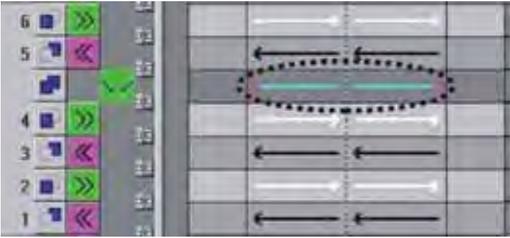
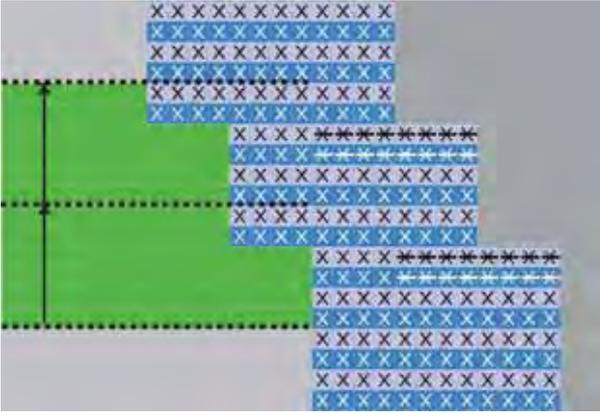


| No. | Function | Meaning |
|-----|---|--|
| 1 | Knit  | Knitting row <ul style="list-style-type: none"> ▪ Color of arrows defines the knitting layer: <ul style="list-style-type: none"> – Black: Layer L1 – White: Layer L0 ▪ Yarn carrier colors corresponding to the yarn carrier rails ▪ The carriage direction in column (2) defines the direction of the arrow. |
| 2 | Do not knit  | Not knitting row The row is edited in the shape view. You can define the knitting layer and the carriage direction. Example: Remaining Narrowing |
| 3 | Not knitting additional row  | Additional non-knitting row Row is originally not present in the shape view; the row is inserted. You can define the knitting layer and the carriage direction. Example: Optimization of narrowings |
| 4 | Additional Row  | Additional knitting row Row is originally not present in the shape view; the row is inserted. You can define the knitting layer and the carriage direction. Example: Bind-off the collar |
| 5 | Binding  | Symbol inserts the symbol for gore at the start / end of a knitting row in the shape view. With the "Configuration" menu, the type of binding in the gore can be specified. You can define the knitting layer and the carriage direction. Example: Knitting cycles for neck gore |

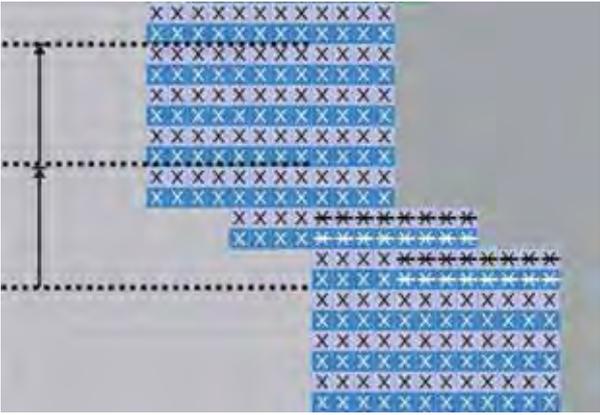
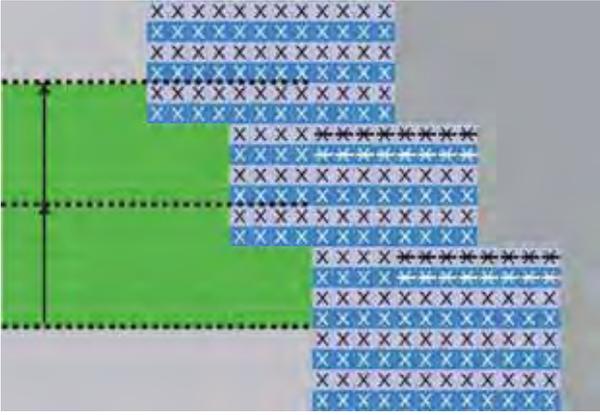
21.1.2 Narrowing

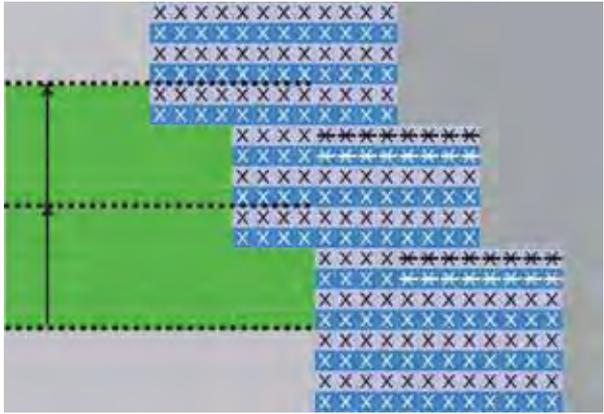


The shape counters are moved in accordance with the narrowing.

| Symbol | Meaning |
|---|--|
|  | <p>Optional Narrowing</p>  <p>Narrowing can be carried out after every third k&w complete row (L1+L0 knitted), if a narrowing is present in the shape. The shape is retained!</p>  <p>Narrowing stepping before inserting the k&w Arrangement.</p>  <p>Narrowing stepping after inserting the k&w Arrangement.</p> |

| Symbol | Meaning |
|---|--|
|  | <p>Forced narrowing by 1 needle</p> <ul style="list-style-type: none"> ▪ k&w in 1x1: no narrowing ▪ k&w all needles (TC-T): Narrowing by 1 needles  <p>Narrowing is always carried out after every complete row, even if no narrowing is present in the shape. The shape changes!</p> |
|  | <p>Forced narrowing by 2 needles</p> <ul style="list-style-type: none"> ▪ k&w in 1x1: Narrowing by 1 stitch ▪ k&w all needles (TC-T): Narrowing by 2 stitches |
|  | <p>Forced narrowing by 3 needles</p> <ul style="list-style-type: none"> ▪ k&w in 1x1: no narrowing ▪ k&w all needles (TC-T): Narrowing by 3 stitches |
|  | <p>Forced narrowing by 4 needles</p> <ul style="list-style-type: none"> ▪ k&w in 1x1: Narrowing by 2 stitches ▪ k&w all needles (TC-T): no narrowing |
|  | <p>Forced narrowing by 5 needles</p> <ul style="list-style-type: none"> ▪ k&w in 1x1: - ▪ k&w all needles (TC-T): - |
|  | <p>Forced narrowing by 6 needles</p> <ul style="list-style-type: none"> ▪ k&w in 1x1: Narrowing by 3 stitches ▪ k&w all needles (TC-T): no narrowing |

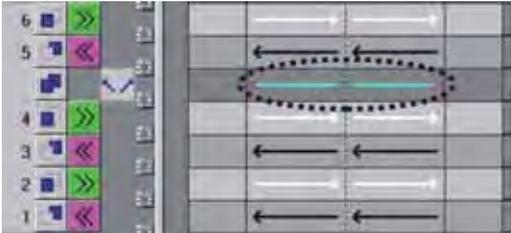
| Symbol | Meaning |
|---|---|
|  | <p>Optional or Anticipatory Narrowing</p>  <p>The k&w Arrangement basically behaves like the k&w Arrangement with "Optional Narrowing". In addition, two additional rules are observed:</p> <p>1. Rule: A narrowing step not carried out is carried out separately from the second narrowing step during the next narrowing permission. The second narrowing step is moved to the next narrowing permission in the k&w Arrangement.</p>  <p>Narrowing stepping before inserting the k&w Arrangement.</p>  <p>Narrowing stepping after inserting the k&w Arrangement. "Optional or Anticipatory Narrowing".</p> |
| | <p>In comparison:</p>  <p>Narrowing stepping after inserting the k&w Arrangement with "Optional Narrowing". Narrowing steps are combined.</p> |

| Symbol | Meaning |
|---|--|
|  | <p>2. Rule: If no shape stepping is present up to the narrowing permission in the k&w Arrangement, then the subsequent shape row is also checked. An existing narrowing step is given preference.</p>  <p>Narrowing stepping before inserting the k&w Arrangement.</p>  <p>Narrowing stepping after inserting the k&w Arrangement.</p> |

21.1.3 Widening



The shape counters are moved in accordance with the widening.

| Symbol | Meaning |
|---|--|
|  | <p>Optional Widening</p>  <p>Widening can be carried out after every third k&w complete row (L1+L0 knitted), if a widening is present in the shape. The shape is retained!</p> |
|  | <p>Widening stepping before inserting the k&w Arrangement.</p> |
|  | <p>Widening stepping after inserting the k&w Arrangement. The first widening is moved to the row with widening permission.</p> |

21.1.4 Width Adjustment

For k&w Arrangements with a closed outer edge, the narrowings of both knitting layers must be executed simultaneously in order to keep the edge closed.

With some k&w Arrangements the number of rows knitted up to the narrowing differs in the layer L0 and L1.

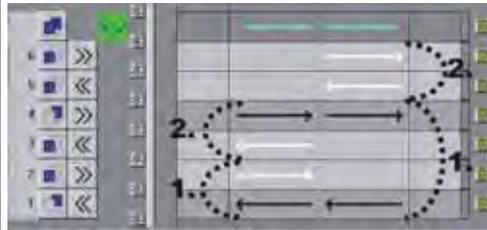
| Symbol | Meaning |
|---|--|
|  | Width Adaptation of Layers via Narrowing of one Layer If the widths of the two knitting layers (L0+L1) differ, the wider knitting layer is adapted to the narrower knitting layer. |
|  | Width Adjustment of Layers via Widening of one Layer If the widths of the two knitting layers (L0+L1) differ, the narrower knitting layer is adapted to the wider knitting layer. |



The shape changes.

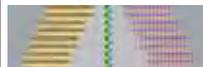
Examples **without** width adjustment (not necessary):

k&w Arrangement with opening, narrowing on outer edge



In both body elements, 2 complete rows (L0+L1) are knit before the first narrowing.

Narrowing is carried out on both layers.

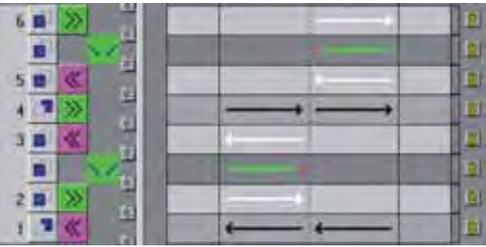


Narrowing stepping before inserting the k&w Arrangement.



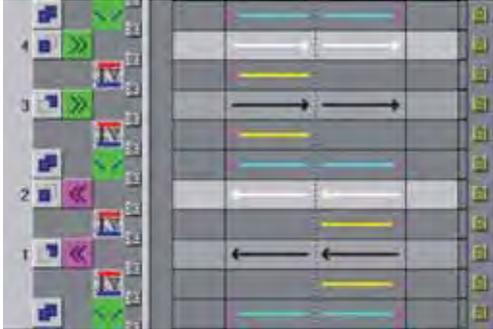
Narrowing stepping after inserting the k&w Arrangement.
Both layers (L0+L1) are narrowed at the same time, as both layers have been worked through equally often before the narrowing permission.

Examples **without** width adjustment (not necessary):

| | |
|--|--|
| <p>k&w Arrangement with narrowings in the V neck</p> |  <p>In the k&w Arrangement only the layer L0 in the V-neck is narrowed.</p> |
| |  <p>Narrowing stepping before inserting the k&w Arrangement.</p> |
| |  <p>Narrowing stepping after inserting the k&w Arrangement. Only layer L0 is narrowed, and therefore no width adjustment is necessary.</p> |

| | |
|---|--|
| Examples with width adjustment: | |
| k&w Arrangement with opening, narrowing on outer edge | <p>In the left body piece, a complete row (1.) is knit before the first narrowing, while in the right body piece only layer L1 (2.) is knit. The narrowing on the right is only carried out on layer L1. Layer L0 is not narrowed.</p> |
| | <p>Narrowing stepping before inserting the k&w Arrangement.</p> |
| | <p>Narrowing stepping after inserting the k&w Arrangement with width adjustment. The wider layer L0 is adjusted to the narrower layer L1.</p> |
| | <p>In comparison: Narrowing stepping after inserting the k&w Arrangement without width adjustment. i: Not knittable!</p> |

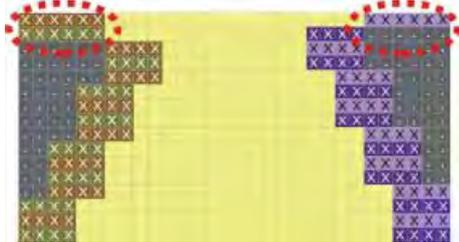
21.1.5 Yarn Carrier May Not Change the Layer

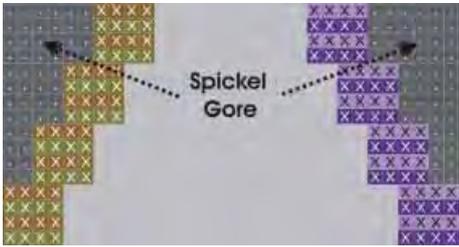
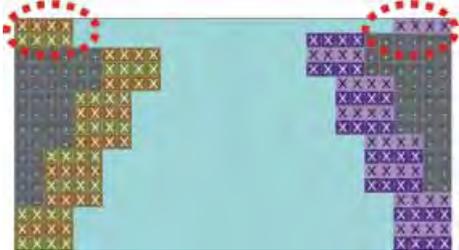
| Symbol | Meaning |
|---|--|
|  | <p>Yarn Carrier May Not Change the Layer</p>  <p>At the selected position the yarn carrier may not change the knitting layer in the following knitting row. Result: The outer edge remains open. Specification always directly before a knitting row, i.e. no other specifications in between.</p> |

i

This function is not necessary with the use of yarn carrier colors in the k&w Arrangement.

21.1.6 Knit off Gore

| Symbol | Meaning |
|---|--|
|  | <p>Knit off gore Generate extension of the following pattern row with shape data.</p> <ul style="list-style-type: none"> You can specify the layer.  |
| |  <p>Gore stepping before inserting the k&w Arrangement.</p> |
| |  <p>The last two shape rows are widened over the entire width of the gore in accordance with the carriage direction. The attributes used in this shape edge are applied to the entire width.</p> |

| Symbol | Meaning |
|---|--|
|  | <p>Extension of the Following Pattern Row</p> <ul style="list-style-type: none"> You can specify the layer.  |
| |  <p>Gore stepping before inserting the k&w Arrangement.</p> |
| |  <p>The last two shape rows are widened over the entire width of the gore in accordance with the carriage direction. The attributes used in this shape edge are applied to the entire width.</p> |

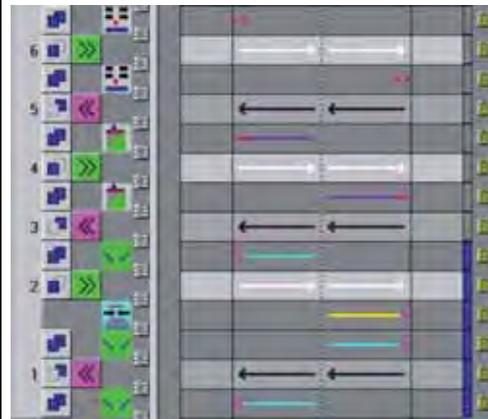
21.1.7 Insert Linking-Off Markings on Previous Shape Row

| Symbol | Meaning |
|--------|--|
| | Insert Linking-Off Markings on Previous Shape Row Binding-off markings are set on the previous knitting row. |

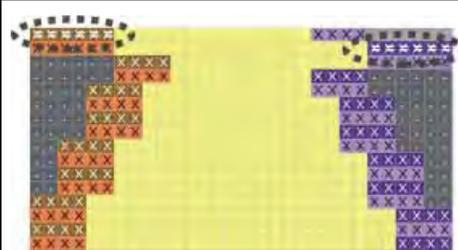
Examples:

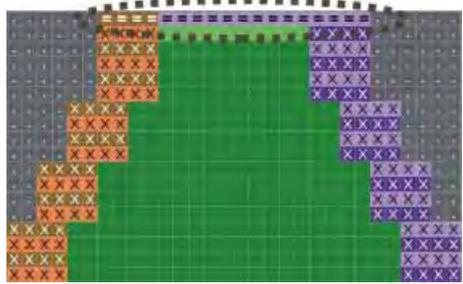
Shoulder binding-off

k&w Arrangement Shoulder gore + shoulder binding-off - 1Y



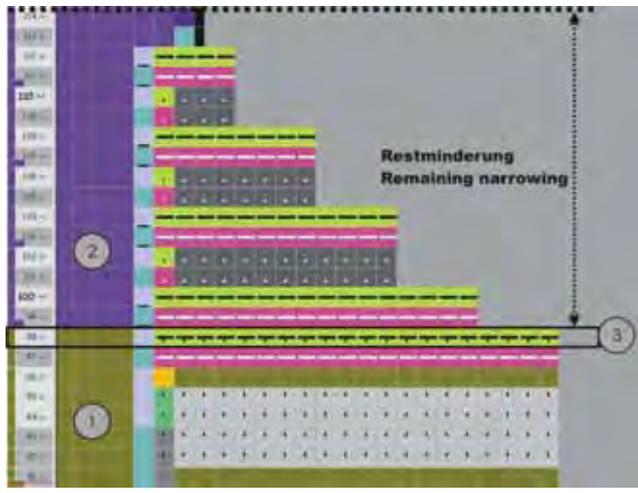
k&w Arrangement with binding-off of the gores (= shoulder).
Markings (red) mean binding-off of both layers of the previously extended row (shoulder).
You can specify the layer.
The color of the markings is layer-dependent.

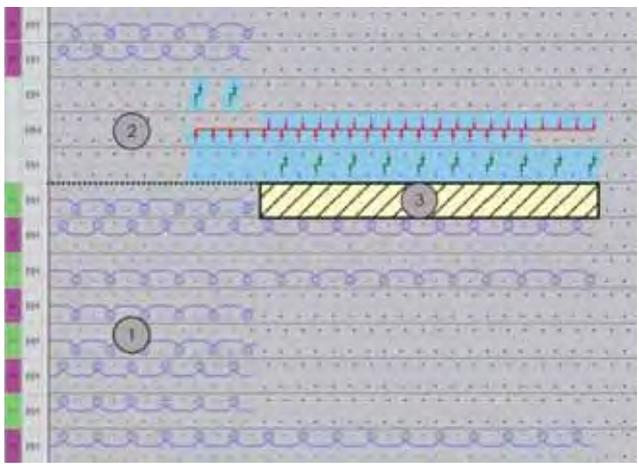


| | |
|--|--|
| Examples: | |
| Binding-off of all shape elements | k&w Arrangement Binding-off neck closed  <p>k&w Arrangement with 2 additional rows in which binding-off is inserted. The markings (purple) in the entire row mean binding-off within the shape. You can specify the layer. The color of the markings is layer-dependent.</p> |
| |  |

21.1.8 Delete Knitting from Previous Knitting Cycle

| Symbol | Meaning |
|--------|---|
| ✘ | Delete knitting from the previous k&w Arrangement The last knitting information of the previous knitting row will be deleted. |

| Example | | | | | | | |
|--|---|---|--|---|-------------------------------------|---|---|
| k&w Arrangement Remaining narrowing with additional rows |  | | | | | | |
| |  | | | | | | |
| | <table border="1"> <tr> <td style="text-align: center;">1</td> <td>k&w Arrangement before remaining narrowing</td> </tr> <tr> <td style="text-align: center;">2</td> <td>k&w Arrangement Remaining Narrowing</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Last knitting row in the sleeve below the remaining narrowing</td> </tr> </table> | 1 | k&w Arrangement before remaining narrowing | 2 | k&w Arrangement Remaining Narrowing | 3 | Last knitting row in the sleeve below the remaining narrowing |
| 1 | k&w Arrangement before remaining narrowing | | | | | | |
| 2 | k&w Arrangement Remaining Narrowing | | | | | | |
| 3 | Last knitting row in the sleeve below the remaining narrowing | | | | | | |
| | The knitting information is deleted in the sleeve element by the additional row ✘ in the k&w Arrangement (2). | | | | | | |

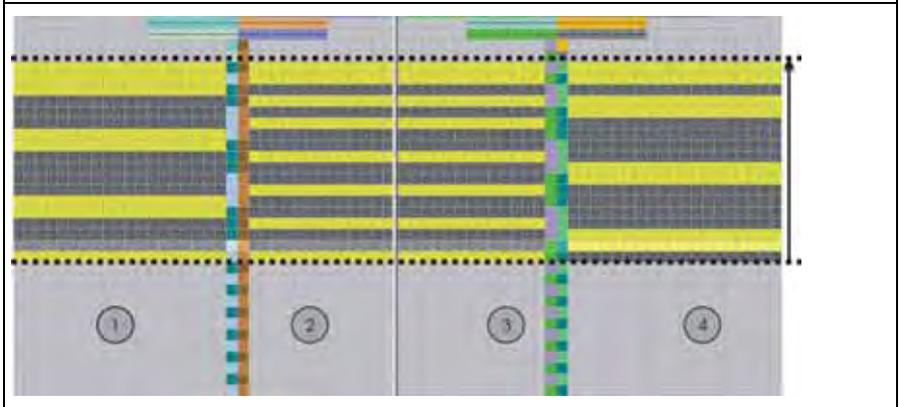
| Example | |
|---------|--|
| |  |
| | <p>3 Deleting the knitting information affects yarn carrier positions.</p> |

21.1.9 Connection of tubes

| Function | Symbol | Meaning |
|----------------------------|---|---|
| Connection of tubes |  | Prepare The selected shape elements are transferred to a needle bed. By this the transferring inward of other area is prepared. |
| |  | Transfer Inward The selected shape elements are transferred inward to the left or right. |

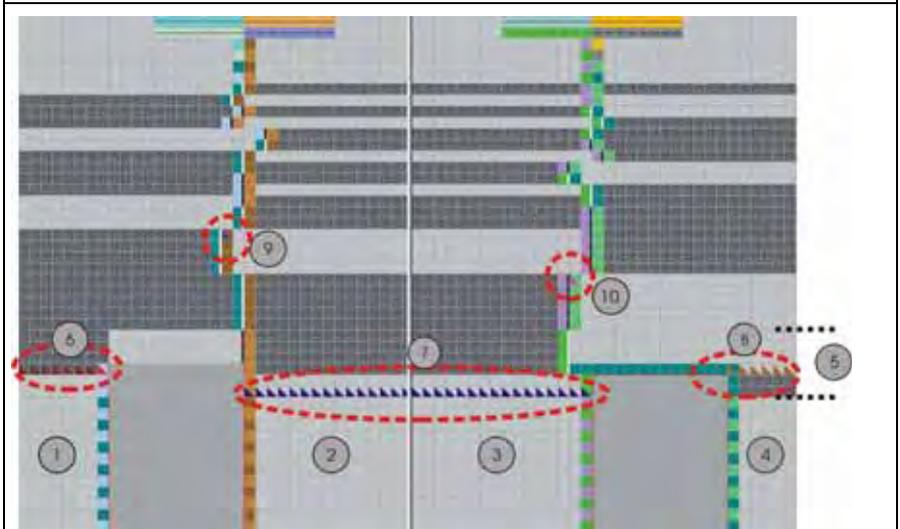
| k&w Arrangement for sleeve-body connection | |
|--|---|
| k&w Arrangement for Connection of Tubes |  |
| 5 | Knitting rows with subsequent transfer of all stitches from L1 to L0 (= pre-widening) in both body elements. Then the right sleeve is knit and then both sleeves are transferred to the body (= transferring inward). |

Shape view with inserted k&w Arrangement before cutting out



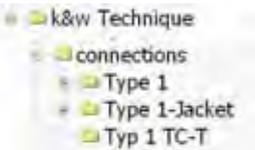
| | |
|---|----------------------|
| 1 | Left sleeve element |
| 2 | Left body element |
| 3 | Right body element |
| 4 | Right sleeve element |

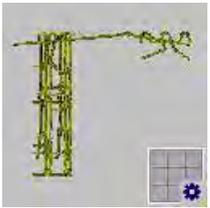
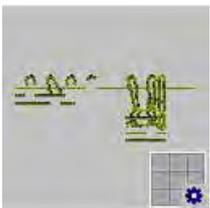
Shape view after cutting out

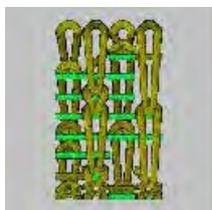


Presentation in technical rows

| | |
|---|--|
| 6 | <p>Transferring inward of left sleeve (Transferring inward >>) A module is allocated to the markings in the shape view under "Shape attributes...".</p> <ul style="list-style-type: none"> • k&w Technique • Combine Sleeves • Type 1 • prepare • Combine << • Combine >> |
| 7 | <p>Prepare A module is allocated to the markings in the shape view under "Shape attributes...".</p> |

| Shape view after cutting out | |
|------------------------------|--|
| 8 | <p>Transferring inward of right sleeve (Transferring inward <-) A module is allocated to the markings in the shape view under "Shape attributes...".</p> |
| 9 | <p>Marking for left connection. A module is allocated to the markings in the shape view under "Shape attributes...".</p>  <p>The positioning of the module is always automatically on the knitting row following directly after transferring inward.</p> <p>Note: If a Color Arrangement is used for the connection, then this marking is not present. The left connection is knitted based on the CA.</p> |
| 10 | <p>Marking for right connection. A module is allocated to the markings in the shape view under "Shape attributes...".</p> <p>Note: If a Color Arrangement is used for the connection, then this marking is not present. The right connection is knitted based on the CA.</p> |

| Modules for the Sleeve-Body connection in the Module Explorer | |
|---|---|
|  | <p>Module for connecting the left sleeve to the body. Old version of the module: Not suitable for multi-color knitting in the area of the sleeve-body connection.</p> |
|  | <p>Module for connecting the left sleeve to the body. New version of the module: The module is for flexible application, as up to 4 colors can be knit in the sleeve-body connection.</p> |

| Modules for the Sleeve-Body connection in the Module Explorer | |
|---|--|
|  | Module for connecting the right sleeve to the body. |

i

You have to allocate the modules to the corresponding markings of the sleeve body connection in the k&w Arrangement Editor via "Attributes".

