

STOLL

THE RIGHT WAY TO KNIT

Stoll pattern software M1

Stoll-knit and wear®

Training



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1 Stoll-knit and wear® on the M1 pattern workstation

Topics of the course:

- Handling of the ShapeSizer
- Using Shape wizard
- Generating k&w patterns
- Generating and using k&w modules
- Special features with k&w

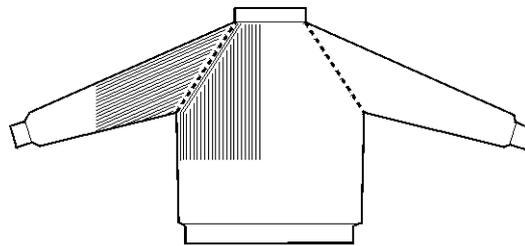
Requirements:

- Knowledge in accordance with the M1 Basic and Fully-Fashion courses
- Good technical knitting knowledge

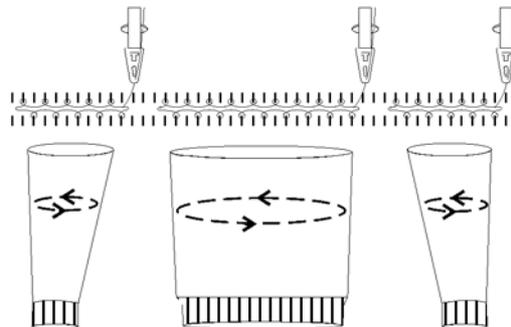
2 General information on Stoll knit and wear® technology

This knitting technique enables you to knit complete articles in a fully-fashioned shape. Complete sweaters can be worn without additional sewing e.g.

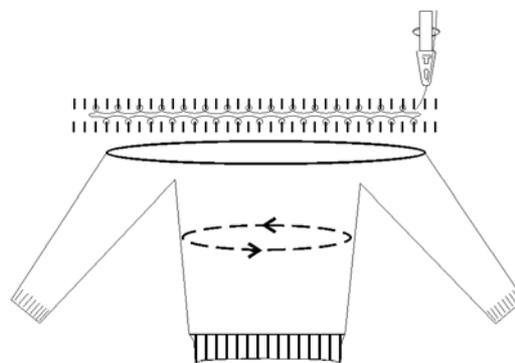
The pieces for sleeves and body are knit like tubes in shape. These pieces are knit together in the machine by widening, narrowing and binding off in order to get a complete garment.



The elements for sleeves and body are knit side by side at first. For each element is at least one separate yarn carrier necessary.



After connecting the elements for body and sleeve only one yarn carrier will be used.



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

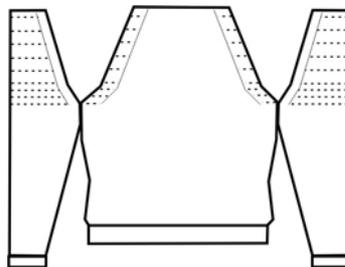


With a tank top or vest, the yarn carriers may not switch layers (front/back), so that no connections arise and remain open at the arm openings.

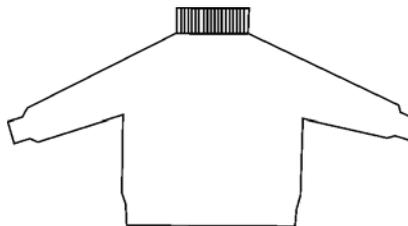
Three yarn carriers are required for such a knitting cycle.



The narrowings are performed in the sleeve and body.

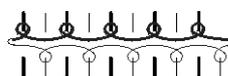


If necessary, a collar can still be added on at the end.

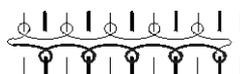


The basis of Stoll knit and wear® is knitting in 1X1. This means that alternately one needle group is working the fabric back and another needle group is working the fabric front.

Knitting mode:



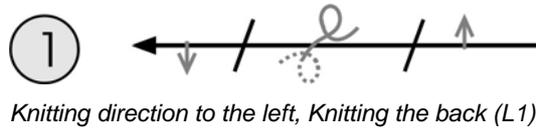
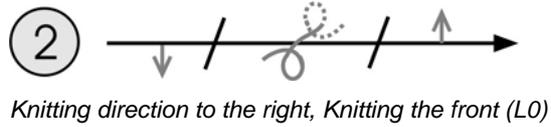
Knitting the back



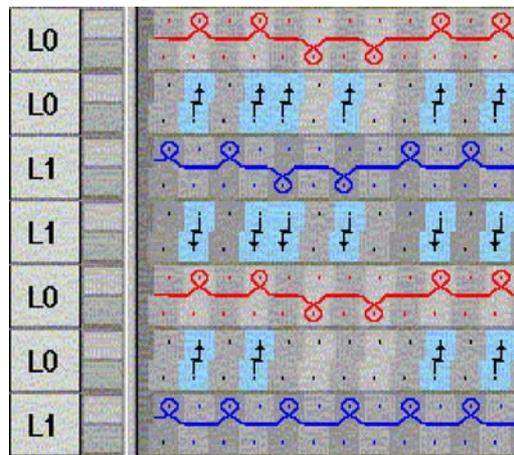
Knitting the front

6.1 ShapeSizer: Raglan with neck gore

Knitting cycle for Stoll knit and wear®:

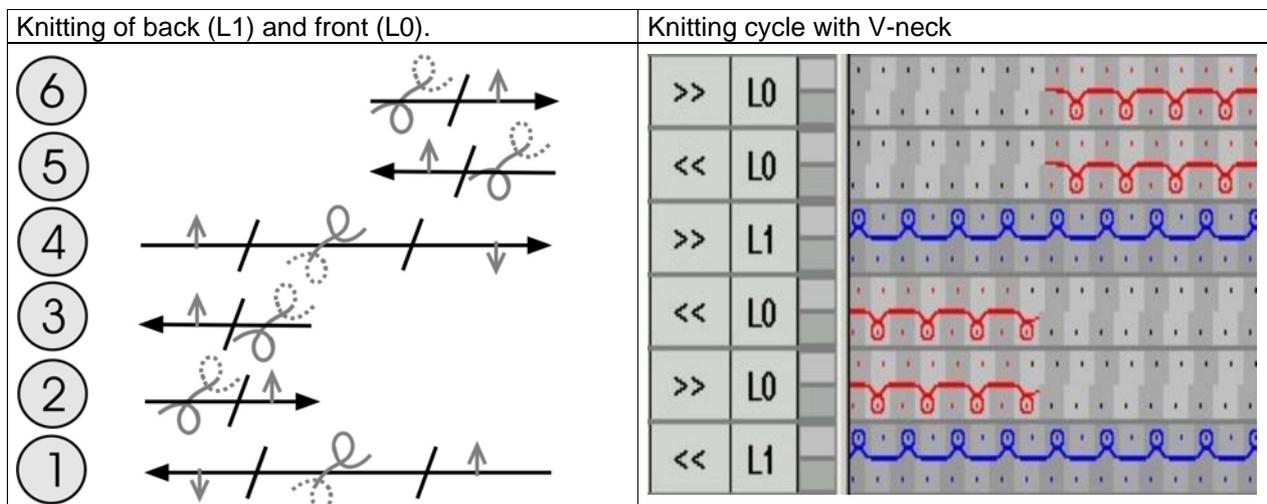


When generating the pattern the transfer rows of both knitting layers (L0+L1) will be combined to one technical row.



Knitting cycle L1 and