21.1.9.1 Knots connection of tubes

The knot type for the sleeve-body connection is defined in the "Configuration" dialog box on the "Intarsia" tab under "Knot".

The knot is inserted by Technical Processing at the end of the knitting cycle "Tube connection".



➔ Call up the "Yarn Field Allocation" dialog box with .

The knot can be activated/deactivated in the "Yarn Field Allocation" dialog box.

21.1.10 Cycles in the k&w Arrangement

Cycles can be defined in the k&w Arrangement with the "Button for cycles" column.

- With the colors red and blue
- Any number of cycles can be used in the k&w Arrangement.

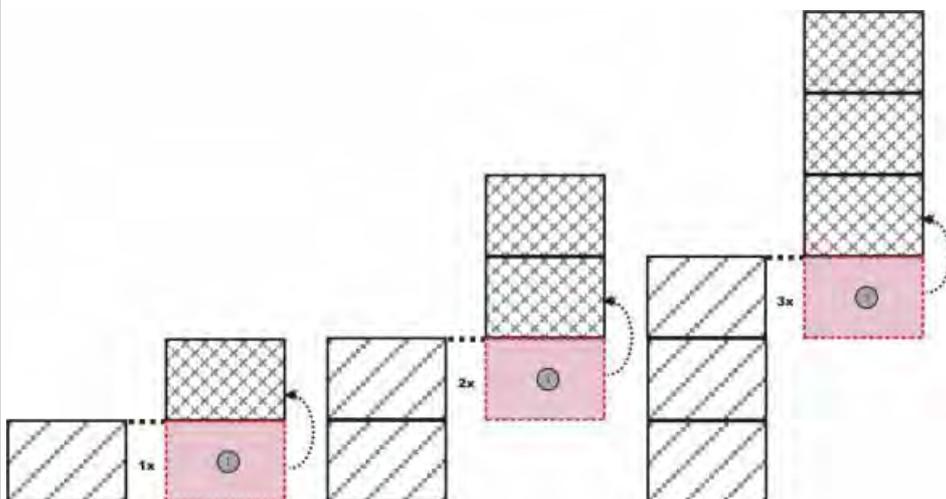
| Examples | |
|------------------------------|---|
| k&w Arrangement with a cycle | <p>Zusatzreihen Additional rows</p> <p>Rapport Cycle</p> <p>In this k&w Arrangement, knitting of the two body pieces is defined as a cycle and the subsequent binding-off is also inserted once at the end.</p> |
| | <p>Bild 1 Picture 1</p> <p>Bild 2 Picture 2</p> |
| Picture 1 | The k&w Arrangement is inserted completely once during the first insertion. During additional insertion of the knitting cycle, only the cycle is always inserted. Marking of the cycle with green lines. |
| Picture 2 | After inserting the k&w Arrangement in the entire area (height), the cycles are combined and the additional rows are added on at the end. |
| | <p>Zusatzreihen Additional rows</p> <p>6x</p> <p>5x</p> <p>4x</p> <p>3x</p> <p>2x</p> <p>1x</p> <p>Result after inserting the k&w Arrangement.</p> |

Examples

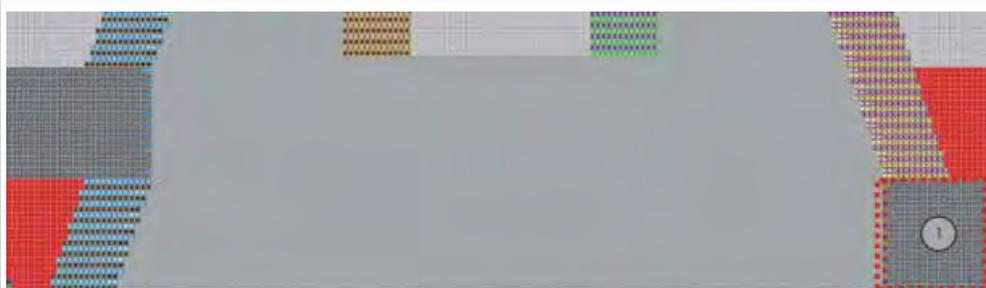
k&w Arrangement with two cycles



The cycles 1 and 2 are knit consecutively.



The shape rows in the right arm piece (1) not processed in cycle 1 are moved upward and processed in the subsequent cycle 2.

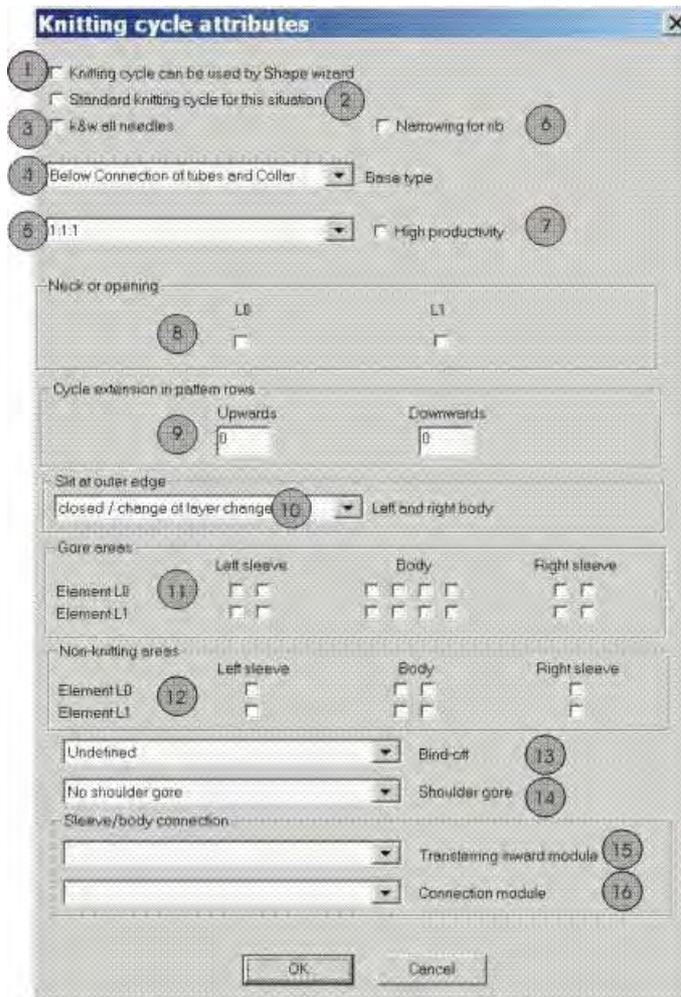


Result after inserting the k&w Arrangement. Cycles are knitted consecutively.

| | |
|---|---|
| 1 | Area with suspension by moving the non-processed rows from cycle 1. |
|---|---|

21.2 Define attributes in the k&w Arrangement Editor

The settings in this dialog box are evaluated by the "Shapewizard" and the "ShapeSizer" when detecting the k&w Arrangements.

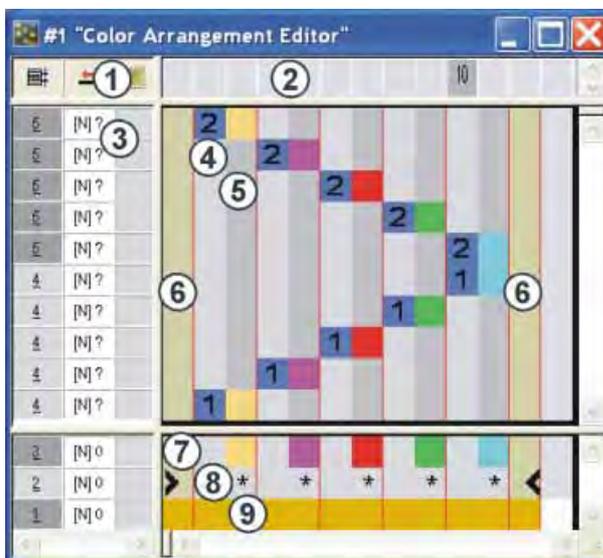


| Meaning | |
|---------|--|
| 1 | <input checked="" type="checkbox"/> The k&w Arrangement is used for editing the k&w shape in the "Shapewizard". |
| | <input type="checkbox"/> The k&w Arrangement is not used for editing the k&w shape in the "Shapewizard". |
| 2 | <input checked="" type="checkbox"/> The k&w Arrangement is used as the default when editing a k&w shape if several k&w Arrangements with the same specifications are available. Behavior of the M1plus when inserting k&w Arrangements: If a k&w Arrangement is contained in the "Own" module group which is defined as the default, then it is used. If this is not the case, then a k&w Arrangement from the "Stoll" module group is used. i : Do not define several of the same k&w Arrangement as default. |
| | <input type="checkbox"/> A k&w Arrangement from the "Stoll" module group defined as the default is used when editing a k&w shape. |
| 3 | <input checked="" type="checkbox"/> The k&w Arrangement is used for the CMS TC-T / CMS T if knitting is carried out with all needles for a k&w pattern. |
| | <input type="checkbox"/> The k&w Arrangement is used for all k&w machines if the k&w pattern is knit in the 1x1 technique. |
| 4 | Select a type of knitting cycle. Types: Tube/tube connection/area |
| 5 | Select a stitch ratio in the sleeve/body/sleeve k&w Arrangement of the Area basic type. |
| 6 | <input checked="" type="checkbox"/> Marking for k&w Arrangements with "Narrowings for 2x2 Rib". |
| 7 | <input checked="" type="checkbox"/> Marking for k&w Arrangements with "Narrowing without S0". Example: k&w Arrangements for CMS TC-T / CMS T |
| 8 | With k&w Arrangements with a cut-out and/or opening, the knitting layer in which the cut-out/opening element is knit must be defined for the cycle. |

| | | |
|----|---|---|
| | Meaning | |
| 9 | Cycle extension in pattern rows (= complete rows). The specification moves the end line of the area in which the k&w Arrangement is to be inserted. | |
| | Example: Shoulder Gore | |
| | Without cycle extension | With cycle extension |
| |  <p>All k&w Arrangements (1-4) are inserted in the shape. The height is determined by the shape.</p> |  <p>All k&w Arrangements are inserted in the shape. The k&w Arrangement attribute "Cycle extension in pattern rows"1 (upward) is specified in k&w Arrangement 3.</p> <p>⇒</p> <ul style="list-style-type: none"> ▪ The k&w Arrangement 3 is inserted in the entire height of the gore. ▪ A complete row from the shape from the collar area is used for binding-off. ▪ The end lines of k&w Arrangement 3 are moved upward by one pattern row. |
| 10 | Left and/or right body outer edge open or closed | |
| | Closed / Change of Layer | Yarn carrier changes the layer. ⇒ The outer edge is closed. |
| | open | Knitting is carried out with two yarn carriers. The yarn carriers do not change the layer. ⇒ The outer edge(s) remain(s) open. |
| | Closed / Thread Crossover | Knitting is carried out with two yarn carriers. These change the layer. ⇒ A thread crossing results at the outer edge. |
| | open at the left | Knitting is carried out with one yarn carrier. The yarn carrier changes to the other layer on the right side. ⇒ The outer edge remains open. |
| 11 | Definition of the element and the layer with gore area | |
| | "Sleeve on the left" | left and right edge for layer L0/L1 |
| | "Body" | left and right part of the body for the left and right edges and for the layers L0/L1. |
| | "Sleeve on the right" | left and right edge for layer L0/L1 |

| | | |
|----|---|---|
| | Meaning | |
| 12 | Definition of the element and the layer with suspension (non-knitting areas) | |
| | "Sleeve on the left" | Layer L0 / L1 |
| | "Body" | left and right part of the body for layer L0 / L1 |
| | "Sleeve on the right" | Layer L0 / L1 |
| 13 | Definition of binding-off type | |
| 14 | Definition of shoulder gore | |
| 15 | Definition of transferring-inward module (transferring before the sleeve-body crossover) | |
| | Type 1 | k&w pattern knit in 1x1 technique |
| | Typ 1 TC-T | k&w pattern knit with all needles |
| 16 | Definition of connecting module of sleeve/body/sleeve | |
| | Type 1 | k&w pattern knit in 1x1 technique. No front opening |
| | Type 1-Jacket | k&w pattern knit in 1x1 technique. With front opening (cardigan) |
| | Typ 1 TC-T | k&w pattern knit with all needles |

22 Color Arrangement Editor for knit and wear



Designations of rows and columns in the "Color Arrangement Editor" (CA).

| | | | |
|---------|--|---------|---|
| 1 | Header of the control columns All control columns are available | | |
| 2 | Column bar | | |
| 3 | Row bar with control columns | | |
| 4 - 11 | Processing Area | 12 - 16 | Search Area |
| 4 | Reference row with reference row number | 12 | Row of search colors |
| 5 | Color column with color segment | 13 | Functions of the search colors |
| 6 - 11 | Shape column with Fully Fashion and k&w) | 14 - 15 | Search color for shape parts (Shape Part Color) with Fully Fashion or k&w |
| 6 + 7 | Shape columns left sleeve | 14 | Shape part color left sleeve |
| 8 + 9 | Shape columns Body | 15 | Shape part color Body |
| 10 + 11 | Shape columns right sleeve | 16 | Shape part color right sleeve |

23 Shapewizard: Raglan with neck gore

| | | |
|---|---|-----|
|  | | |
| Pattern name: | Raglan mit Halsspickel | |
| Pattern size: | Width: | 250 |
| | Height: | 250 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | 1X1 - Rib | |
| Basic pattern: | Jersey | |
| Knitting technique | knit and wear | |
| Description of pattern: | k&w shape Raglan with neck gore and collar | |

23.1 Generate Pattern without Shape

Generate basic pattern for knit and wear:

1) Select "File" / "New" from the menu bar.

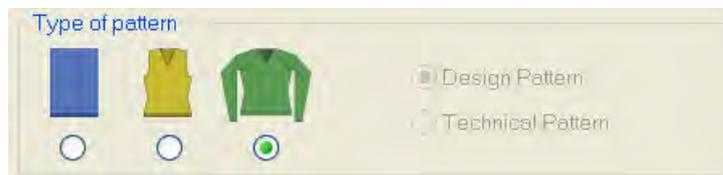
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Select k&w pattern type.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field.

Width: 250

Height: 250



With k&w the size of the pattern field is automatically doubled in height and width.

6) Select the "Jersey" binding for the basic pattern via the selection list.



You can not select a start for the k&w pattern at the beginning.
The start will be selected with the **Cut-out shape** step of processing.

7) Confirm the settings with "Generate Design Pattern".

⇒ The "Symbol View [Basic]" will be opened.

23.2 Create shape: Raglan with neck gore

I. Generate a front and back in the Shape Editor:

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function | Group |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|-------|
| 1 | | 0 | -173 | 0 | -52 | 0 | -52 | 1 | 0 | 0 | | | Basis | 0 |
| 2 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | 0 | | 0 |
| 3 | | 86 | 0 | 26 | 0 | 26 | 0 | 1 | 0 | 0 | | 0 | | 0 |
| 4 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | | 0 | | 0 |
| 5 | | 166 | 0 | 50 | 0 | 50 | 0 | 1 | 0 | 0 | | 0 | | 0 |
| 6 | | 20 | 0 | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | 0 | | 0 |
| 7 | ✓ | 226 | 100 | 68 | 30 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | Narrowing | 0 |
| 8 | | 0 | 73 | 0 | 22 | 0 | 22 | 1 | 0 | 0 | | | Bind-off | 0 |

| Line Editor Line 7 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 68 | 30 | | | |
| 1 | 0 | 4 | 2 | 15 | 6 | 0 |
| 1 | 0 | 8 | 0 | 1 | 6 | 0 |

- 7) Allocate the desired attributes "Widening", "Narrowing" and "Bind-off" to the edges under "Function".



Generate a shape for the back with the same specifications as for the front.

II. Insert the neck gore element in the front:

- 1) Open the **Raglan Front** shape.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the **Gore** entry in the "Type" section list.
- 4) Create the table under "Left Lines" and enter the values for the element.

Neck gore in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function | Group |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|-------|
| 1 | | 0 | -13 | 0 | -4 | 0 | -4 | 1 | 0 | 0 | | 0 | | 0 |
| 2 | ✓ | 46 | -53 | 14 | -16 | 0 | 0 | 0 | 0 | 0 | | 0 | | 0 |
| 3 | | 0 | 66 | 0 | 20 | 0 | 20 | 1 | 0 | 0 | | | | 0 |

| Line Editor Line 2 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 14 | -16 | | | |
| 1 | 0 | 2 | -4 | 1 | | 0 |
| 1 | 0 | 2 | -3 | 2 | | 0 |
| 1 | 0 | 2 | -2 | 3 | | 0 |
| 1 | 0 | 2 | 0 | 1 | | 0 |

- 5) Define the distance to the "base line" or to the "end line".



Do not connect the gore element to the end line.

III. Generate the element for the sleeve in the Shape Editor:

- 1) Open the shape editor via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w Sleeve** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values in the table:

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function | Group |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|-------|
| 1 | | 0 | -100 | 0 | -30 | 0 | -30 | 1 | 0 | 0 | | | Basis | 0 |
| 2 | | 400 | -33 | 120 | -10 | 12 | -1 | 10 | 0 | 0 | 1 | 0 | Widening | 0 |
| 3 | | 20 | 0 | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | | | 0 |
| 4 | ✓ | 226 | 100 | 68 | 30 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | Narrowing | 0 |
| 5 | | 0 | 33 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | | | Bind-off | 0 |

| Line Editor Line 4 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 68 | 30 | | | |
| 1 | 0 | 4 | 2 | 15 | 6 | 0 |
| 1 | 0 | 8 | 0 | 1 | 6 | 0 |

- 4) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".



Two more stitch rows has to follow the last narrowing otherwise it will not be narrowed.

23.3 Shapewizard: Load shape elements

Load shape elements in the Shapewizard:

Combine the shapes front, back, sleeve and collar in the "Shapewizard" into a Raglan with neck gore.kaw shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
⇒ The "Open" dialog box appears.
- 3) Select shape.
⇒ The shape will be loaded and the name will be displayed und "Body front".



You can remove the shape for sleeve and collar with  again.
You can call-up the "Shape Editor" in order to correct the loaded shape with .

- 4) Load the shape elements for "Body back" and "Sleeve" following the same procedure.
- 5) Specify stitch cross-over (connection of body and sleeve).

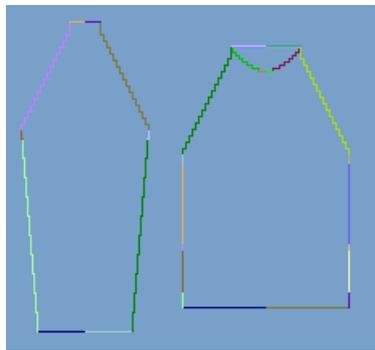
| Selection | Use |
|--|---|
| B1-Type 1 (no connection L0-L1) | Continuous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |
| B1-Type 1 TC-T (no connection L0-L1) | k&w Arrangement for pullover knit on CMS machine with additional beds. Continuous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |
| B8 Connection of trousers | k&w Arrangement for trousers |
| B5 Type 1 with gore (L0) no connection L0-L1 | k&w Arrangement for pullover with Fair Isle and gore below the sleeve-body connection |
| B6 Type 1 with gore (L0+L1) no connection L0-L1 | k&w Arrangement for pullover with Fair Isle and gore below the sleeve-body connection |
| B2 Type 1 with opening (L0) no connection L0-L1 | k&w Arrangement for a cardigan The front of the body is open. No connection of both the knitting layers |
| B2-Type 1 TC-T with opening (L0) | k&w Arrangement for cardigan knit on CMS machine with additional beds. The front of the body is open. No connection of both the knitting layers |
| B7 Type 1 with opening (L0) no connection L0-L1 Rib | k&w Arrangement for cardigan with 2x2 Rib |
| B3-Type1 with gore and opening (L0) and gore and opening (L1) no connection L0-L1 | k&w Arrangement for cardigan with gore in front and back |
| B4-Type 1 with gore and opening (L0) no connection L0-L1 | k&w Arrangement for cardigan with gore in front |
| I17-Type 1 no connection L0-L1 +I L0 Body | k&w Arrangement for Intarsia on L0 |

23.4 Shapewizard: Docking points for raglan

The shape elements are connected by knitting at the docking points.

I. Open the graphical shape display in order to define the docking points:

➔ Open the "Shape View" and the "Docking Points" dialog box with  in the toolbar of the "Shapewizard".

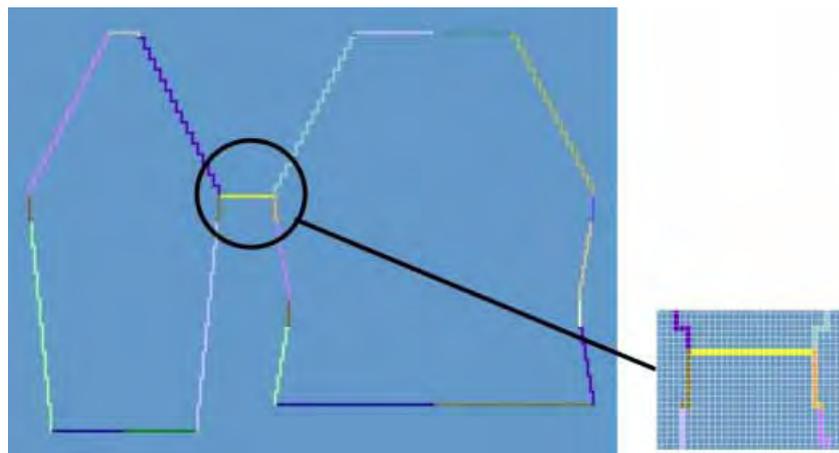


| Element | Function |
|-----------------------|--|
| "Sleeve - body" | Set the docking point "sleeve - body". The connection line is the first knitting row after the sleeve-body connection. |
| "Suspend body" | Set the docking point "Suspend body". Compensation of the length difference in the case of a sleeve longer than the body. Example: saddle shoulder |
| "Suspend sleeve" | Set the docking point "Suspend sleeve". Compensation of the length difference in the case of a body longer than the sleeve. Example: Inserted sleeve |
| "Remaining Narrowing" | Set the docking point "Remaining Narrowing". Connection of the stitches remaining at the end of the sleeve to the body. Example: Inserted sleeve |
| "Difference" | The difference of rows will be displayed when setting the connecting lines. |

| Element | Function |
|---|--|
| "Display field for the name of the knitting cycles" | If the cursor is placed in the graphical presentation of the shape display after determining the knitting cycles, then the name of the respective knitting cycle is shown. |
| "Collar" | Set the docking point "Collar". The collar element is set to corresponding width by the connection. |
| "Measuring" | You can measure a distance within a shape element with the "Measuring" button and the left mouse button pressed. The result is displayed in "Columns" and "Rows". |
| "Delete all lines" | Deletes all specified docking points. |

II. Define the docking point for sleeve-body:

The docking points form a connection line between sleeve and body and determine the first continuous knitting row after the sleeve-body connection.



- 1) Click in the pattern with the left mouse button and hold it.
- 2) Move the cursor in the element to be connected and specify the end position of the connection, then release the left mouse button.
- 3) Change the position by a manual entry in the "Docking Points" dialog box in order to correct a docking point.

- or -

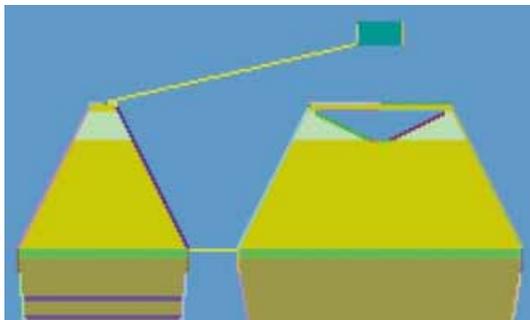
➔ Press  to delete a connection.



Press the "Ctrl" key while specifying the docking points, in order to jump with the cursor automatically to the nearest edge start or edge end.

III. Generate a k&w shape for raglan with neck gore:

- 1) Press "Determine k&w Arrangements".



The determined k&w Arrangements are represented color coded in the graphical Shape Display.

| Key | Function |
|------------------------------|--|
| "Determine k&w Arrangements" | By pressing the "Determine k&w Arrangements" button, the shapes are checked and the sequences required for technical processing are determined. |
| "Initialize" | The determined k&w Arrangements are deleted and the shapes are reloaded. A redetermination of the k&w Arrangements is required for further editing. |

- 2) Save the shape as kaw file after editing.
"File" / "Save" menu

- or -



The elements of the shape (front, back, and sleeve) and the **kaw** file must all be located in the same directory.

- 3) Exit the "Shapewizard".

23.5 Lay on k&w shape and position it

I. Lay the generated k&w shape onto the basic pattern:

- 1) Call up the dialog box with the "Shape" / "Open and Position Shape..." menu.

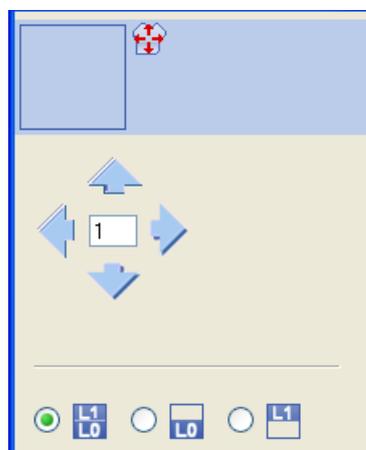


- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the entry with "OK".
- ⇒ The shape elements will be layed on the basic motif of the "Symbol View [Basic]".

II. Position the shape:

- ▷ The shape with k&w Arrangements lies on the basic pattern after "Open k&w shapes".
- 1) Select the  drawing tool.

"Tool Properties" toolbar:



- 2) Select the desired setting in the "Tool Properties" toolbar for the  drawing tool:

| Symbol | Function |
|---|---|
|  | Move front layer (L0) and back layer (L1) |
|  | Move front layer (L0) only |
|  | Move back layer (L1) only |

- 3) Select the desired setting in the "Pattern Presentation k&w" toolbar:

| Symbol | Function |
|--|----------------------------|
|  | Display Pattern Cut-out |
|  | Display Pattern Folded out |
|  | Display Pattern Collapsed |

- 4) Position the shape elements **Sleeve** and **Body** on the motif with the  symbol activated and the left mouse button pressed.

- or -

- ➔ Select the desired shape element left clicking. Position the selected shape element with the arrow keys of the keyboard or of the "Properties of Drawing Tools" toolbar.

23.6 Generate Color Arrangements based on k&w Arrangements

Get the Color Arrangements generated based on the k&w Arrangements of the shape:

▷ The k&w shape generated in the "Shapewizard" lies on the basic pattern.

1) Open the "Shape View" with .

- or -

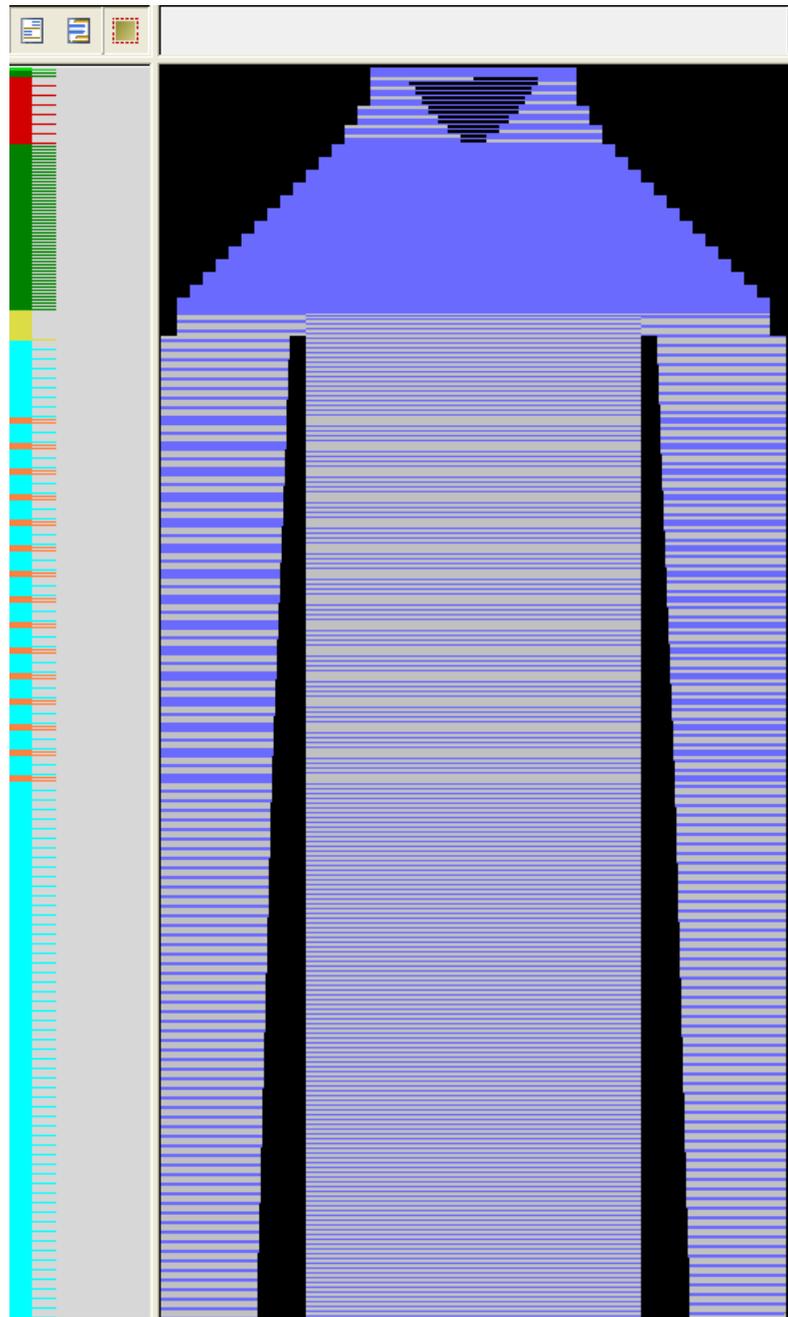
➔ Switch the "Symbol View" with  into the **Display Pattern Cut-out** k&w presentation.

2) Toggle on control columns:

- k&w Arrangement with 
- Color Arrangements with 

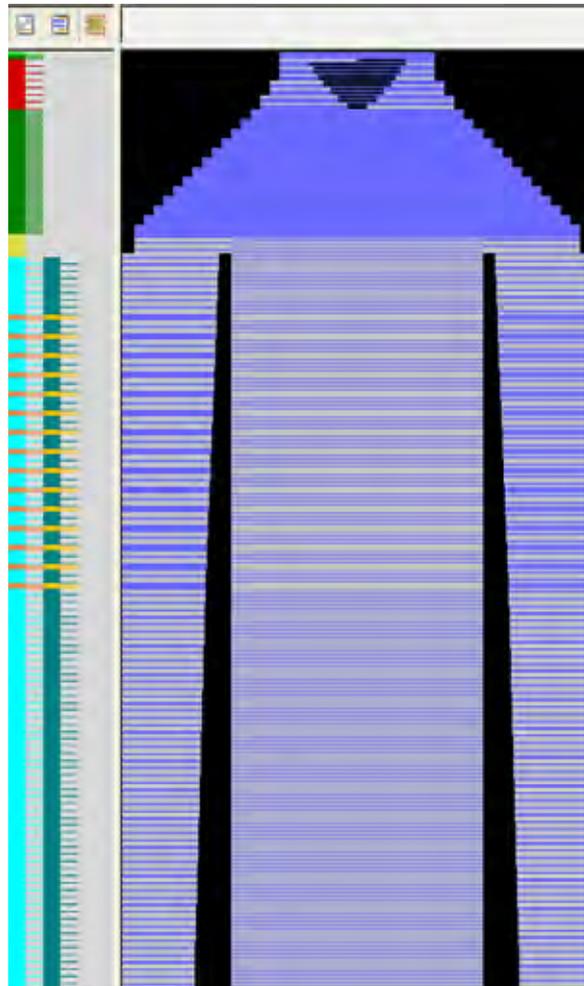


The k&w Arrangements in use are represented color coded in the  control column.



- 3) Select the rows from the start up to the start of the sleeve-body connection in the control column .
- 4) Place the cursor in the  control column and call up the context menu.

- 5) Select "Allocate a Color Arrangement from the k&w Arrangement".
⇒ Color Arrangements will be generated based on the k&w Arrangements in use. They are represented color coded in the  control column.

**Result:**

- The calculated CA are displayed in the "Modules" toolbar on the "local Color Arrangement" tab .
 - The calculated CA are named by the M1plus.
 - The k&w Arrangements in use are displayed in the "Modules" toolbar on the "local k&w Arrangements" tab .
 - CA are coupled to the original k&w Arrangement and named in the "k&w Arrangement Editor".
- 6) Delete the selection with .

23.7 Cut out k&w Shape

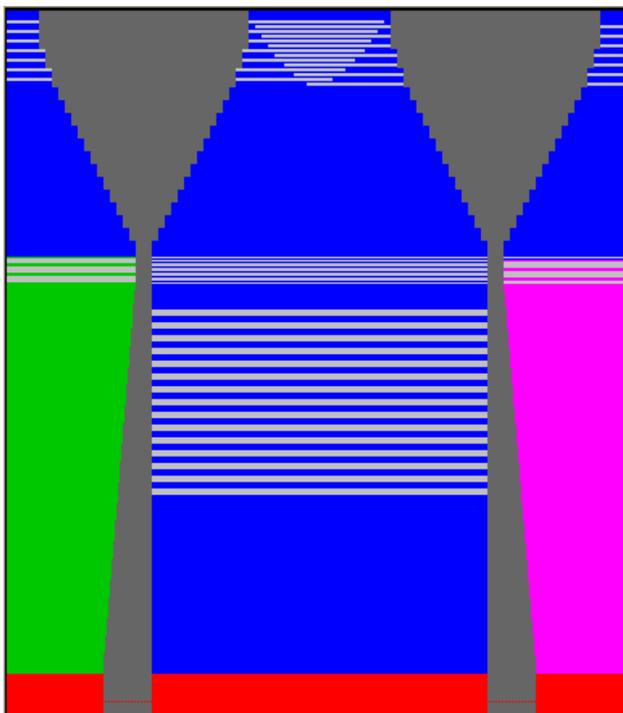
Cut-out k&w-shape of the basic pattern:

i You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.

i You can not make all of the settings if you repeat the Cutting out step of processing. These settings are already with the first cutting out.

- 2) Confirm the settings in the dialog box with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm the settings with "OK".
⇒ The k&w start is inserted as writeprotected area within shape.



23.8 Space the Suspending Rows Newly

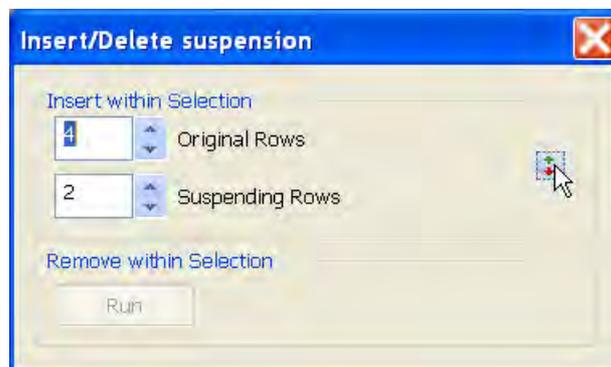
Space the length compensation in the body manually:

- ▷ The Cut-out shape processing step  has to be loaded.
- 1) Select the body in width and height from the first row after the start up to the last row with suspending in the "Symbol View [Basic with shape]".

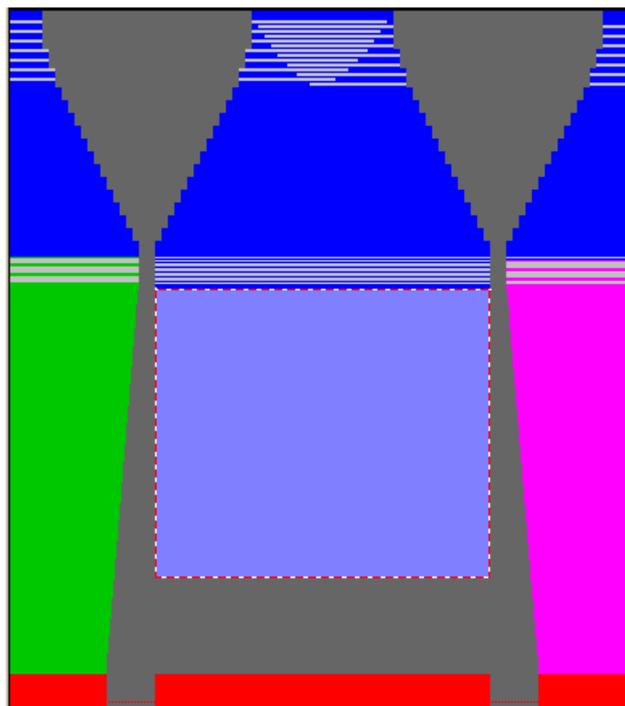


The selection must not contain **Outside Shape**.

- 2) Call up the "Insert/Delete Suspension" dialog box with .



- 3) Press the "Run" key.
- ⇒ The **Suspension** inserted when calculating the CA will be removed.



- 4) Enter new values under "Insert within Selection":
- Original Rows = Number of rows to be knitted
 - Suspending rows = Number of rows without knitting

| | |
|------------------|---|
| Example: | |
| Original Rows: | 8 |
| Suspending Rows: | 4 |

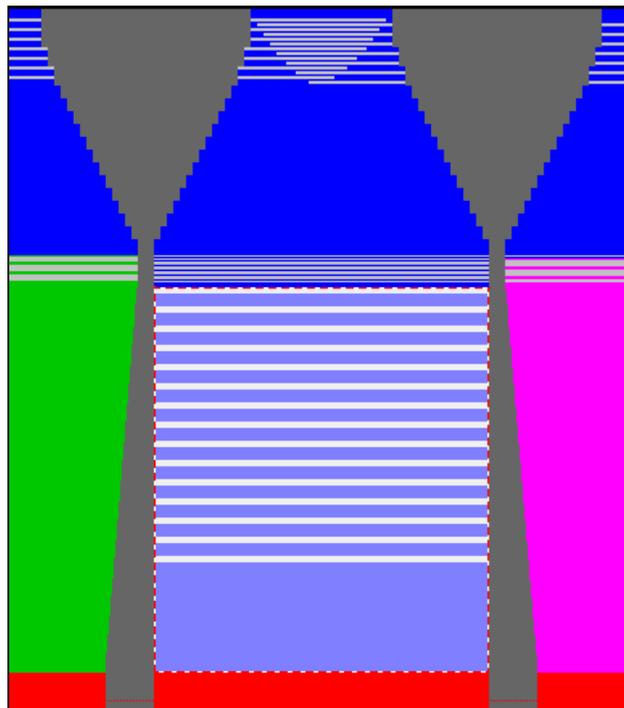
- 5) Pick up the selection at the first row after the suspending area with the left mouse button and drag it open downward.



The meaning of the different cursor presentations:

| Cursor | Meaning |
|---|--|
|  | Drag open in both directions is not possible |
|  | Drag open upward |
|  | Drag open downward |

Result:



- 6) Close the "Insert/Delete suspension" dialog box with "X".
 - 7) Re-allocate the CA to the new suspending area in the  control column.
- ⇒ The modifications are saved in the  state of pattern.

23.9 Draw in a Structure after Cutting out

Toggle suspension on and off and draw in a structure into the pattern:

▷ **Shaped Pattern** is the active state of pattern.

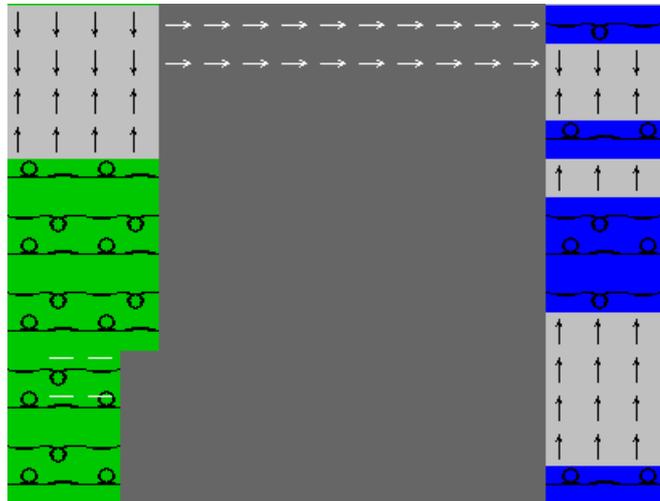
1) Select in the "Pattern presentation" toolbar:

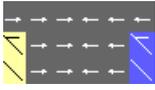
- Yarn Color or Yarn Carrier Color for the Background 
- Shape Symbols 

2) Select in the "Pattern Presentation k&w" toolbar:

k&w presentation 

Result: Symbol View with the symbols for suspension



| | Function | |
|---|--|---|
|  | Direction of fading out the suspending rows to the top | |
|  | Direction of fading out the suspending rows to the bottom | |
|  | | |
|  | Aligning symbol for folding in and out within the shape to the left | |
|  | Aligning symbol for folding in and out within the shape to the right | |
|  | Aligning symbol for folding in and out within the shape to the left and outside the shape |  |
|  | Aligning symbol for folding in and out within the shape to the right and outside the shape | |

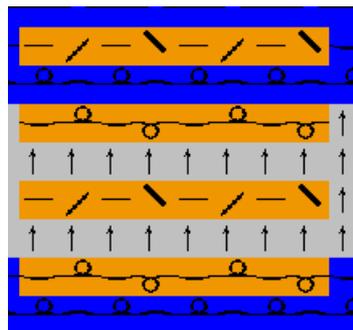
- 3) Select in the "Pattern Presentation k&w"  toolbar.
⇒ The suspending rows will be toggled off in the "Symbol View [Basic with shape]".
- 4) Select further presentation options in the "Pattern Presentation k&w" toolbar if desired.
- 5) Select the desired structure module and draw it in:
 - Cables
 - Aran
 - Petinet and so on

Result:

The modules drawn in will be placed on a knitting row of the corresponding knitting layer.



The suspending rows will **not** be skipped if these rows are **not faded out**.

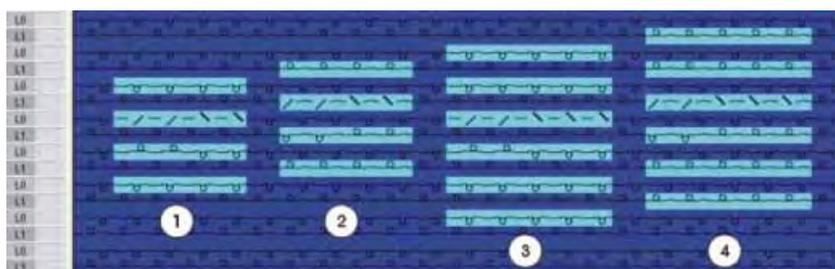


23.10 Generate a Module Arrangement

Generate a Module Arrangement from a selection:

- ▷ A shaped pattern  is load after the **Cutting out** step of processing.
- 1) Click on  and  of the "Pattern Presentation k&w" toolbar.
- ⇒ The suspending rows and the aligning symbols will be hidden in the "Symbol View [Basic with shape]".
- 2) Draw in different structure modules on the same row:
 - Of front layer (L0) only: Adjustment of the module from L0 only
 - Of back layer (L1) only: Adjustment of the module from L1 only
 - Of both layers (L0 + L1): Adjustment of the modules from L0, from L1 and from L0 in relation to L1

Example with modules on both layer:



| | Designation |
|---|-------------------------------|
| 1 | Cable 2x2 on front layer (L0) |
| 2 | Cable 2x2 on back layer (L1) |
| 3 | Cable 3x2 on front layer (L0) |
| 4 | Cable 3x2 on back layer (L1) |

- 3) Select the pattern rows with modules.



Only modules of the same knitting row can be arranged to each other.

- 4) Click the  icon in the "Default" toolbar.

- or -

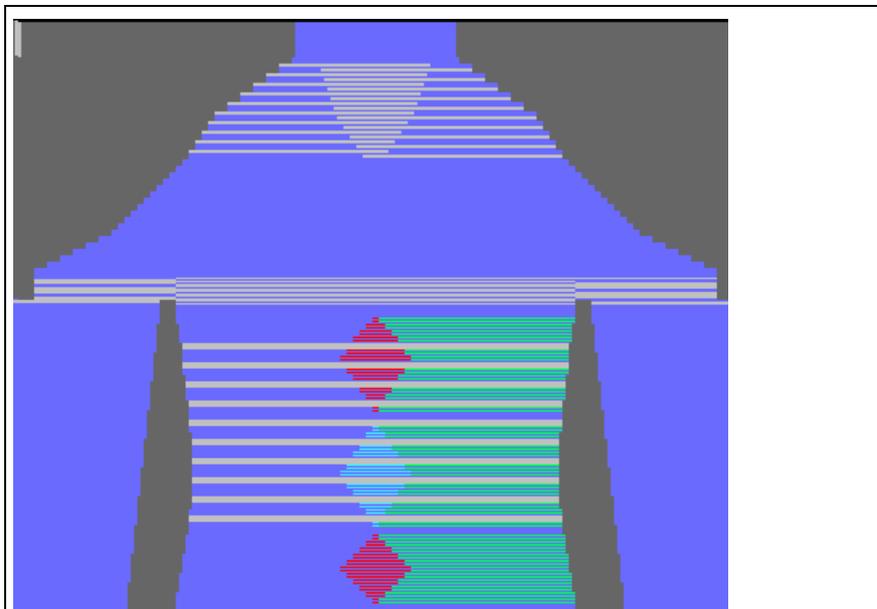
- ➔ Call up the "Module" / "Generate from Selection" / "Module Arrangement" menu.

23.11 Complete the pattern

Complete the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The binding off module is inserted.
- 2) Start the technical processing with .
⇒ The query "Generate MC Program" appears.
- 3) Confirm the query with "OK".
- 4) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
➔ Start the "Sintral Check" with the  button.

24 Shapewizard: Raglan with intarsia



| | |
|-------------------------|--|
| Pattern name | Intarsia |
| Pattern size: | Width: 300 Height: 170 |
| Machine type: | CMS 822 k&w |
| Gauge: | E 6.2 |
| Start: | 1x1 |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | k&w pattern with Raglan and Intarsia technique in the body |

24.1 Generate Pattern without Shape

Generate knit and wear pattern:



The intarsia motif is not drawn-in until the shape is not laid onto the basic pattern.

1) Select "File" / "New" from the menu bar.

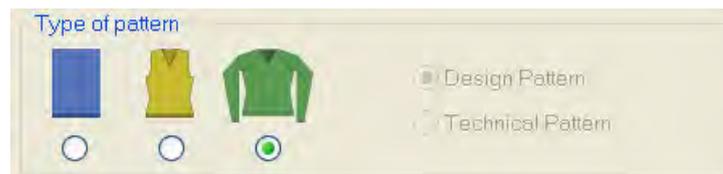
- or -

➔ Click the  icon.

2) Enter a pattern name.

3) Select machine.

4) Type of pattern: Select k&w pattern.



The k&w pattern type is in the "Design Pattern" mode available only.

5) Enter height and width of the pattern field.

Width: 300

Height: 400

6) Select the knitting mode: "Face stitch" in the selection list "Basic pattern".

7) Confirm the settings with the "Generate Design Pattern" button.

⇒ Symbol View [Basic] in k&w presentation appears.

24.2 Create shape: Raglan with neck gore

I. Generate a front and back in the Shape Editor:

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate  "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Insert the entry field for edge lines with the  "Add new line at end" button.
- 7) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -206 | 0 | -62 | 0 | -62 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 100 | 16 | 30 | 5 | 6 | 1 | 5 | 0 | 0 | 0 | Narrowing |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 100 | -16 | 30 | -5 | 6 | -1 | 5 | 0 | 0 | 0 | Widening |
| 5 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 6 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | 0 | 0 | Narrowing |
| 7 | | 106 | 53 | 32 | 16 | 2 | 1 | 16 | 0 | 0 | 0 | Narrowing |
| 8 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | 0 | 0 | Narrowing |
| 9 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 10 | | 0 | 73 | 0 | 22 | 0 | 22 | 1 | 0 | 0 | 0 | |

- 8) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".



Generate a shape for the back with the same specifications as for the front.

II. Insert the neck gore element in the front:

- 1) Open the **Raglan Front** shape.
- 2) Generate a new element in the Shape Editor with .
- 3) Select the **Gore** entry in the "Type" section list.
- 4) Create the table under "Left Lines" and enter the values for the element.

Neck gore in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 0 | -13 | 0 | -4 | 0 | -4 | 1 | 0 | 0 | 0 | |
| 2 | | 26 | -26 | 8 | -8 | 2 | -2 | 4 | 0 | 0 | 0 | |
| 3 | | 40 | -20 | 12 | -6 | 2 | -1 | 6 | 0 | 0 | 0 | |
| 4 | | 0 | 60 | 0 | 18 | 0 | 18 | 1 | 0 | 0 | 0 | |

5) Define the distance to the "base line" or to the "end line".



6) Save shape.



Do not connect the gore element to the end line.

III. Generate the element for sleeve in the Shape editor:

- 1) Open the shape editor via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w Sleeve** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values in the table:

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -113 | 0 | -34 | 0 | -34 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 300 | -33 | 90 | -10 | 9 | -1 | 10 | 0 | 0 | 0 | Widening |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | 0 | 0 | Narrowing |
| 5 | | 106 | 53 | 32 | 16 | 2 | 1 | 16 | 0 | 0 | 0 | Narrowing |
| 6 | | 40 | 40 | 12 | 12 | 1 | 1 | 12 | 0 | 0 | 0 | Narrowing |
| 7 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 8 | | 0 | 13 | 0 | 4 | 0 | 4 | 1 | 0 | 0 | 0 | |

- 4) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".
- 5) Save shape



After the last narrowing, at least two stitches must still be knit, otherwise the last narrowing will not be performed.

IV. Generate the element for the collar in the Shape Editor:

- 1) Open the shape editor via "Shape" / "Generate/Edit Shape...".
- 2) Select the **k&w collar** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values for the collar in the table under "Left lines".

Front of Collar / Back of Collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|----------|
| 1 | | 0 | -86 | 0 | -26 | 0 | -26 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 3 | | 0 | 86 | 0 | 26 | 0 | 26 | 1 | 0 | 0 | 0 | Bind-off |

- 4) Allocate **bind-off** to the end line under "Function" in the "General" tab.
- 5) Allocate the single-jersey knitting mode in accordance with the collar shape "cut-out" or "fast cut-out".
- 6) Save the collar element



You have to save all shape elements in the same directory.

24.3 Shapewizard: Load Shape Elements

Load shape elements in the Shapewizard:

Combine the shapes front, back, sleeve and collar in the "ShapeWizard" to a **Raglan-with-Intarsia.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
- 3) Select shape.



Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.

- 4) Specify the knitting mode of the collar via the selection menu:
 - The collar width should match the module width used.
 - The collar width is dependent on the docking points.
 - This means that the end width of the sleeve and body must be matched to the module width used.
- 5) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|--|--|
| B1-Type 1 (no connection L0-L1) | Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |

24.4 Shapewizard: Determine docking points and k&w Arrangements

I. Open ShapeWizard and set docking points:

- 1) Open the "ShapeWizard" dialog box via the "Shape" / "ShapeWizard (k&w Put Together Shape)..." menu.
- 2) Open the "Docking Points" dialog box with the  icon in the toolbar of the "Shapewizard".
- 3) Set the docking points for "sleeve-body".



If the "Ctrl" key is pressed while specifying the docking points, then the cursor automatically jumps to the nearest edge start or edge end.

- 4) Set the docking point "Collar".
 - Always set the connecting line on the left collar side.
 - The same position is automatically applied for the right side.
 - Overwrite the position for the right side in the "Docking points" dialog box if you wish the collar to be positioned asymmetrically.

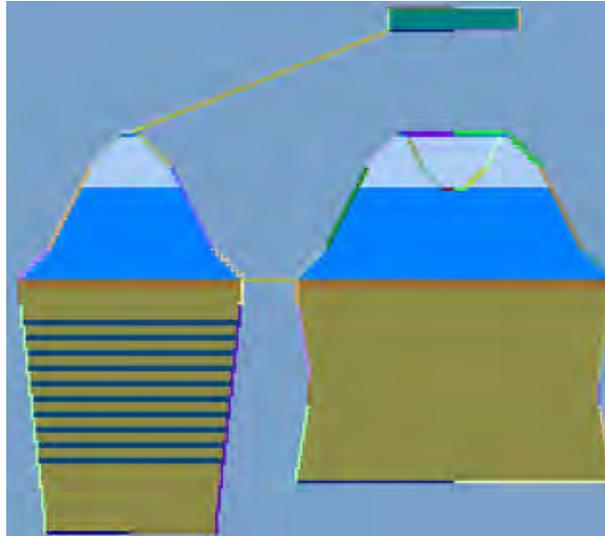
Result: The width of the collar element is adjusted by the docking point.

All docking points:



II. Determine k&w Arrangements:

- 1) Press "Determine k&w Arrangements".



You can delete the determined k&w Arrangements with the "Initialize" button.

- 2) Exchange k&w Arrangements:
Select the k&w Arrangement in the "ShapeWizard" dialog box by double click.
⇒ A window with alternative k&w Arrangements appears.
- 3) Select the desired k&w Arrangement.
- 4) Close the dialog box with the "OK" button.
⇒ The selected k&w Arrangement is inserted.



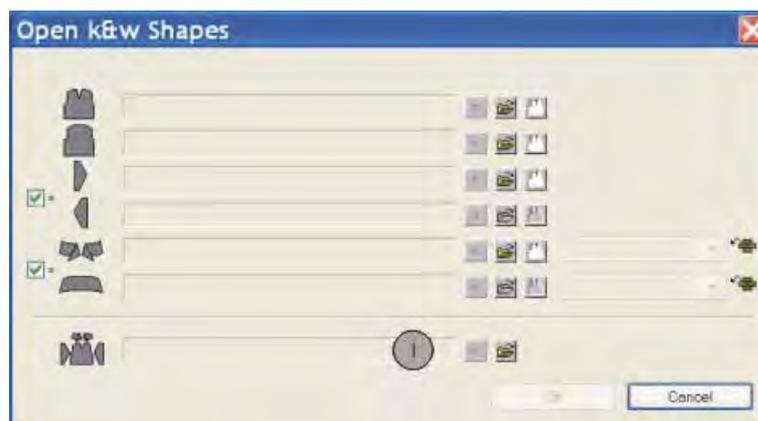
The elements of the shape (front, back, sleeve and collar) and the **kaw** file must all be located in the same directory.

- 5) Close the "Shapewizard" dialog box.

24.5 Open, position shape and draw-in intarsia motif

I. Lay the kaw file onto the basic pattern:

- 1) Call up the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the *.kaw extension via  (1).
 - 3) Confirm the selection with "OK".
- ⇒ The kaw file is laid onto the basic motif.

II. Position the shape:

- ▷ Shape with k&w Arrangements lies on the basic pattern.

- 1) Position the shape elements **Sleeve** and **Body** on the motif with  activated and the left mouse button pressed.

- or -

- ➔ Select the desired shape element with  active. Position the selected shape element with the arrow keys of the keyboard or of the "Tool properties" toolbar.

III. Draw-in the intarsia motif in the basic pattern:

Options when drawing:

- **Use yarn colors**

Do not use the option "Insert yarn carrier colors from the k&w Arrangement" when "Cutting out" .

- **Use yarn carrier colors**

Use the option "Insert yarn carrier colors from the k&w Arrangement" when "Cutting out" .

**Example:**

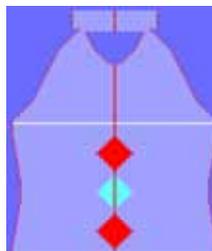
Yarn colors were used for generating the motif in this example.

▷ The shape for the body (front and back) is positioned on the basic pattern.

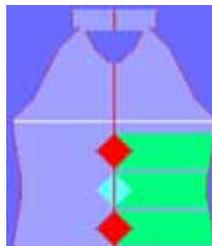
1) Switch the presentation of the symbol view with .

⇒ Only the columns (knitting needles) of the layer L0 are displayed in the symbol view.

2) Draw-in the intarsia motif on the front layer (L0) of the basic pattern:



3) Draw-in further colors as search color in the area of the intarsia motif:



4) Switch the symbol presentation with the  button.

⇒ All the columns of both layers are displayed in the symbol view.

5) Cut out the shape with  in the "Steps of Processing" toolbar.

⇒ The "k&w Options for Cut out" dialog box appears.

6) The option: Deactivate "Insert yarn carrier colors from the k&w Arrangement".

7) Confirm the settings in the dialog box with "OK".

⇒ The "Insert/Replace k&w Start" dialog box appears.

8) Select the desired start.

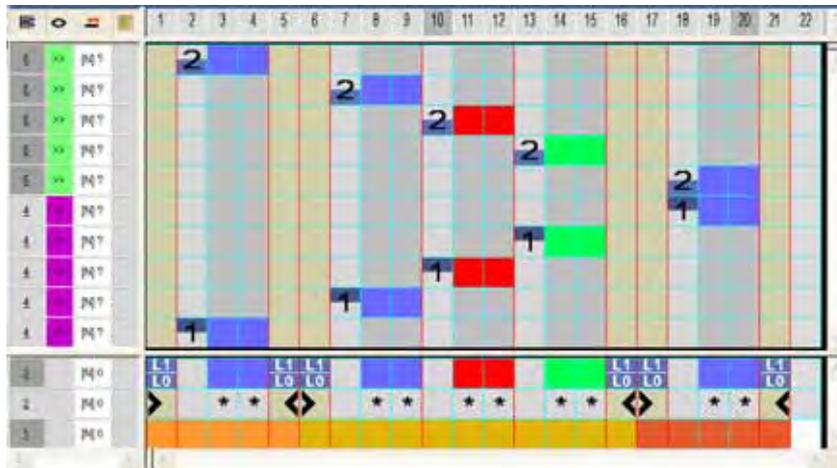
9) Confirm the settings with "OK".

⇒ The selected start is inserted.

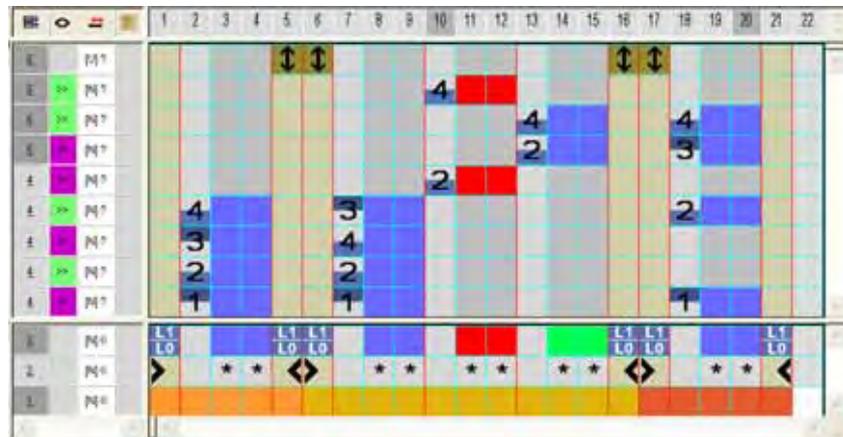
24.6 Generate Color Arrangement

I. Generate a Color Arrangement for the intarsia area:

- ▷ The processing step  is carried out.
- 1) Display all the knitting layers in the symbol view with the  key.
- 2) Select the corresponding intarsia pattern rows of the area with the red diamond via the row selection bar.
- 3) Click the  icon in the "Default" toolbar.
- or -
- ➔ Call up the function "Generate from Selection" / "Color Arrangement" in the "Module" menu.
- ⇒ The "Properties of: XX" dialog box appears.
- 4) Enter a module name.
- 5) Confirm the dialog box with the "OK" key and close it.
- ⇒ The color sequence present in the selection will be displayed in the "Color Arrangement Editor".



- 6) Modify the color sequence in the shape part #1 (body) according to the intarsia knitting technique.



The intarsia knitting cycle contains 4 k&w complete rows.

- 7) Close the "Color Arrangement" dialog box with .
⇒ The Color Arrangement will be closed and saved in the "Modules" toolbar under **local Color Arrangements** .
- 8) Select the corresponding intarsia pattern rows of the area with the light blue diamond via the row selection bar.
- 9) Click the icon in the "Default" toolbar.
⇒ The Color Arrangement is displayed.
- 10) Modify also the second Color Arrangement.
- 11) Close the "Color Arrangement" dialog box with .
⇒ The Color Arrangement will be closed and saved in the "Modules" toolbar under **local Color Arrangements** .

II. Insert Color Arrangements in the pattern:

- 1) Load the basic pattern  processing step.
- 2) Switch the presentation of the symbol view into **Display Pattern Cut-out** .
- 3) Activate the control column Color Arrangement  additionally.
- 4) Draw-in the two Color Arrangements in the control column  in the height of the intarsia areas.



Ensure that the cycle height of the Color Arrangement fits also into the areas of the **suspending rows**.

24.7 Complete the pattern

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm with "OK".
⇒ The selected start is inserted.
- 5) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 6) Confirm with "OK".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for binding off the collar is inserted.
- 7) Start the technical processing with .
⇒ The query "Generate MC Program" appears.
- 8) Confirm the query with "OK".
- 9) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
➔ Start the "Sintral Check" with .

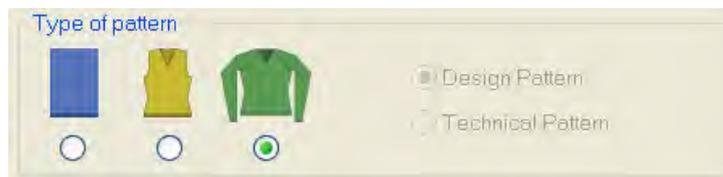
25 Shapewizard: Raglan with Intarsia in the Sleeve

| | |
|---|---|
|  | |
| Pattern name: | Raglan mit Intarsia |
| Pattern size: | Width: 300 Height: 300 |
| Machine type: | CMS 822 k&w |
| Gauge: | E 6.2 |
| Start: | 2x2 Rib |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | k&w shape Raglan with <ul style="list-style-type: none"> ▪ neck gore and collar ▪ Intarsia stripes in the sleeves |

25.1 Generate Pattern without Shape

Generate basic pattern for knit and wear:

- 1) Click the  icon.
- 2) Enter a pattern name.
- 3) Select machine.
- 4) Select k&w pattern type.



- 5) Enter height and width of the pattern field.
Width: 300
Height: 300



With k&w the size of the pattern field is automatically doubled in height and width.

- 6) Select the "Jersey" binding for the basic pattern via the selection list.
 - 7) Confirm the settings with "Generate Design Pattern".
- ⇒ "Symbol View [Basic]" in k&w presentation appears.

25.2 Create shape: Raglan with neck gore

I. Generate a front and back in the Shape Editor:

- 1) Open the shape editor via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -173 | 0 | -52 | 0 | -52 | 1 | 0 | 0 | | | Basis |
| 2 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | 0 | |
| 3 | ✓ | 86 | 13 | 26 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | Narrowing |
| 4 | | 13 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 0 | | 0 | |
| 5 | / | 166 | -13 | 50 | -4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | Widening |
| 6 | | 20 | 0 | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | 0 | |
| 7 | ✓ | 226 | 100 | 68 | 30 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | Narrowing |
| 8 | | 0 | 73 | 0 | 22 | 0 | 22 | 1 | 0 | 0 | | | |

| Line Editor Line 3 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 26 | 4 | | | |
| 1 | 0 | 6 | 1 | 4 | 6 | 0 |
| 1 | 0 | 2 | 0 | 1 | 6 | 0 |

| Line Editor Line 7 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 68 | 30 | | | |
| 1 | 0 | 4 | 2 | 15 | 3 | 0 |
| 1 | 0 | 8 | 0 | 1 | 3 | 0 |

- 7) Allocate the desired attributes **Widening** and **Narrowing** to the lines under "Function".



Generate a shape for the back with the same specifications as for the front.

II. Insert the neck gore element in the front:

- 1) Open the **Raglan Front** shape.
- 2) Generate a new element in the Shape Editor with the  button.
- 3) Select the **Gore** entry in the "Type" section list.
- 4) Create the table under "Left Lines" and enter the values for the element.

Neck gore in the front

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | | 0 | -13 | 0 | -4 | 0 | -4 | 1 | 0 | 0 | | 0 | |
| 2 | ✓ | 46 | -53 | 14 | -16 | 0 | 0 | 0 | 0 | 0 | | 0 | |
| 3 | | 0 | 66 | 0 | 20 | 0 | 20 | 1 | 0 | 0 | | | |

| Line Editor Line 2 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 14 | -16 | | | |
| 1 | 0 | 2 | -4 | 1 | | 0 |
| 1 | 0 | 2 | -3 | 2 | | 0 |
| 1 | 0 | 2 | -2 | 3 | | 0 |
| 1 | 0 | 2 | 0 | 1 | | 0 |

- 5) Define the distance to the "base line" or to the "end line".

Example: 2



- 6) Save the shape in the directory created beforehand with "File" / "Save" or "Save As".



Do not connect the gore element to the end line.

III. Generate the element for the sleeve in the Shape Editor:

- 1) Open the shape editor via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w Sleeve** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values in the table.

Sleeve

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|
| 1 | | 0 | -100 | 0 | -30 | 0 | -30 | 1 | 0 | 0 | | | Basis |
| 2 | | 360 | -33 | 108 | -10 | 10 | -1 | 10 | 8 | 0 | 1 | 0 | Widening |
| 3 | | 20 | 0 | 6 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | |
| 4 | ✓ | 226 | 100 | 68 | 30 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | Narrowing |
| 5 | | 0 | 33 | 0 | 10 | 0 | 10 | 1 | 0 | 0 | | | |

| Line Editor Line 4 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 68 | 30 | | | |
| 1 | 0 | 4 | 2 | 15 | 6 | 0 |
| 1 | 0 | 8 | 0 | 1 | 6 | 0 |

- Allocate the desired attributes **Widening** and **Narrowing** to the lines under "Function".
- Save the shape in the directory created beforehand with "File" / "Save" or "Save As".



Two more stitch rows has to follow the last narrowing otherwise it will not be narrowed.

IV. Generate the element for the collar in the Shape Editor:

- Open the shape editor via "Shape" / "Generate/Edit Shape...".
- Select the **k&w collar** entry in the "Type" selection menu under "General shape data".
- Enter the values for the collar in the table under "Left lines":

Front of Collar / Back of Collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | | 0 | -133 | 0 | -40 | 0 | -40 | 1 | 0 | 0 | | | Basis |
| 2 | | 133 | 0 | 40 | 0 | 40 | 0 | 1 | 0 | 0 | | 0 | |
| 3 | | 0 | 133 | 0 | 40 | 0 | 40 | 1 | 0 | 0 | | | Bind-off |

- Allocate **bind-off** to the end line under "Function" in the "General" tab.
- Allocate the single-jersey knitting mode in accordance with the collar shape "cut-out" or "fast cut-out".
- Save the shape in the directory created beforehand with "File" / "Save" or "Save As".



You have to save all shape elements in the same directory.

25.3 Shapewizard: Load shape elements

I. Load shape elements in the "Shapewizard":

Combine the shapes front, back, sleeve and collar in the "Shapewizard" to a **Raglan with Intarsia.kaw** shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
⇒ The "Open" dialog box appears.
- 3) Select shape.
⇒ The shape will be loaded and the name will be displayed und "Body front".



You can call-up the "Shape Editor" in order to correct the loaded shape with .

- 4) Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.
- 5) Specify stitch cross-over (connection of body and sleeve).

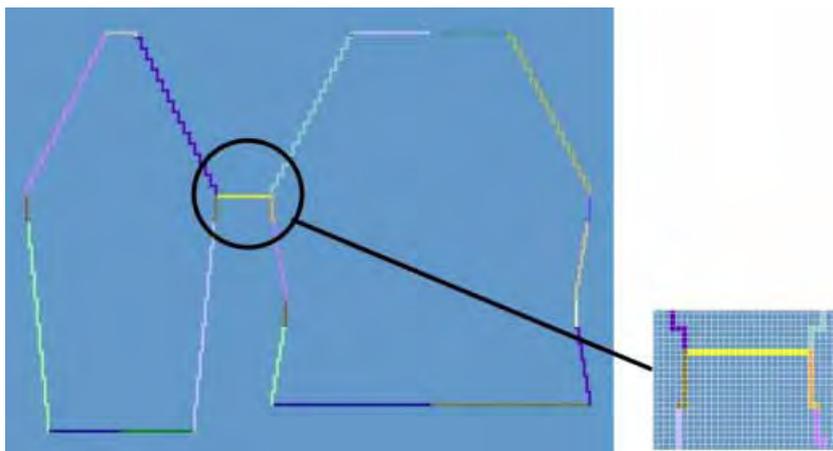
25.4 Shapewizard: Determine docking points and k&w Arrangements

I. Open the dialog to define docking points:

- ➔ Open the "Shape View" and the "Docking Points" dialog box with  in the toolbar of the "Shapewizard".



II. Define the docking point for sleeve-body:



i

Press the "Ctrl" key while specifying the docking points, in order to jump with the cursor automatically to the nearest edge start or edge end.

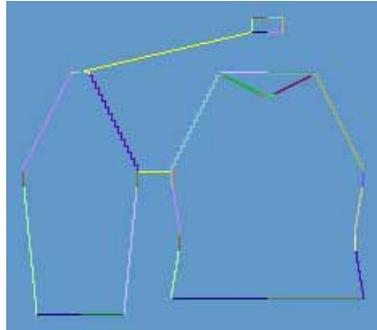
- 1) Click in the pattern with the left mouse button and hold it.
- 2) Move the cursor in the element to be connected and specify the end position of the connection, then release the left mouse button.
- 3) Change the position by a manual entry in the "Docking Points" dialog box in order to correct a docking point.

- or -

- ➔ Press  to delete a connection.

III. Define the docking point for the collar:

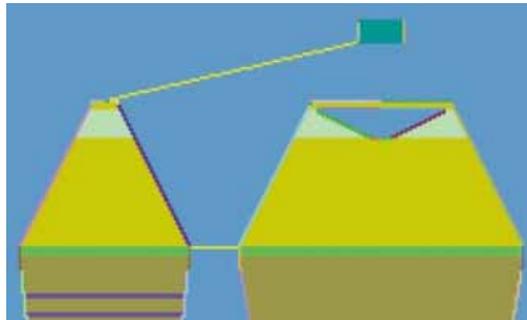
- 1) Define the "Collar" docking points in the "Docking Points" dialog box.



- Always set the connecting line on the left collar side.
- The same position is automatically applied for the right side.
- If the collar is to be positioned asymmetrically, then you can overwrite the positions.

IV. Generate k&w shape:

- 1) Press the "Determine k&w Arrangements" button.



The determined k&w Arrangements are represented color coded in the graphical Shape Display.

- 2) Save the shape as kaw file via the "File" / "Save" menu.



The elements of the shape (front, back, and sleeve) and the **kaw** file must all be located in the same directory.

- 3) Exit the "Shapewizard".

25.5 Lay-on and position the shape and draw-in the motif

I. Lay k&w shape onto the basic pattern:

- 1) Call up the dialog box with the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the selection with "OK".
- ⇒ The shape elements get layed on the basic motif of the "Symbol View [Basic]".

II. Position the shape:

- ▷ Shape with k&w Arrangements lies on the basic pattern.

- 1) Position the shape elements **Sleeve** and **Body** on the motif with the  symbol activated and the left mouse button pressed.

- or -

- ➔ Select the desired shape element left clicking. Position the selected shape element with the arrow keys of the keyboard or of the "Properties of Drawing Tools" toolbar.

III. Draw-in an intarsia color stripe:

- 1) Draw-in a stripe with a further color in complete height and desired width at the outer edges of the left and right sleeve:
 - Yarn color
 - Yarn carrier color
- 2) Draw in a structure (e.g. Rib) in the color stripe if desired.

25.6 Modify lokal k&w Arrangements



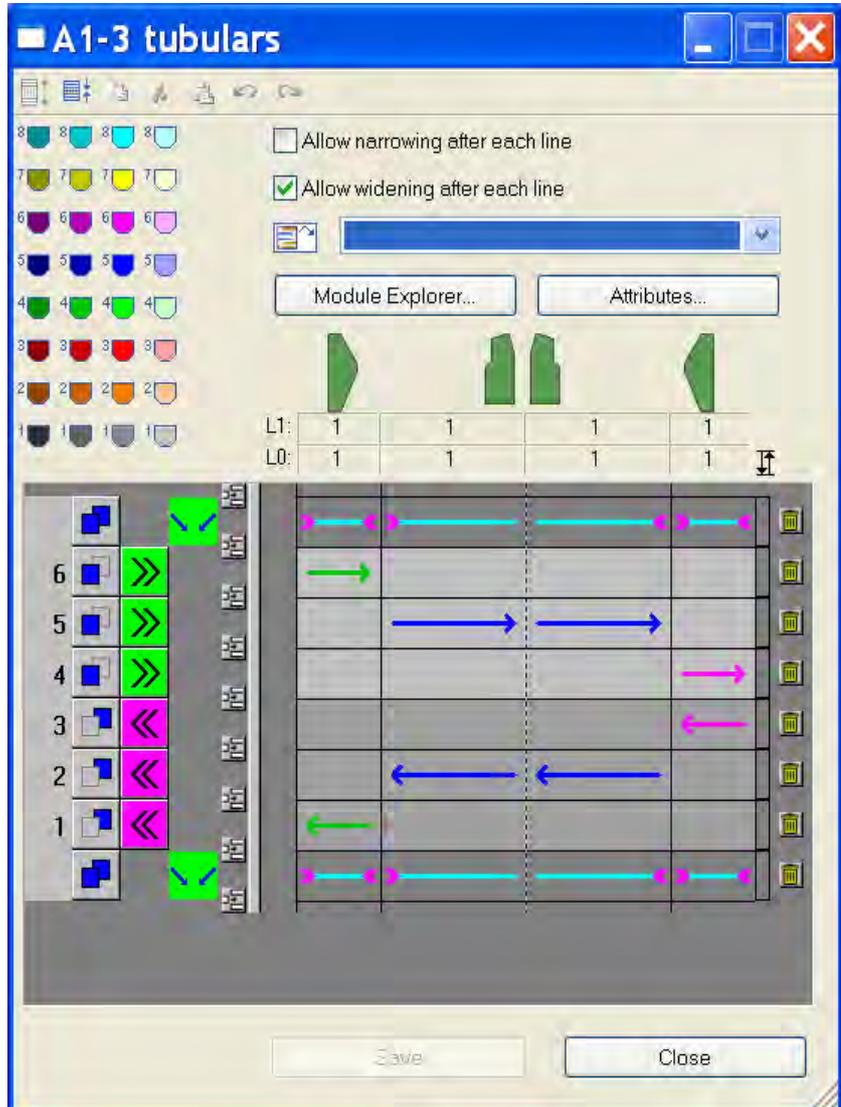
You have to adjust all k&w Arrangements determined by the Shapewizard to the Intarsia knitting sequence.

I. Adjust lokale k&w Arrangements:

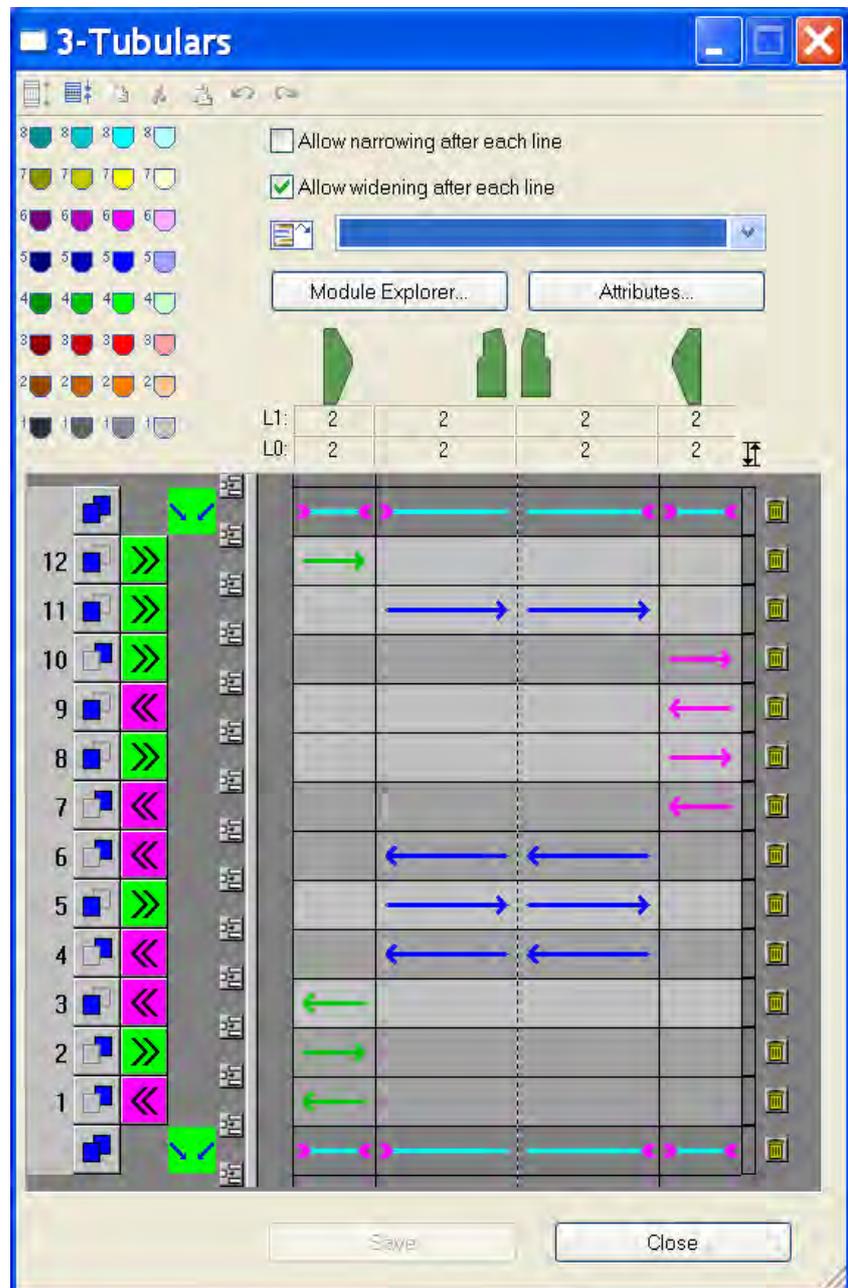
▷ Shape with its k&w Arrangements is loaded in the "Symbol View [Basic]".

- 1) Switch the presentation in the Symbol View with  or .
- 2) Toggle on the  control column.
⇒ The determined k&w Arrangements are displayed.
- 3) Copy the desired Stoll Standard k&w Arrangements.
- 4) Open the copy of the "A1-3 tubulars" k&w Arrangement by double click.

Example: "A1-3 tubulars"

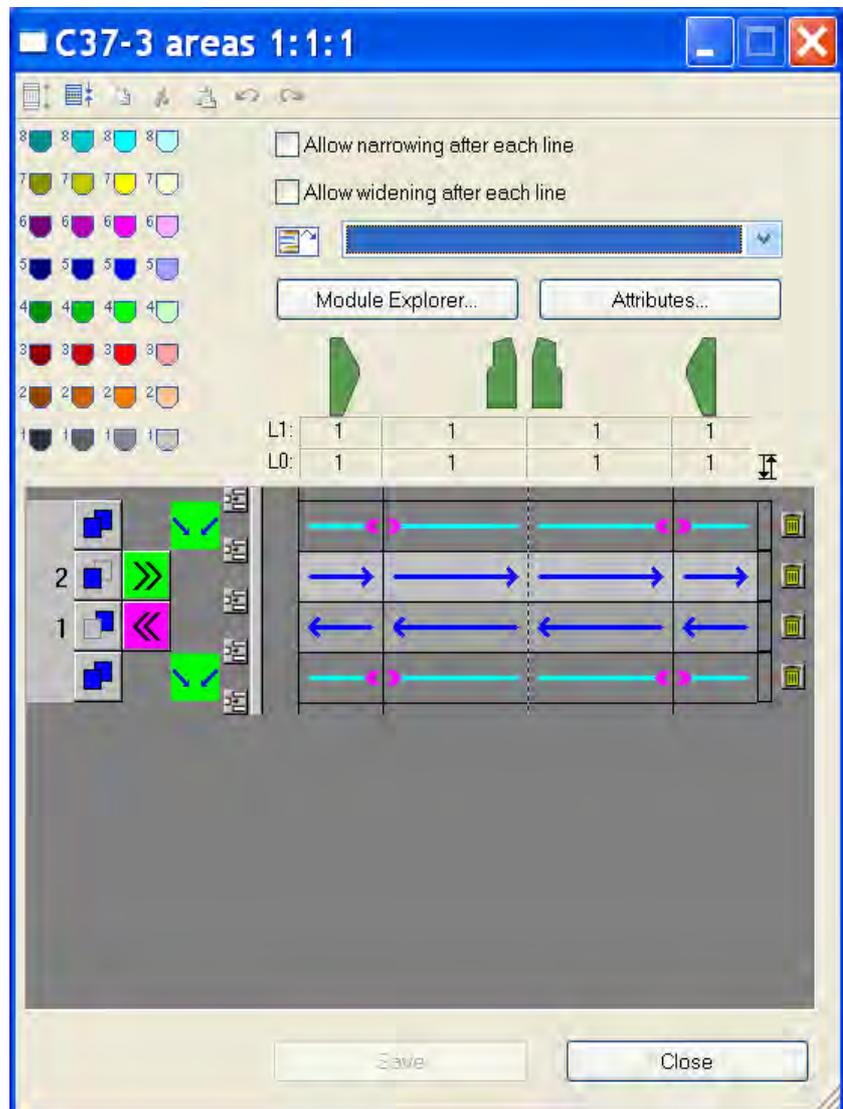


- 5) Modify it according to the desired Intarsia knitting sequence:

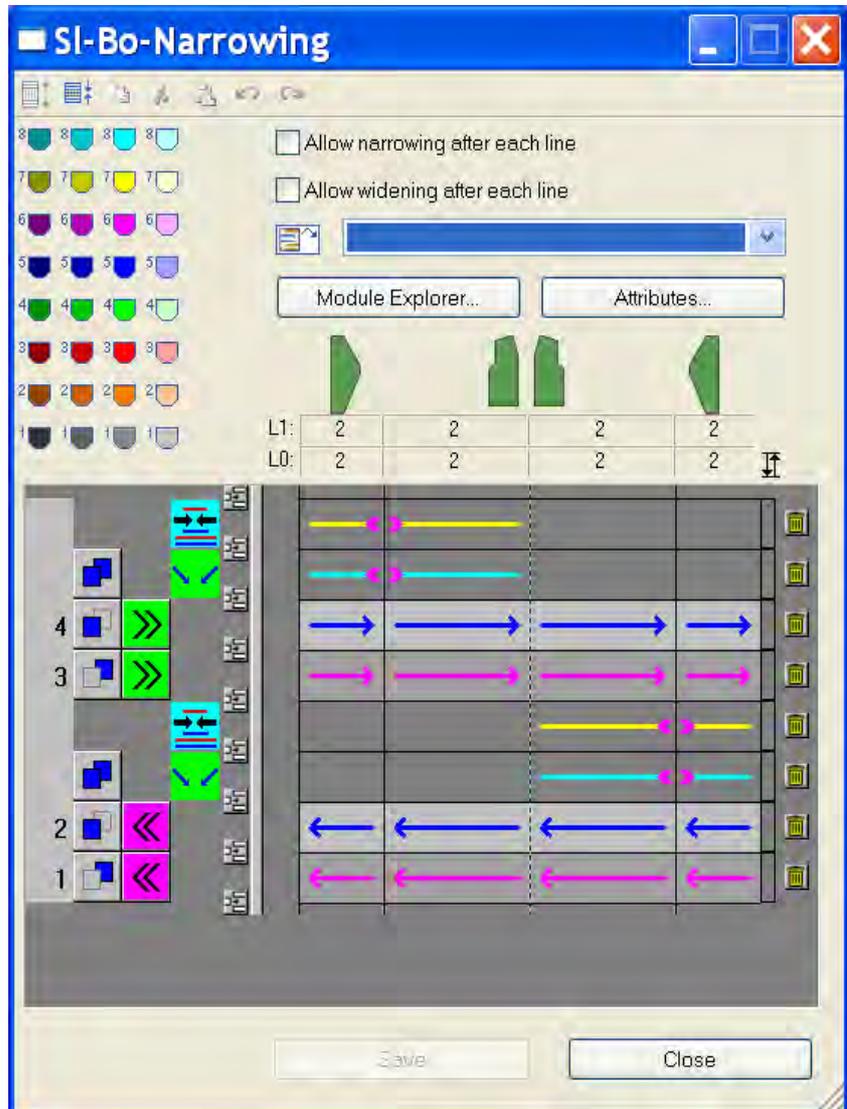


- 6) Copy the "C37-3 areas 1:1:1" k&w Arrangements and open them by double clicking.

Example: "C37-3 areas 1:1:1"



7) Modify it according to the desired Intarsia knitting sequence:



- 8) Copy and modify all the other k&w Arrangements following the same procedure.
- "A5-2 tubulars"
 - "B1-Type1 (no connection L0-L1)"
 - "C11-3 areas 1:1:1 with gore (L0)"



You can name the k&w Arrangements as you wish. These names will be used when determine the Color Arrangements:

Example:

k&w Arrangement: "A1-3 tubulars" results in the Color Arrangement: "CA_A1-3 tubulars"

- 9) Overwrite all k&w Arrangements from the shape with the "X Standard" k&w Arrangement.
- 10) Draw in the modified k&w Arrangements in the corresponding rows manually.

25.7 Calculate Color Arrangements

Calculate Color Arrangements based on the modified k&w Arrangements:

1) Open the Shape View with .

- or -

➔ Switch the "Symbol View" with  into the **Display Pattern Cut-out** k&w presentation.

2) Toggle on control columns:

- k&w Arrangement with 
- Color Arrangements with 



The k&w Arrangements in use are represented color coded in the  control column.

3) Select the rows from the start upto the end of the front (without collar) in the row selection bar .

4) Place the cursor in the  control column and call up the context menu.

5) Select "Allocate a Color Arrangement from the k&w Arrangement".

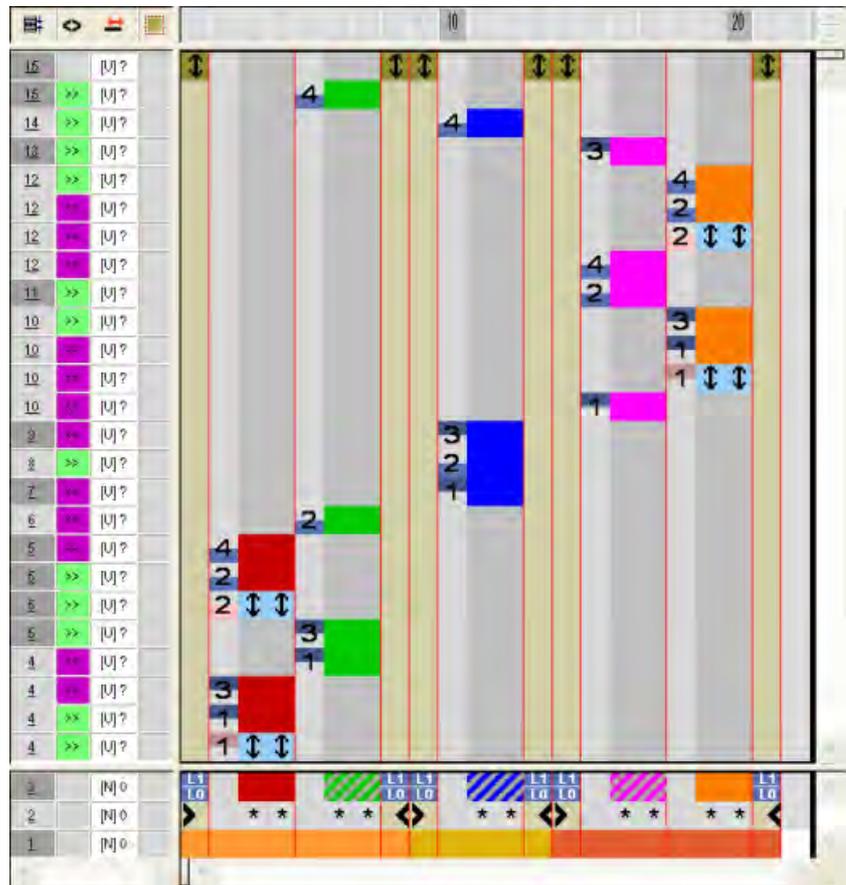
⇒ Color Arrangements will be generated based on the k&w Arrangements in use. They are represented color coded in the  control column.

- The CA calculated based on the k&w Arrangements are displayed in the "Modules" toolbar on the "local Color Arrangements" tab .
- The k&w Arrangements in use are displayed in the "Modules" toolbar on the "local k&w Arrangements" tab .
- CA are coupled to the original k&w Arrangement and named in the "k&w Arrangement Editor".

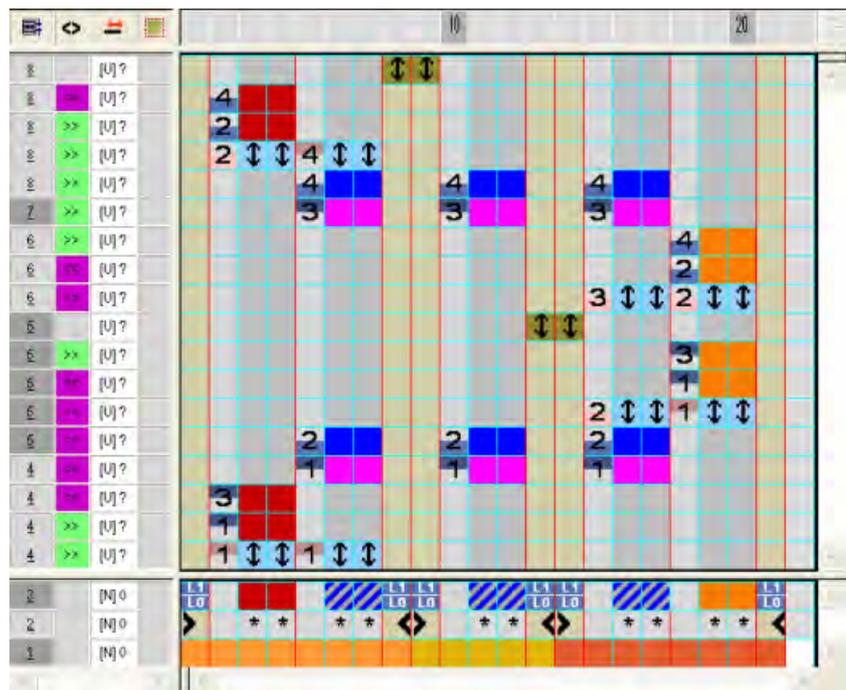
6) Delete the selection with .

7) Adjust the CA according to the desired Intarsia knitting cycle.

Example: CA_A1-3 tubulars



Example: CA_C37-3 areas 1:1:1



- 8) Have Color Arrangements allocated from all the other k&w Arrangements and modify them.
 - "A5-2 tubulars"
 - "B1-Type1 (no connection L0-L1)"
 - "C11-3 areas 1:1:1 with gore (L0)"

25.8 Cut-out shape

Cut-out k&w-shape of the basic pattern:



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Cut out the shape with  in the "Steps of Processing" toolbar.
⇒ The "k&w Options for Cut out" dialog box appears.



You can not make all of the settings if you repeat the Cutting out step of processing. These settings are already with the first cutting out.

- 2) Confirm the dialog box with "OK".
⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm the settings with "OK".
⇒ The k&w start is inserted as writeprotected area within shape and the k&w Arrangements are displayed with the corresponding yarn carrier colors.

25.9 Complete the pattern

Complete the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The binding off module is inserted.
- 2) Start the technical processing with .
⇒ The query "Generate MC Program" appears.
- 3) Confirm the query with "OK".
- 4) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
- or -
➔ Start the "Sintral Check" with the  button.

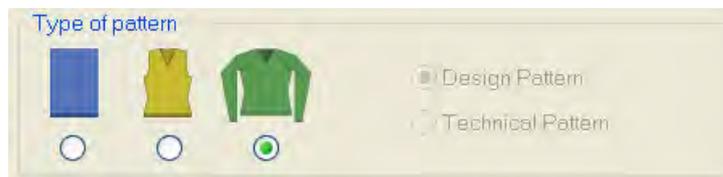
26 Shapewizard: Saddle Shoulder with Pockets

| | |
|---|--|
|  | |
| Pattern name | Sattelschulter |
| Pattern size: | Width: 250 Height: 250 |
| Machine type: | CMS 822 k&w |
| Gauge: | E 6.2 |
| Start: | 2x2 |
| Basic pattern: | Jersey |
| Knitting technique | knit and wear |
| Description of pattern: | Pullover with saddle shoulder and pockets in the front |

26.1 Generate Pattern without Shape

Generate basic pattern for knit and wear:

- 1) Click the  icon.
- 2) Enter a pattern name.
- 3) Select machine.
- 4) Select k&w pattern type.



- 5) Enter height and width of the pattern field.
Width: 250
Height: 250



With k&w the size of the pattern field is automatically doubled in height and width.

- 6) Select the "Jersey" binding for the basic pattern via the selection list.
 - 7) Confirm the settings with "Generate Design Pattern".
- ⇒ "Symbol View [Basic]" in k&w presentation appears.

26.2 Create shape: Saddle Shoulder with Pockets

I. Generate a front and back in the "Shape Editor":

- 1) Open the shape editor via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function | Group | Comme |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|-------|-------|
| 1 | | 0 | -52 | 0 | -52 | 1 | 0 | 0 | | | Basis | 0 | |
| 2 | | 48 | 4 | 12 | 1 | 4 | 0 | 0 | 4 | 0 | Narrowing | 0 | |
| 3 | | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | 0 | | 0 | |
| 4 | | 32 | -4 | 8 | -1 | 4 | 0 | 0 | 1 | 0 | Widening | 0 | |
| 5 | | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | 0 | | 0 | |
| 6 | | 4 | 4 | 1 | 1 | 4 | 0 | 0 | | 0 | Narrowing | 0 | * |
| 7 | | 8 | 8 | 2 | 2 | 4 | 0 | 0 | 3 | 0 | Narrowing | 0 | |
| 8 | | 32 | 0 | 32 | 0 | 1 | 0 | 0 | | 0 | | 0 | |
| 9 | ✓ | 28 | 22 | 0 | 0 | 0 | 0 | 0 | | 0 | Narrowing | 0 | * |
| 10 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | 0 | | 0 | |
| 11 | | 0 | 18 | 0 | 18 | 1 | 0 | 0 | | | | 0 | |

| Line Editor Line 9 left | | | | | | |
|-------------------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 28 | 22 | | | |
| 1 | 0 | 2 | 1 | 6 | 0 | 0 |
| 1 | 0 | 2 | 2 | 8 | 0 | 0 |



Line 6

4 stitches are bind-off in a simulated way in this edge (no.6).

- 7) Select **k&w-Do not knit** for the edge (no.9) in the **front only** under "Function" in the "Connections" tab .
- ⇒ **Result:** The saddle shoulder tilts more into the front.
- 8) Allocate the desired attributes "Widening" and "Narrowing" to the edges under "Function".

- 9) Allocate the **Narrowing** function to the shoulder edge (A) under "Function" in the "General" tab.

| | | |
|---------------|-------------------|------------------------------------|
| Setting | | |
| Line 9 | | |
| Narrowing | Fade-out width | 0 |
| | Narrowing width | 0 |
| | Type of narrowing | Perform narrowing in sleeve |



Generate a shape for the back with the same values as for the front.

Exception: The attribute **Do not knit** will **not** be allocated to the edge (no.9)

II. Insert the neck gore element in the front:

- 1) Open the **Raglan Front** shape.
- 2) Generate a new element in the "Shape Editor" with .
- 3) Select the **Gore** entry in the "Type" section list.
- 4) Specify the coordinates for the neck gore.

Neck gore in the front

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function | Group | Comm |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|-------|------|
| 1 | | 0 | -8 | 0 | -8 | 1 | 0 | 0 | | 0 | | 0 | |
| 2 | | 12 | -12 | 2 | -2 | 6 | 0 | 0 | | 0 | | 0 | |
| 3 | | 0 | 18 | 0 | 18 | 1 | 0 | 0 | | | | 0 | |

- 5) Specify the distance to the "end line":

Example: 32



- 6) Save the shape in the directory created beforehand with "File" / "Save" or "Save As".



Do not connect the gore element to the end line.

III. Generate the element for the sleeve in the "Shape Editor":

- 1) Open the shape editor via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
- 2) Select the **k&w Sleeve** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values in the table.

Sleeve

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function | Group | Com |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|-----------|-------|-----|
| 1 | | 0 | -30 | 0 | -30 | 1 | 0 | 0 | | | Basis | 0 | |
| 2 | / | 104 | -10 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | Widening | 0 | |
| 3 | | 6 | 0 | 6 | 0 | 1 | 0 | 0 | | | | 0 | |
| 4 | | 4 | 0 | 4 | 0 | 1 | 0 | 0 | | | Narrowing | 0 | |
| 5 | ✓ | 40 | 30 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | Narrowing | 0 | |
| 6 | | 28 | 0 | 28 | 0 | 1 | 0 | 0 | | 2 | Narrowing | 0 | |
| 7 | | 2 | 0 | 2 | 0 | 1 | 0 | 0 | | 2 | | 0 | |
| 8 | | 0 | 10 | 0 | 10 | 1 | 0 | 0 | | | | 0 | |

| Line 5 | | | | | | |
|----------------|-------|--------------|-------------|--------|-----------|-----------|
| Factor Grouped | Group | Height Steps | Width Steps | Factor | Width --- | Width \\\ |
| | | 40 | 30 | | | |
| 10 | 1 | 2 | 1 | 1 | 4 | 0 |
| 0 | 1 | 2 | 1 | 1 | 4 | 0 |

- 4) Allocate the **Narrowing** function to the edge (no.4) under "Function" in the "General" tab.
- 5) Activate Narrow **entire width of sleeve** in the "Narrowing" tab.
- 6) Allocate the **Narrowing** function to the edge (no.5) under "Function" in the "General" tab.
- 7) Allocate the following attributes in the "Narrowing" and "Widening" tabs.

| Setting | | |
|------------------|-------------------|--|
| Line 5 | | |
| Narrowing | Fade-out width | 0 |
| | Narrowing width | Narrow entire width of sleeve |
| | Type of narrowing | Sleeve underneath Sleeve underneath Layers apart Sleeve above Sleeve above Layers apart |

IV. Generate the element for the collar in the "Shape Editor":

- 1) Open the shape editor via "Shape" / "Generate/Edit Shape...".
- 2) Select the **k&w collar** entry in the "Type" selection menu under "General shape data".
- 3) Enter the values for the collar in the table under "Left lines":

Front of Collar / Back of Collar

| No. | Lines Editor | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width \\\ | Function | Group | Comm |
|-----|--------------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|-------|------|
| 1 | | 0 | -20 | 0 | -20 | 1 | 0 | 0 | | | Basis | 0 | |
| 2 | | 20 | 0 | 20 | 0 | 1 | 0 | 0 | | 0 | | 0 | |
| 3 | | 0 | 20 | 0 | 20 | 1 | 0 | 0 | | | Bind-off | 0 | |

| | | |
|-----------------|------------------|--------------------------|
| Adjustments | | |
| Line 1-3 | | |
| Fade out | No fading-out | |
| Line 3 | | |
| Binding-off | Binding-off type | Neckline Fast cut-out |

- 4) Allocate **bind-off** to the end line under "Function" in the "General" tab.
- 5) Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".

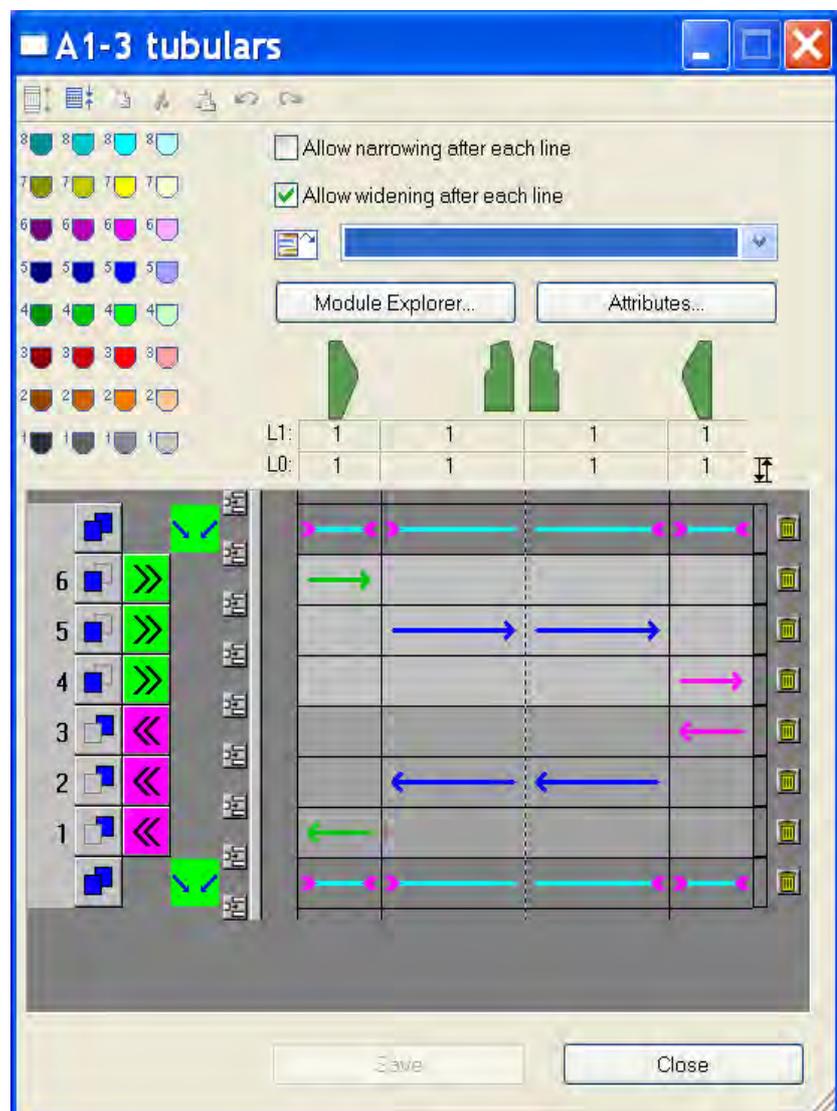


You have to save all shape elements in the same directory.

26.3 Modify the Stoll k&w Arrangement

Generate a k&w Arrangement of your own:

- 1) Call up the "Module" / "Module Explorer of Database..." menu.
- 2) Open the "k&w Arrangements" / "Stoll" / "3 Tubulars" / "without opening" / "without gore" module group.
- 3) Copy the "A1-3 tubulars" k&w Arrangement.



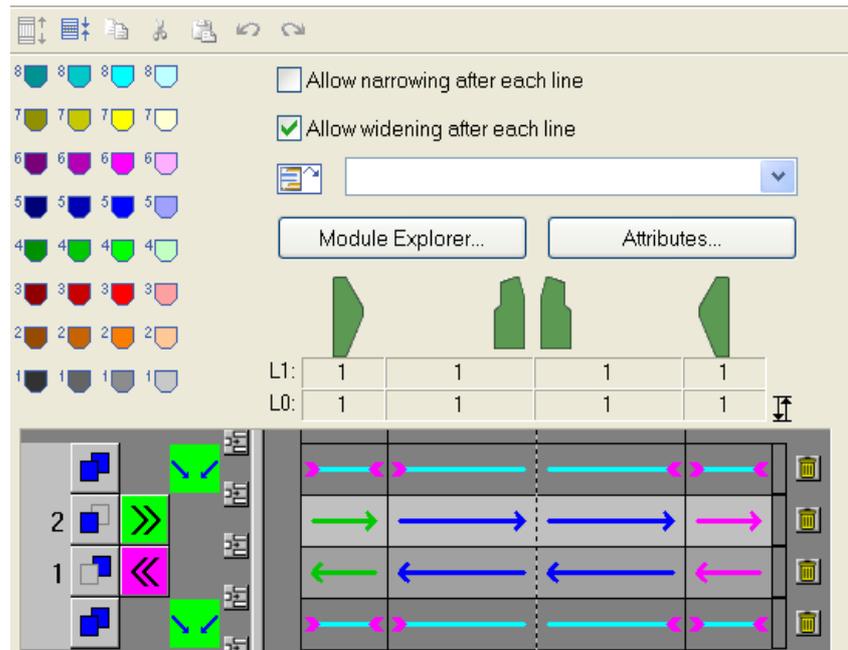
- 4) Double click the copy to open it.
- ⇒ Call up the "Properties of: ..." appears.
- 5) Name the module under "Group Name".
- 6) Define a color under "Module color" eine Farbe definieren.

7) Modify the k&w Arrangement:

⇒ No row will be displayed expanded when the k&w Arrangement is inserted due to the change from **Intarsia knitting cycle** to **Knitting in One System**.

This simplifies drawing in the pocket.

Name: My 3-tubulars-optimized



8) Call up the "k&w Arrangement Attributes" dialog box and activate "k&w Arrangement usable by the Shapewizard".

⇒ k&w Arrangement will be used by the Shapewizard.

9) Close the dialog box.

⇒ The k&w Arrangement is saved.

10) Save the modified k&w Arrangement in the "k&w Arrangements" / "Stoll" / "3 Tubulars" / "without opening" / "without gore" module group of the Module Explorer of Database.

⇒ The k&w Arrangement generated by you will be preferred by the Shapewizard as it is saved in the "Own" module group.

26.4 Shapewizard: Load Shape Elements

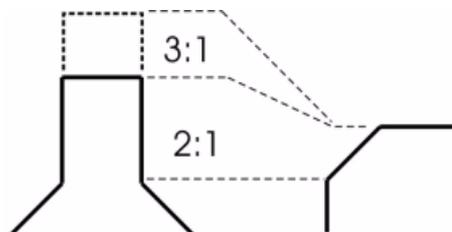
Load shape elements in the "Shapewizard":

Combine the shapes front, back, sleeve and collar in the "Shapewizard" to the **Saddle shoulder with pockets** .kaw shape.

- 1) Run the "Shapewizard" via the "k&w Shape" / "Shapewizard (k&w Put Together Shape)...".
- 2) Load a shape for the "Body front" element with the  button.
- 3) Select shape.
- 4) Load the shape elements for "Body Back", "Sleeve" and "Collar".
- 5) Select the knitting mode for the front and the back of the collar in the selection list.
- 6) Specify stitch cross-over (connection of body and sleeve).

| Setting | Use |
|-----------------------------------|---|
| "B1 Type 1 (no connection L0-L1)" | Continuous stitch rows in the front, i.e. no opening. No connection of both knitting layers. |

- 7) Activate the "Saddle shoulder with 2:1 compensation" checkbox.



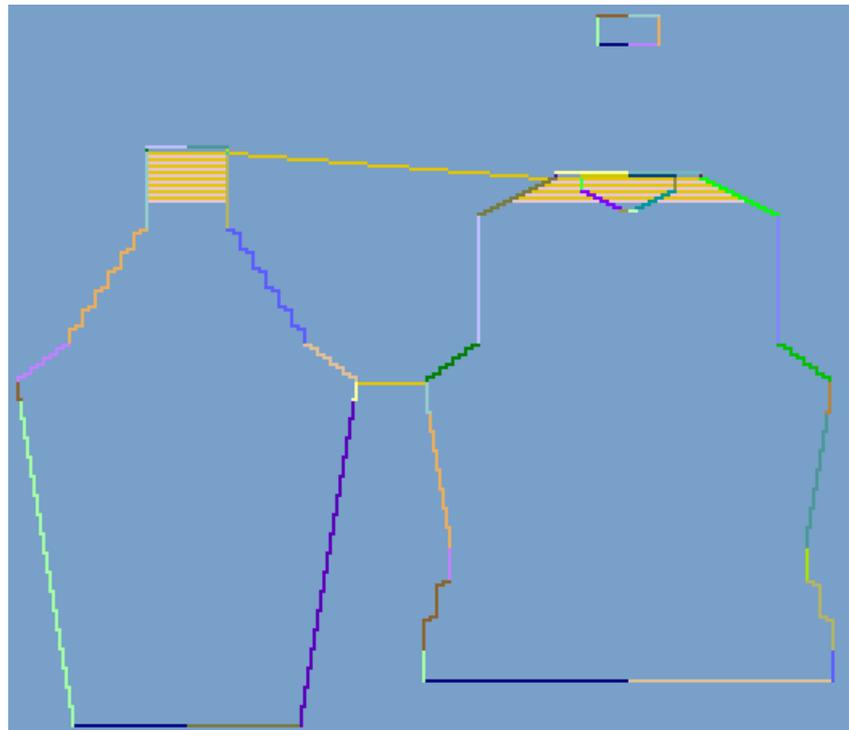
26.5 Shapewizard: Determine docking points and k&w Arrangements

I. Specify the docking points:

- 1) Open the "Docking Points" dialog box with  in the toolbar of the "Shapewizard".
- 2) Set the docking points for "sleeve-body".
- 3) Set the docking point "suspend body".



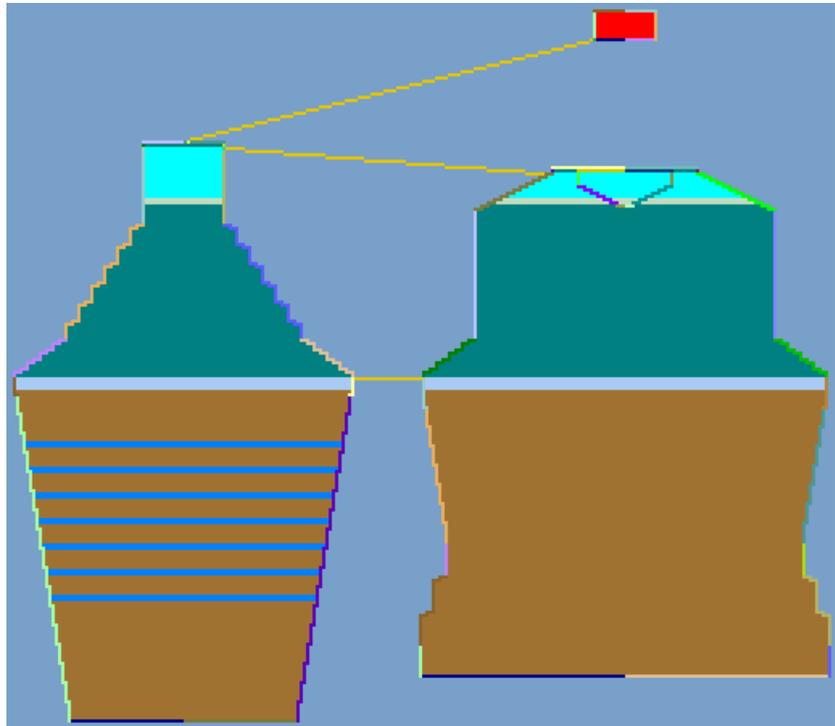
To create this connection, use the "Ctrl" key.



- 4) Set the docking point for the "Collar".
⇒ The width of the collar element is adjusted by the docking point.

II. Generate k&w shape:

- 1) Press the "Determine k&w Arrangements" button.



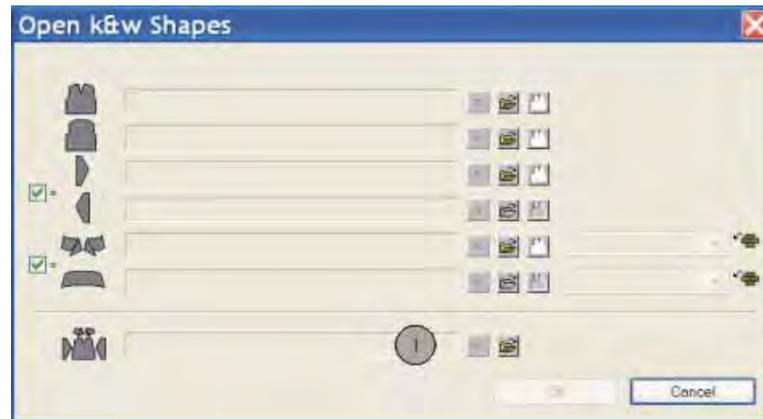
The determined k&w Arrangements can be deleted with the "Initialize" button.

- 2) Then save the shape as kaw file via the "File" / "Save" menu.
- 3) Exit the "Shapewizard".

26.6 Load and position the shape and draw-in the pockets

I. Lay k&w shape onto the basic pattern:

- 1) Call up the dialog box with the "Shape" / "Open and Position Shape..." menu.



- 2) Load the shape with the .kaw extension via  (1).
 - 3) Confirm the selection with "OK".
- ⇒ The shape elements will be layed on the basic motif in the "Symbol View [Basic]".

II. Position the shape:

- ▷ Shape with k&w Arrangements lies on the basic pattern.

- 1) Position the shape elements **Sleeve** and **Body** on the motif with  activated and the left mouse button pressed.
- ➔ Select the desired shape element with  active. Position the selected shape element with the arrow keys of the keyboard or of the "Tool Properties" toolbar.

III. Draw in areas for the pockets:

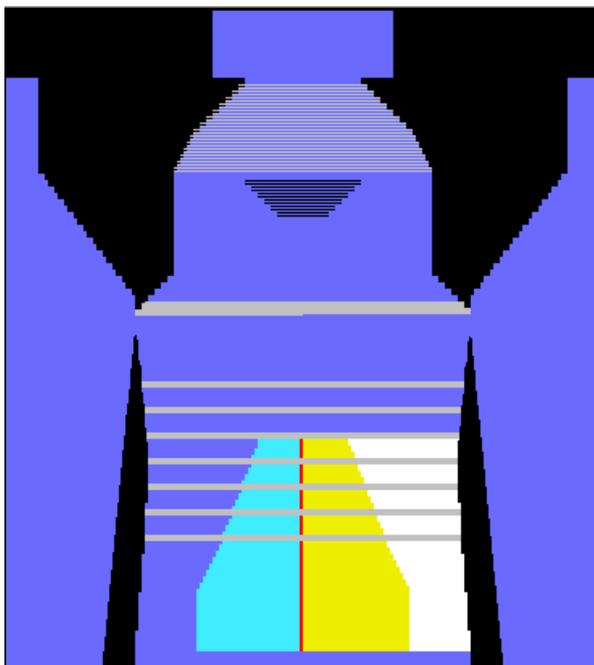
▷ The k&w shape generated in the "Shapewizard" lies on the basic pattern.

1) Open the "Shape View" with .

➔ Switch the "Symbol View" with  into the **Display Pattern Cut-out** k&w presentation.

2) Draw-in the pocket areas with five different yarn colors or different yarn carrier colors.

Draw in the colors on the front layer (L0) and the back layer (L1).



The pocket starts on the front layer (L0)

⇒ The different colors are used as search colors in the Color Arrangement.



Draw the narrowing steps in the area of the pocket mouth offset in order to knit the yarn carriers out of the narrowing area.

26.7 Calculate Color Arrangements

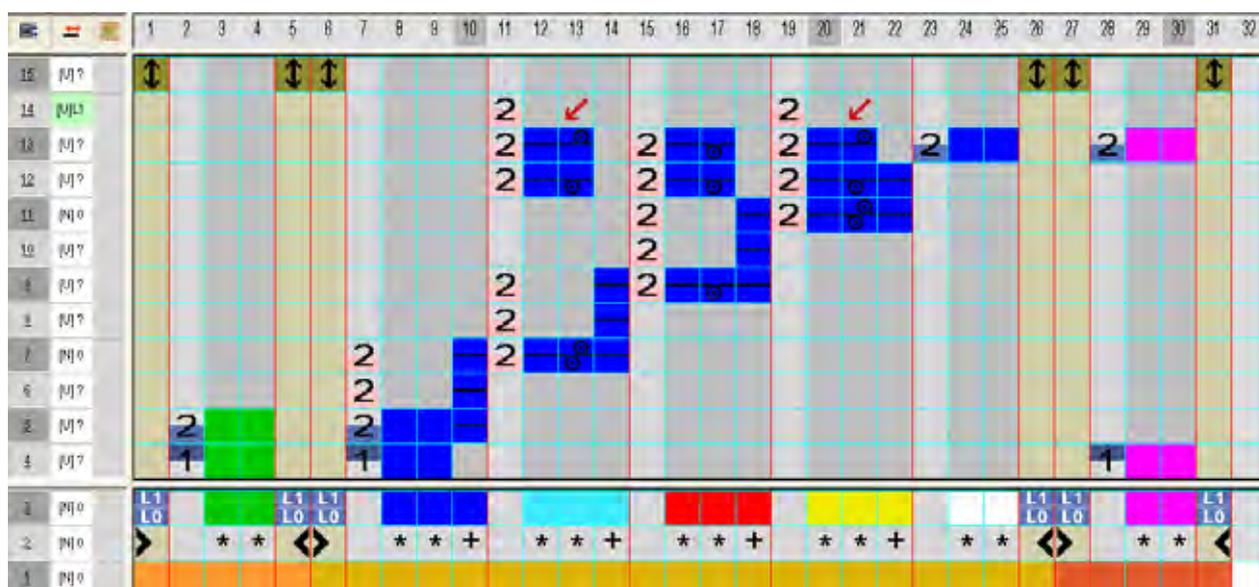
Calculate Color Arrangements based on the k&w Arrangements

- 1) Switch the "Symbol View" with  into the **Display Pattern Cut-out** k&w presentation.
- 2) Toggle on control columns:
 - k&w Arrangement with 
 - Color Arrangements with 

i The k&w Arrangements in use are represented color coded in the  control column.

- 3) Select two rows in the row selection column .
The first row in the basic pattern (L1) and the first row of the pocket (L0)
- 4) Place the cursor in the  control column and call up the context menu.
- 5) Select "Allocate a Color Arrangement from the k&w Arrangement".
⇒ Color Arrangements will be generated based on the k&w Arrangements in use. They are represented color coded in the  control column.
- 6) Open and edit the Color Arrangement by double click.

CA for the start of the pocket



- 7) Close and save the modified Color Arrangement with .
- 8) Enter the Color Arrangement in the control column.
- 9) Select the following two rows.
- 10) Place the cursor in the  control column and call up the context menu.
- 11) Select "Allocate a Color Arrangement from the k&w Arrangement".
- 12) Open and edit the Color Arrangement by double click.

CA for the pocket lining

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|---------|----|---|---|---|----|----|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Control | ↕ | | | | ↕ | ↕ | | | | | | | | | | | | | | | | ↕ | ↕ | | | | | ↕ |
| 4 | | | | | | | | | | 4 | ✓ | 4 | ✓ | 4 | ✓ | | | | | | | | | | | | | |
| 4 | | 4 | | | | | | 4 | | 4 | ⊗ | 4 | ⊗ | 4 | ⊗ | 4 | | | | | | | | | 4 | | | |
| 3 | | | | | | | | | | 4 | ↗ | 4 | ↗ | 4 | ↗ | | | | | | | | | | | | | |
| 3 | | 3 | | | | | | 3 | | 3 | ⊗ | 3 | ⊗ | 3 | ⊗ | 3 | | | | | | | | | 3 | | | |
| 2 | | | | | | | | | | 2 | ✓ | 2 | ✓ | 2 | ✓ | | | | | | | | | | | | | |
| 2 | | | | | | | | | | 2 | ⊗ | 2 | ⊗ | 2 | ⊗ | 2 | | | | | | | | | | | | |
| 2 | | | | | | | | | | 2 | ⊗ | 2 | ⊗ | 2 | ⊗ | 2 | | | | | | | | | | | | |
| 2 | | 2 | | | | | | 2 | | 2 | ⊗ | 2 | ⊗ | 2 | ⊗ | | | | | | | | | | | | | |
| 2 | | | | | | | | | | 2 | ↗ | 2 | ↗ | 2 | ↗ | | | | | | | | | | | | | |
| 1 | | | | | | | | | | 1 | ⊗ | 1 | ⊗ | 1 | ⊗ | 1 | | | | | | | | | | | | |
| 1 | | | | | | | | | | 1 | ⊗ | 1 | ⊗ | 1 | ⊗ | 1 | | | | | | | | | | | | |
| 1 | | 1 | | | | | | 1 | | 1 | ⊗ | 1 | ⊗ | 1 | ⊗ | | | | | | | | | | | | | |
| Control | L1 | | | | L1 | L1 | | | | | | | | | | | | | | | | | | | | | | |
| Control | LO | | | | LO | LO | | | | | | | | | | | | | | | | | | | | | | |
| Control | > | * | * | | < | < | | | * | * | | * | * | | * | * | | * | * | | * | * | | < | * | * | | < |
| Control | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

- 13) Close and save the modified Color Arrangement with .
- 14) Enter the Color Arrangement in the control column.
- 15) Generate the next three Color Arrangements following the same procedure:
 - Color Arrangement for transition from the pocket lining to the pocket mouth
 - Pocket mouth
 - End of the pocket

26.8 Complete the pattern

Complete the pattern:

- 1) Start the technical processing with the  icon.
⇒ The query "Generate MC Program" appears.
- 2) Confirm the query with "OK".
- 3) Call-up the "Sintral Check" via "MC program " / " Conduct Sintral Check..." menu.

27 TC-T: Narrowing, widening and binding-off types

When knitting knit and wear articles on a CMS with additional beds, all needles are used.

Special modules for pattern generation are required for this reason.

27.1 TC-T: Narrowing types

Use different narrowing types:

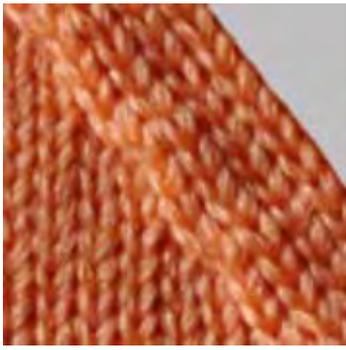
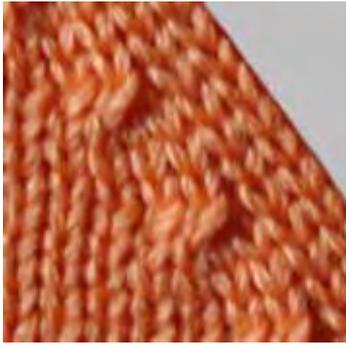
- 1) Open the "Shape Editor".



With the shape elements, the "k&w All Needles" must be active.

- 2) Allocate the desired narrowing type and narrowing width to the **Narrowing edges** under "Function".

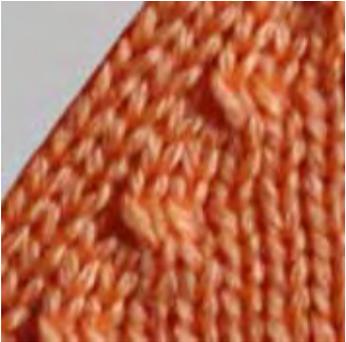
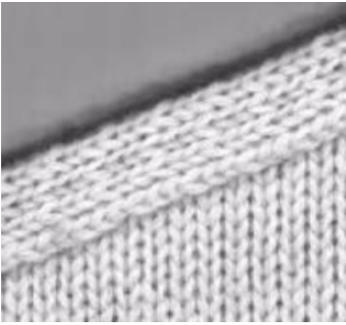
I. Narrowing types for the sleeve:

| Designation | Function | Presentation |
|----------------------------|---|---|
| "Sleeve TC-T" | | |
| "Sleeve above 2 TC-T" | Narrowing stitches lie on the basic stitches Narrowing is carried out in 2 strokes |  |
| "Sleeve above 4 TC-T" | Narrowing stitches lie on the basic stitches Narrowing is carried out in 4 strokes | |
| "Sleeve underneath TC-T" | Narrowing stitches lie under the basic stitches |  |
| "Sleeve above S0 TC-T" | Narrowing stitches lie on the basic stitches | |
| "Remaining Narrowing TC-T" | Special narrowing cycle for shapes with inserted sleeve, in various ratios of stitch numbers to stitch rows | |



The designation above or underneath always refers to the narrowing stitches.
The narrowing modules contain **layer-separated narrowing**.

II. Narrowing type for the body:

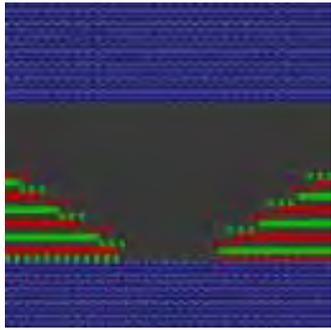
| Designation | Function | Presentation |
|-----------------------------------|--|---|
| "Body" | | |
| "Body underneath 2 TC-T" | Narrowing stitches lie under the basic stitches. Narrowing is carried out in 2 strokes |  |
| "Body underneath 4 TC-T" | Narrowing stitches lie under the basic stitches Narrowing is carried out in 4 strokes. | |
| "Body underneath without S0 TC-T" | Narrowing stitches lie under the basic stitches The narrowing is carried out without an empty stroke. | |
| "Shoulder TC-T" | In the front and back the shoulder is narrowed. The shoulder area will not be gored. |  |

III. Narrowing type for the neck:

| Designation | Function | Presentation |
|--------------------------|--|---|
| "Neckline" | | |
| "V-neck underneath TC-T" | Narrowing stitches lie under the basic stitches. |  |

IV. Multi-step narrowing / Doubling:

- 1) Open the Shape Editor.
- 2) Open the attributes of a narrowing edge via "Function".
- 3) Activate "Multi-step narrowing" in the "Narrowing" tab.

| Designation | Use | Presentation | Function |
|------------------------------|---------------------------------------|--|---|
| "TC-T Fair Isle k&w" | Pattern with Fair Isle technique |  | Stitches will be transferred several times. Small rackings are necessary. Use with TC-T pattern as all needles are allocated and no large rackings are possible. |
| "TC-T Doubling 1x1 fine k&w" | Doubling after the k&w start 1x1 fine | | |
| "TC-T Doubling 2x1 k&w" | Doubling after the k&w start 2x1 | | |

27.2 TC-T: Widening types

Use different widening types:

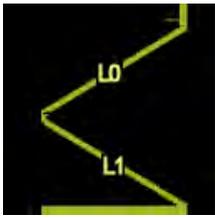
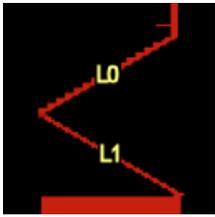
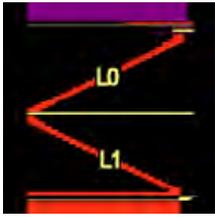
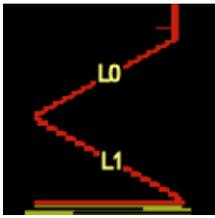
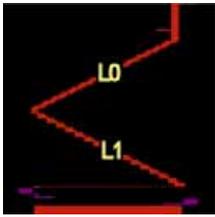
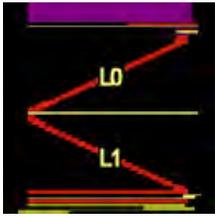
If a **Widening** edge line is present in the shape, you can specify the type of widening.

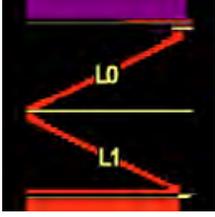
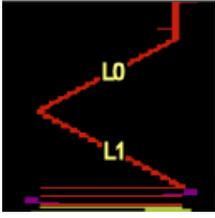
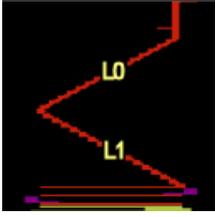
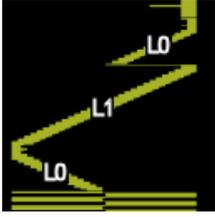
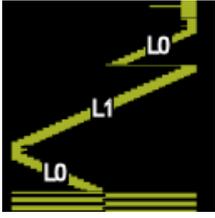
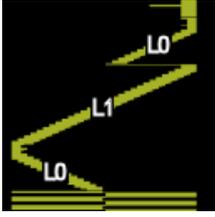
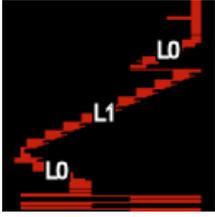
- 1) Open the Shape Editor.
- 2) Allocate the desired widening type and widening width to the **widening edges** under "Function".

| Widening body/sleeve | |
|--------------------------------|--|
| Designation | Function |
| No module | No special technique is used |
| TC-T Standard | Alternating widening technique. Widening of layer 0 and layer 1. |
| TC-T Closing-Stitch | Widening with plugging technique. |
| TC-T Standard Edge open | Alternating widening technique. Widening of layer 0 and layer 1, but with separated layers. |

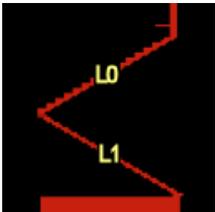
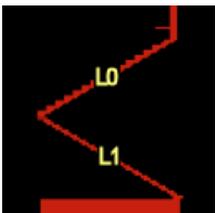
27.3 TC-T: Binding-off types

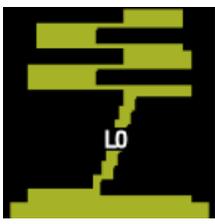
Different binding-off types:

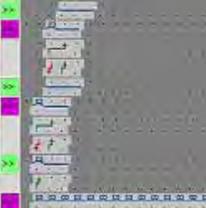
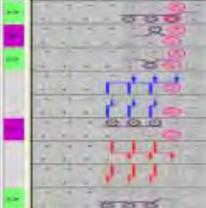
| Modules | Schematic cycle | Use |
|------------------------------------|---|---|
| "TC-T neckline fine ZB" |  | <p>Closed neckline knit with all needles. Binding-off with the additional beds.</p>  <p>Example: Turtleneck collar</p> |
| "TC-T neckline fine 2x1 ZB" |  | <p>Closed neckline knit with all needles as 2x1 rib. Binding-off with the additional beds.</p> |
| "TC-T neckline fine 2x1 NB" |  | <p>Closed neckline knit with all needles as 2x1 rib. Binding-off with the needle beds.</p> |
| "TC-T Neckline Collar 1x1 fine ZB" |  | <p>The binding off module contains "Collar 1x1_fine" with cycle repetition and binding-off of the neckline with the additional beds.</p> |
| "TC-T Neckline fine 2x1 Fixing ZB" |  | <p>Closed neckline knit with all needles as 2x1 rib. Binding-off with the additional beds. Before the binding-off stitches are formed with protection yarn at the left and right outer edge of the shape in order to insure a secure binding-off.</p> |
| "TC-T Neckline Collar 1x1 fine NB" |  | <p>The binding off module contains "Collar 1x1_fine" with cycle repetition and binding-off of the neckline with the needle beds.</p> |

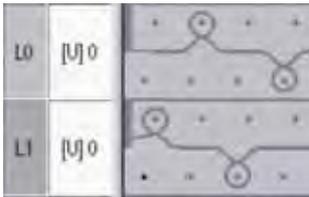
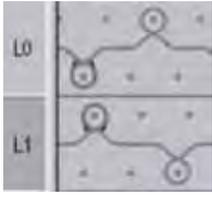
| Modules | Schematic cycle | Use |
|---|---|---|
| "TC-T Neckline Collar 2x1 NB" |  | The binding off module contains "Collar 2x1" with cycle repetition and binding-off of the neckline with the needle beds. |
| "TC-T Neckline Collar 1x1 fine Fixing ZB" |  | The binding off module contains "Collar 1x1_fine" with cycle repetition and binding-off of the neckline with the additional beds. Before the binding-off stitches are formed with protection yarn at the left and right outer edge of the shape in order to insure a secure binding-off. |
| "TC-T Neckline Collar 2x1 Fixing ZB" |  | The binding off module contains "Collar 2x1" with cycle repetition and binding-off of the neckline with the additional beds. Before the binding-off stitches are formed with protection yarn at the left and right outer edge of the shape in order to insure a secure binding-off. |
| "TC-T Neckline open L0 fine ZB" |  | Cut out with opening (e.g. V-neck) at the front layer knit with all needles. Binding-off with the additional beds. |
| "TC-T Neckline open L1 fine ZB" |  | Cut out with opening (e.g. V-neck) at the back layer knit with all needles. Binding-off with the additional beds. |
| "TC-T Neckline open L0+L1 fine ZB" |  | Cut out with opening (e.g. V-neck) at the front and back layer knit with all needles. Binding-off with the additional beds. |
| "TC-T Neckline open L0 2x1 ZB" |  | Cut out with opening (e.g. V-neck) at the front layer knit with all needles as 2x1 rib. Binding-off with the additional beds. |

| Modules | Schematic cycle | Use |
|---|-----------------|--|
| "TC-T Neckline open L1 2x1 ZB" | | Cut out with opening (e.g. V-neck) at the back layer knit with all needles as 2x1 rib. Binding-off with the additional beds. |
| "TC-T Neckline open L0+L1 2x1 ZB" | | Cut out with opening (e.g. V-neck) at the front and back layer knit with all needles as 2x1 rib. Binding-off with the additional beds. |
| "TC-T Neckline open L0 collar 1x1 fine ZB" | | Cut out with opening (e.g. V-neck) at the front layer and "Collar 1x1_fine" with cycle repetition. Binding-off with the additional beds. |
| "TC-T Neckline open L0+L1 collar 1x1 fine ZB" | | Cut out with opening (e.g. V-neck) at the front and back layer and collar 1x1_fine with cycle repetition. Binding-off with the additional beds. |
| "TC-T Neckline open L1 collar 1x1 fine ZB" | | Cut out with opening (e.g. V-neck) at L1 and "Collar 1x1_fine" with cycle repetition. Binding-off with the additional beds. |
| "TC-T Neckline open right fine ZB" | | Cut out with opening at the right side knit with all needles. Binding-off with the additional beds. |
| "TC-T Neckline open right 2x1 ZB" | | Cut out with opening at the right side knit as 2x1. Binding-off with the additional beds. |

| Modules | Schematic cycle | Use |
|--|---|--|
| "TC-T Neckline open right collar 1x1 fine ZB" | | Cut out with opening at the right side and "Collar 1x1_fine" with cycle repetition. Binding-off with the additional beds. |
| "TC-T Neckline open left fine ZB" |  | Cut out with opening at the left side knit with all needles. Binding-off with the additional beds. |
| "TC-T Neckline open left 2x1 ZB" |  | Cut out with opening at the left side knit as 2x1. Binding-off with the additional beds. |
| "TC-T Neckline open left collar 1x1 fine ZB" | | Cut out with opening at the left side and "Collar 1x1_fine" with cycle repetition. Binding-off with the additional beds. |
| "TC-T Neckline open left+right fine ZB" |  | Cut out with opening at the right and left side knit with all needles. Binding-off with the additional beds. |
| "TC-T Neckline open left+right 2x1 ZB" |  | Cut out with opening at the right and left side knit as 2x1. Binding-off with the additional beds. |
| "TC-T Neckline open left+right collar 1x1 fine ZB" | | Neckline with opening at the left + right side and "Collar 1x1_fine" with cycle repetition. Binding-off with the additional beds. |

| Modules | Schematic cycle | Use |
|---|---|---|
| "TC-T V-Neckline start L0 L1 fine ZB" |  | Neckline starting with more than two needles and having a basic pattern knit with all needles. Binding-off with the additional beds of the front layer, the back layer or both layers.  Example: Round neck |
| |  | Neckline starting with more than two needles and having a basic pattern knit with all needles. Binding-off with the additional beds of the front layer, the back layer or both layers.  Example: Cut-out with steps |
| "TC-T Cutout 2x1 protection rows" |  | Closed cut out knit as 2x1 rib with following protection rows. |
| "TC-T Cutout fine protection rows" |  | Closed cut out knit with all needles and with following protection rows. |
| "TC-T Cutout Collar 1x1 protection rows" |  | Closed cut out with collar knit as 1x1 fine and with following protection rows. |
| "TC-T Cutout open L0 fine protection rows" |  | Cut out at the front layer knit with all needles and with following protection rows. |
| "TC-T Cutout open L0 2x1 protection rows" |  | Cut out at the front layer knit as 2x1 and with following protection rows. |
| "TC-T Cutout open L0 collar 1x1 fine protection rows" |  | Cut out with opening and collar knit as 1x1 fine and with following protection rows. |

| Modules | Schematic cycle | Use |
|--------------------------|--|--|
| "TC-T Shoulder Type2 NB" |  | Binding-off the shoulder using the needle bed (wide shoulder seam) |
| "TC-T Shoulder Type1 NB" |  | Binding-off the shoulder using the needle bed (narrow shoulder seam) |
| "TCT Neck ZB" |  | Binding-off the neck of the back using the additional beds. |

| Terms / Abbreviations | Meaning | |
|------------------------|---|---|
| NB | Binding-off with draw thread on the needle beds. | |
| ZB | Binding-off without draw thread using the additional beds. | |
| fine | All needles knit - no ribs | |
| 1x1_fine | The 1x1 rib is not knit in 1x1 technique | |
| | 1x1 rib in 1x1 technique | 1x1_fine |
| |  |  |
| Open neckline | Neckline in the specified layer is open  Example: Open neckline _ ... _ L0 | |
| L0 | Front layer | |
| L1 | Back layer | |
| Fixing | Lateral binding with protection yarn before the binding-off | |
| Collar | Collar is part of the binding-off module including cycle repetition. | |
| Protection rows | End module with protection rows and without binding-off. The collar is linked. | |

28 Stamping out: raglan

| | | |
|---|--|-----|
|  | | |
| Pattern name: | Raglan | |
| Pattern size: | Width: | 250 |
| | Height: | 200 |
| Machine type: | CMS 822 k&w | |
| Gauge: | E 6.2 | |
| Start: | 1X1 - Rib | |
| Basic pattern: | Jersey | |
| Knitting technique | knit and wear | |
| Description of pattern: | k&w shape Raglan with <ul style="list-style-type: none"> ▪ Neck gore ▪ Gore in the body ▪ Gore in the body after the start | |

28.1 Create shape: raglan

I. Generate a front and back in the Shape Editor:

i You can create the shape elements in the ShapeSizer as well.

- 1) Open the shape editor via "Shape" / "Shape Editor (Generate or Edit Shapes)...".
- 2) Select a k&w ... entry under "General shape data".
- 3) Set "Input format" to **Stitches**.
- 4) Activate "mirrored" under "Elements".
- 5) Specify starting width.
- 6) Insert the entry field for edge lines with the  "Add new line at end" button.
- 7) Open the table with "Left Lines" and enter the values for the front and the back.

Front / Back

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -200 | 0 | -60 | 0 | -60 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 100 | 16 | 30 | 5 | 6 | 1 | 5 | 0 | 0 | 0 | Narrowing |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 100 | -16 | 30 | -5 | 6 | -1 | 5 | 0 | 0 | 0 | Widening |
| 5 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 6 | | 200 | 100 | 60 | 30 | 2 | 1 | 30 | 0 | 0 | 0 | Narrowing |
| 7 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 8 | | 0 | 100 | 0 | 30 | 0 | 30 | 1 | 0 | 0 | 0 | |

- 8) Allocate the desired **k&w attributes** to the edges "Widening" and "Narrowing" under "Function".

i Generate a shape for the back with the same specifications as for the front.

II. Generate the element for sleeve in the Shape editor:

- 1) Open Shape Editor.
- 2) Generate a new shape / table for the sleeve using the  key.
- 3) Create table with values.

Sleeve

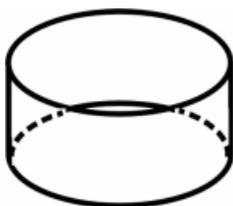
| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Group | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-------|-----------|
| 1 | | 0 | -93 | 0 | -28 | 0 | -28 | 1 | 0 | 0 | 0 | Basis |
| 2 | | 266 | -26 | 80 | -8 | 10 | -1 | 8 | 0 | 0 | 0 | Widening |
| 3 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | |
| 4 | | 200 | 100 | 60 | 30 | 2 | 1 | 30 | 0 | 0 | 0 | Narrowing |
| 5 | | 6 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | |
| 6 | | 0 | 20 | 0 | 5 | 0 | 5 | 1 | 0 | 0 | 0 | |

- 4) Allocate the desired **k&w attributes** to the edges "Widening" and "Narrowing" under "Function".

i After the last narrowing, at least two stitches must still be knit, otherwise the last narrowing will not be performed.

III. Generate the element for the collar in the Shape Editor:

Stand-up or turtleneck collar



- 1) Open Shape Editor.
- 2) Generate a new shape / table for the sleeve using the  key.
- 3) Create a table with values for front of collar + back of collar:

Front of Collar / Back of Collar

| No. | Lines Editor | Height mm | Width mm | Height Stitches | Width Stitches | Height Steps | Width Steps | Factor | Height Remainder | Width Remainder | Width --- | Width /// | Function |
|-----|--------------|-----------|----------|-----------------|----------------|--------------|-------------|--------|------------------|-----------------|-----------|-----------|----------|
| 1 | | 0 | -120 | 0 | -36 | 0 | -36 | 1 | 0 | 0 | | | Basis |
| 2 | | 33 | 0 | 10 | 0 | 10 | 0 | 1 | 0 | 0 | | 0 | |
| 3 | | 0 | 120 | 0 | 36 | 0 | 36 | 1 | 0 | 0 | | | Bind-off |

The width of the collar:

- is dependent on the cycle width of the module used in the collar 1x1, 2x2 etc.
- must be matched to the end width of front and back, sleeve and V-neck.

i If you change the width of the front or back, then you must adjust the front and back of the collar.

- 4) Allocate **bind-off** to the end line under "Function" in the "General" tab.

- 5) Allocate the single-jersey knitting mode in accordance with the collar shape "cut-out" or "fast cut-out".
- 6) Save the shapes in the directory created beforehand with "File"/"Save" or "Save As".



You have to save all shape elements in the same directory.

28.2 Generate Pattern without Shape

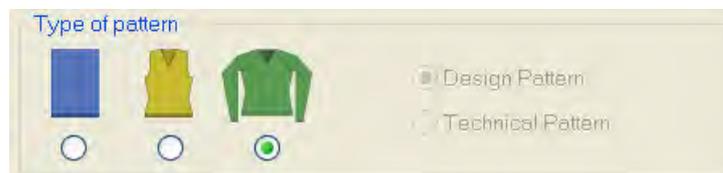
Generate knit and wear pattern:

- 1) Select "File" / "New" from the menu bar.

- or -

➔ Click the  icon.

- 2) Enter a pattern name.
- 3) Select machine.
- 4) Type of pattern: Select **k&w pattern** type.



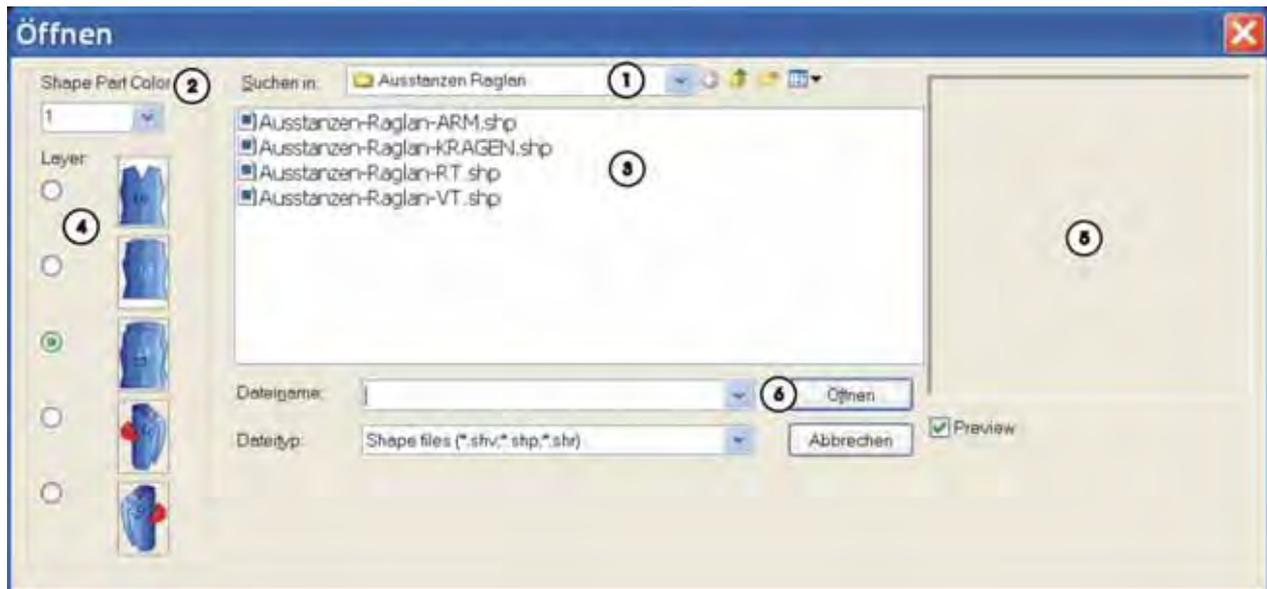
- 5) Enter height and width of the pattern field.
Width: 250
Height: 200
 - 6) Select "Jersey" for the basic pattern via the selection list.
 - 7) Confirm the settings with the "Generate Design Pattern" button.
- ⇒ Symbol View [Basic] in k&w presentation appears.

28.3 Load and position the shape elements

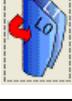
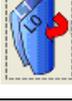
I. Open shape elements and position them on the basic pattern:

1) Call up the "Open" dialog box via the "Shape" / "Open and Position Shape (Stamp out *experimental*)..." menu.

⇒ The "Open" dialog box will be displayed.



| No. | Function |
|-----|---|
| 1 | Select the path of the folder (directory) with the shape elements |
| 2 | <p>Selection list with the shape part colors for defining the shape part when loading</p> <p>Use of the shape part color (Stoll default):</p> <ul style="list-style-type: none"> ▪ Shape part color 1 for the body ¹ ▪ Shape part color 2 for den left sleeve ² ▪ Shape part color 3 for den right sleeve ³ ▪ Shape part color 4 for the collar ⁴ <p>i: Select the shape part colors according to Stoll default to ensure that the shape part colors match the Color Arrangements in the Module Explorer of Database.</p> |
| 3 | List of the shape elements of the selected folder (directory) for selecting the element to be opened |

| No. | | Function |
|-----|---|--|
| 4 | | <p>The shape element selected in the list will be allocated to the activated layer</p> <p>i: Based on the specification under "General shape data" when generating the shape elements, the system detects the corresponding layer.</p> <p>Result: For the selected shape element with the k&w body front setting, L0 is selected automatically.</p>  |
| |   | <p>Position the shape element (one-layer element) on L0 Example: Body front</p> |
| |   | <p>Position the shape element (one-layer element) on L1 Example: Back of the body</p> |
| |   | <p>Position the shape element on L0 and L1.</p> <ul style="list-style-type: none"> Result: The first row of the shape element is placed on L0 and the second row on L1, etc. |
| |   | <p>Position the shape element (two-layer element) on L0 + L1 Example: Left sleeve</p> |
| |   | <p>Position the shape element (two-layer element) on L0 + L1 Example: Right sleeve</p> |
| 5 | <input checked="" type="checkbox"/> | Preview of the selected shape element |
| | <input type="checkbox"/> | No preview |
| 6 | | Open and position the selected shape element with the given specifications |



Positioning of the shape elements when opening

By default, the shape elements are positioned always from left to right on the basic pattern.
Therefore it is useful to load the elements in the sleeve-body-sleeve order.
When positioning the first shape element, the basic pattern becomes **outside shape**.

2) Select the first shape element in the list.

Example: left sleeve

3) Check the shape part color and change it if necessary.

4) Check layer allocation and adapt if necessary.

5) Click "Open".

⇒ The selected shape element is positioned on the specified layer in the allocated shape part color in the basic pattern.



Open all the other shape elements following the same procedure.

Result:

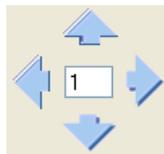
-  not active
-  active



II. Move shape elements:

▷ The symbols  and/or  are active.

- 1) Select the  icon in the "Drawing Tools" toolbar.
- 2) Select the **body** shape element with "LMB" and position it in the height according to the sleeves (sleeve-body connection).
- 3) Select the **Right sleeve** shape element.
- 4) Enter **24** in the "Tool properties" dialog box and select both layers.
- 5) Move it to the right with the arrow button.



⇒ The shape element is shifted to the right by 24 columns.

- 6) Select the **Body** shape element.
- 7) Enter **12** in the "Tool Properties" toolbar.
- 8) Move it to the right with the arrow button.

⇒ The Body shape element is shifted to the right by 12 columns.



Distance between sleeve-body

The distance between the sleeve-body-sleeve shape elements is 12 columns each.

This corresponds to a racking by 24 needles.

The distance is gauge-dependent.

- 9) Select the **Collar** shape element and position the element at the end of the Body element in the center using the "LMB".

⇒ The Collar shape element is positioned centered on the body.

28.4 Adjustments in the Symbol View [basic]

I. Draw-in the yarn carrier colors in the shape elements:



The editing is also possible when using yarn colors, as the **Stoll Color Arrangements** are generated with **Transparent colors**.

▷  is active.

- 1) Select the color for the yarn carrier 6 (pink #75) from the yarn carrier table in the "Pattern Colors" toolbar.
- 2) Draw-in a horizontal line for the sleeve-body connection at the end of the shape edge in the **Right sleeve** shape element.
- 3) Deactivate .
- 4) Select the drawing tool .
- 5) Click on the **background color** under "Tool properties".
- 6) Fill the area below the inserted line with the selected color (6).
- 7) In the **Left sleeve** shape element, draw-in a horizontal line with the color for the yarn carrier 4 (green #82) also in the same height as in the right sleeve.
- 8) Fill the area below the inserted line with the selected color (4).
- 9) Now, fill the Body and Collar shape element with the color for the yarn carrier 5 (blue #79).
- 10) The two areas in both sleeves above the other colors as well.

II. Insert length compensation body-sleeve:

- 1) In the "Symbol View [Basic]" select the body from the first row up to the two complete rows (8 rows CA the sleeve-body connection + two rows) below the sleeve-body connection in height and width.
- 2) Call up the "Insert/Delete Suspension" dialog box with .
- 3) Enter new values under "Insert within Selection":

| | |
|-------------------------|---|
| Example: | |
| Original Rows: | 4 |
| Suspending Rows: | 4 |

4) Pick up the selection at the first row after the suspending area with

"LMB" and drag it downward with  .

5) Close the "Insert/Delete suspension" dialog box with .

28.5 Draw-in gore in the shape element

I. Draw-in gore after start on layer L0 and L1 in the Body shape element:

▷ The symbols  and/or  are active.

- 1) Select the gore symbol  in the "Shape Attributes" toolbar.
- 2) Select the e.g. the yarn color #10 in the "Pattern Colors" toolbar.
- 3) Draw-in gore in the **Body** shape element.
- 4) Remove the narrowing for the waist in the area of the gore at the right edge of the body.



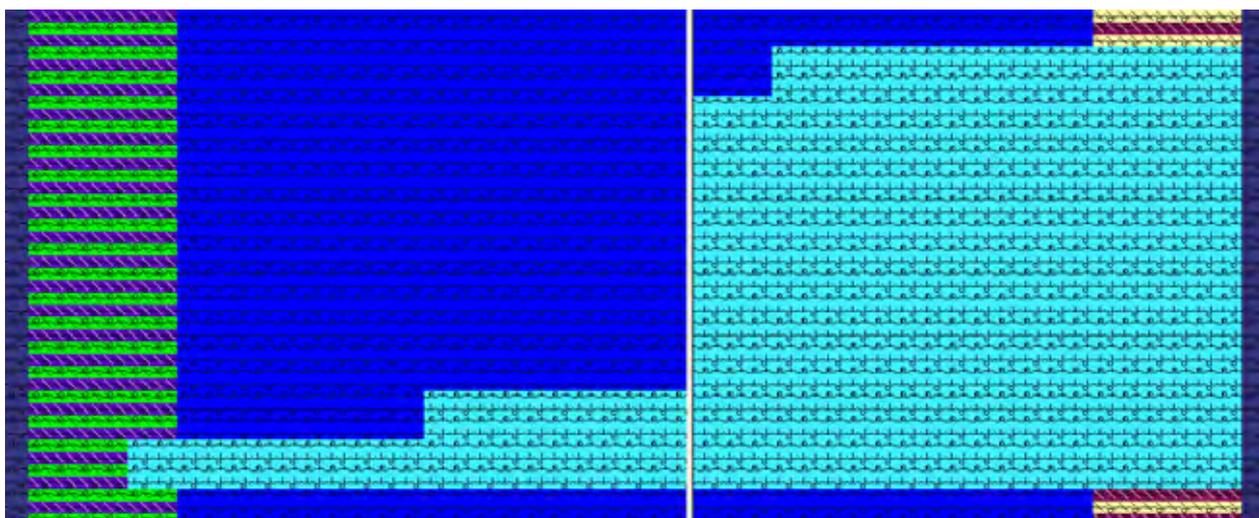
No narrowing or widening can be done in the gore (not-knitting area).



All functions are available for editing the shape elements.

- Insert columns / rows
- Copy / Paste
- Draw-in gore-elements
- Generate shape edges (Shape attributes)

Result:

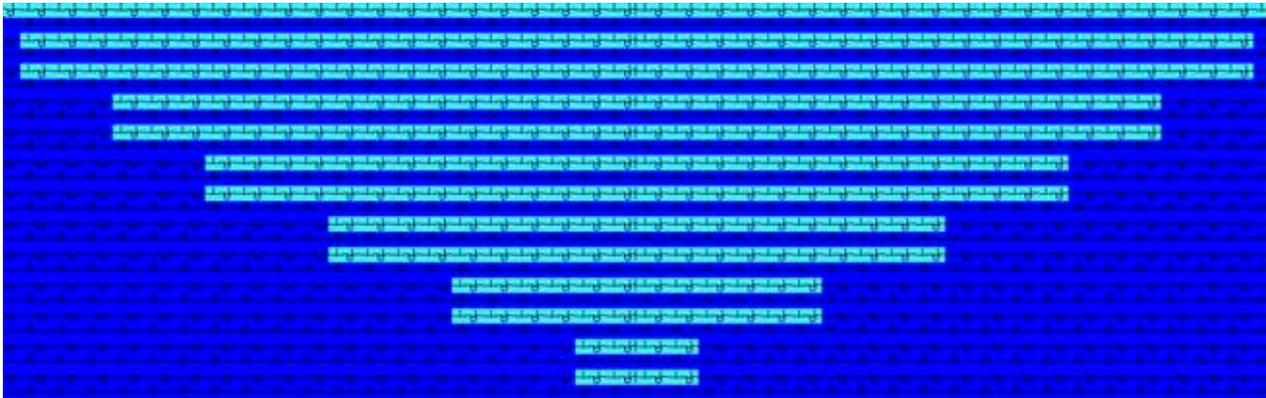


Due to the knitting cycle with gore technique pay attention to the step height, step width and step start (layer L0).

II. Draw-in gore on layer L0 in the body below the sleeve-body connection:

- 1) Select the gore symbol  in the "Shape Attributes" toolbar.
 - 2) Select the e.g. the yarn color #10 in the "Pattern Colors" toolbar.
 - 3) Draw-in gore in the **Body** shape element in the center.
 - 4) Insert the symbol Separate  in the center of the pattern rows for the gore.
- ⇒ The symbol Separate divides the pattern into two knitting zones, which is why it is possible to use the same color at the left and right side of the gore.

Result:



The generated gore elements can be saved as pattern element in the Module Explorer of Database.

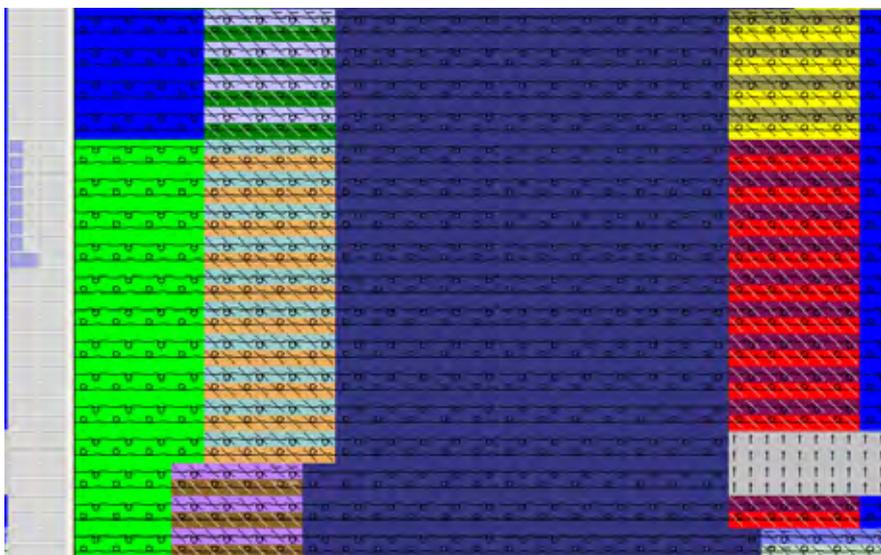
III. Draw-in the neck gore on layer L0 in the body:

- 1) Generate a pattern element from the gore drawn-in and draw it in.
- or -
➔ Draw the gore newly.
 - 2) Select the gore symbol  in the "Shape Attributes" toolbar.
 - 3) Select the e.g. the yarn color #10 in the "Pattern Colors" toolbar.
 - 4) Draw-in gore in the **Body** shape element in the center.
 - 5) Insert the symbol Separate  in the center of the pattern rows for the gore.
- ⇒ The symbol Separate divides the pattern into two knitting zones, which is why it is possible to use the same color at the left and right side of the gore.

28.6 Generate and insert Color Arrangements

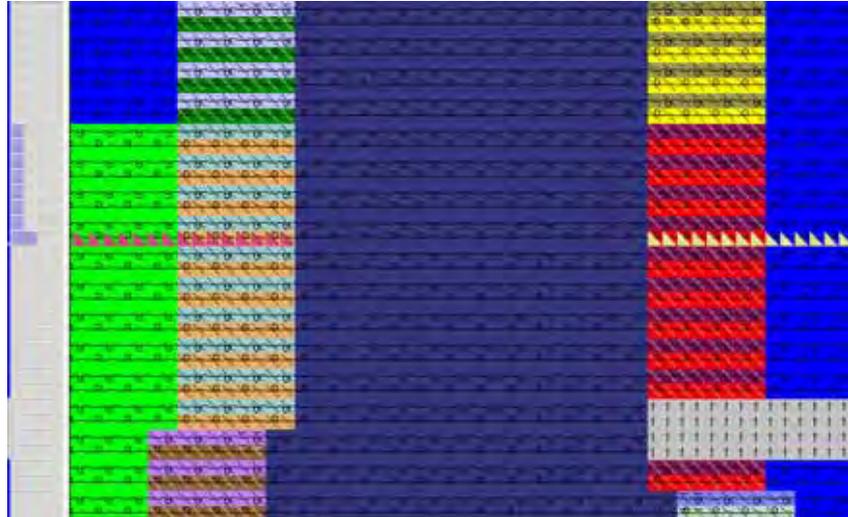
I. Sleeve-body connection

- 1) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
- 2) Under "k&w Arrangements" / "Stoll" / "Connections" / "3 tubulars" / "without opening" / "without gore", select the Color Arrangement "CA_B1-Typ 1 (no connection L0-L1)".
- 3) Insert the selected CA in the control column  in the designated area of the sleeve-body connection over 8 rows.



- 4) Draw-in the markings for the sleeve-body connection:
 - **Left sleeve:** Transfer Inward >
 - **Body:** Prepare
 - **Right sleeve:** Transfer Inward <
- 5) In the "Shape tool" toolbar under , select the corresponding marking color.

- 6) Draw-in the selected marking with the "Alt" key pressed in the first row of the CA over the total width of the corresponding shape element.



Result:

The knitting-technical information for working the sleeve-body connection is worked out based on the Color Arrangement, whereas Stoll modules are used for preparing and transferring inward.



The knitting-technical cycle of preparing and transferring inward can also be inserted in the Color Arrangement. Markings are not necessary then.

II. Draw-in aligning symbols at the left and right between sleeve - body - sleeve:

- 1) Select "Aligning outside Shape Part to the Right"  in the "Shape tools" toolbar.
 - 2) Select the "Fill line up to color change"  drawing tool.
 - 3) Enter the symbol with "LMB" pressed between left sleeve and body. Starting at the second row of the Color Arrangement sleeve-body connection up to the start of the collar.
 - 4) Select "Aligning outside Shape Part to the Left"  in the "Shape tools" toolbar.
 - 5) Enter the symbol with "LMB" pressed between right sleeve and body in the same rows as on the left side.
- ⇒ After stamping out , with  the sleeves are presented folded in or out due to the aligning symbols.

III. Generate Color Arrangement for 3 tubulars:

- 1) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
 - 2) Under "k&w Arrangements" / "Stoll" / "3 tubulars" / "without opening" / "without gore", select the k&w Arrangement "A1-3 tubulars"
 - 3) Open the context menu with "RMB".
 - 4) Select "Generate Color Arrangement" in the menu.
- ⇒ A Color Arrangement is generated from the selected k&w Arrangement and saved under "Modules" / "User" / ... / "New Color Arrangements".



The Color Arrangement generated receives the name of the k&w Arrangement with the addition CA_ xxx.

- 5) Modify the Color Arrangement if necessary.

Example: Group three knitting rows to one knitting row



All the knitting rows in the Color Arrangement must have a carriage direction.

- 6) Enter the Color Arrangement below the sleeve-body connection in the pattern rows without gore.

IV. Generate Color Arrangement for 3 tubulars with gore L0 + L1:

- 1) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
 - 2) Under "k&w Arrangements" / "Stoll" / "3 tubulars" / "without opening" / "without gore", select the k&w Arrangement "A1-3 tubulars"
 - 3) Open the context menu with "RMB".
 - 4) Select "Generate Color Arrangement" in the menu.
- ⇒ A Color Arrangement is generated from the selected k&w Arrangement and saved under "Modules" / "User" / ... / "New Color Arrangements".

5) Modify the generated Color Arrangement:



6) Enter the Color Arrangement below the sleeve-body connection in the pattern rows with gore on L0 + L1.

V. Generate Color Arrangements for 3 tubulars with gore L0:

- 1) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
 - 2) Under "k&w Arrangements" / "Stoll" / "3 tubulars" / "without opening" / "with gore", select the k&w Arrangement "A20-3 tubulars with gore (L0)".
 - 3) Open the context menu with "RMB".
 - 4) Select "Generate Color Arrangement" in the menu.
- ⇒ A Color Arrangement is generated from the selected k&w Arrangement and saved under "Modules" / "User" / ... / "New Color Arrangements".
- 5) Modify the Color Arrangement generated.



Two color segments will be generated in the CA for the body element (shape part color 1) by the symbol for separation or by the opening element in the shape front. The information of L1 present in the left color segment will be applied to right part of the body.

6) Enter the Color Arrangement below the sleeve-body connection in the pattern rows with gore on L0.

VI. Generate Color Arrangement for 3 areas 1:1:1:

- 1) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
 - 2) Under "k&w Arrangements" / "Stoll" / "3 areas" / "1:1:1 ratio" / "without opening" / "without gore", select the k&w Arrangement "C37-3 areas 1:1:1 "
 - 3) Open the context menu with "RMB".
 - 4) Select "Generate Color Arrangement" in the menu.
- ⇒ A Color Arrangement is generated from the selected k&w Arrangement and saved under "Modules" / "User" / ... / "New Color Arrangements".
- 5) Enter the Color Arrangement above the sleeve-body connection in the pattern rows without gore.

VII. Generate Color Arrangement for 3 areas 1:1:1 with gore L0:

- 1) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
 - 2) Under "k&w Arrangements" / "Stoll" / "3 areas" / "1:1:1 ratio" / "without opening" / "with gore", select the k&w Arrangement "C11-3 areas 1:1:1 with gore (L0)"
 - 3) Open the context menu with "RMB".
 - 4) Select "Generate Color Arrangement" in the menu.
- ⇒ A Color Arrangement is generated from the selected k&w Arrangement and saved under "Modules" / "User" / ... / "New Color Arrangements".
- 5) Enter the Color Arrangement above the sleeve-body connection in the pattern rows with gore (neck gore).

VIII. Generate Color Arrangement for collar:

- 1) Open the "Module Explorer" via the "Module" / "Module Explorer of Database..." menu.
- 2) Select the "D11 collar" k&w Arrangement under "k&w Arrangements" / "Stoll" / "Collar" / "without opening" / "without gore".
- 3) Open the context menu with "RMB".
- 4) Select "Generate Color Arrangement" in the menu.
- ⇒ A Color Arrangement is generated from the selected k&w Arrangement and saved under "Modules" / "User" / ... / "New Color Arrangements".
- 5) Open Color Arrangement double clicking.
- 6) Check shape part color and replace with shape part color 4, if necessary.



When generating a Color Arrangement from a k&w Arrangement for collar, the shape part collar 1 is used in the collar by default.

- 7) Enter the Color Arrangement in the area of the collar.

28.7 Cut out the shape and complete the pattern

I. Stamp out the shape (=cut out):



You can make pattern related settings in the "Configuration k&w" dialog box before cutting out.

- 1) Stamp out the shape with .
- ⇒ The "k&w Options for Cut out" dialog box appears.
- 2) Confirm the settings in the dialog box with "OK".
- ⇒ The "Insert/Replace k&w Start" dialog box appears.
- 3) Select the desired start.
- 4) Confirm the settings with "OK".
- ⇒ The module will be inserted into the pattern.

II. Fadenführer-Grundstellung ändern:

- 1) Im Bearbeitungsschritt "Formmuster laden" die Fadenführergrundstellung ändern.
- 2) Im Dialog "Muster-Darstellungen" mit Taste den Dialog "Garnfeldzuordnung" aufrufen.
- 3) Den Fadenführer für den Gummifaden1 auf Fadenführerschiene 2 positionieren, damit dieser nicht mit dem Fadenführer Trennfaden1 kollidiert.
- 4) Den Dialog "Garnfeldzuordnung" mit der Taste "OK" schließen.

II. Modify the yarn carrier home position:

- 1) Modify the yarn carrier home position in the „Shaped Pattern“ state of pattern.
- 2) Call up the „Yarn Field Allocation“ dialog box.
- 3) Position the yarn carrier for the **Elastic Yarn1** on yarn carrier track **2** in order to avoid collision with the yarn carrier for the **Draw Thread1**.
- 4) Close the Yarn Field Allocation dialog box with „OK“.

III. Complete the pattern:

- 1) Expand the pattern with  of the "Steps of Processing" toolbar.
⇒ The "Correction of Widening" dialog box appears.
- 2) Confirm with "Yes".
⇒ The shape edges with the **Widening** attribute are corrected.
The bind-off module for the collar is inserted.
- 3) Start the technical processing with .
⇒ The query "Generate MC Program" appears.
- 4) Confirm the query with "OK".
- 5) Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.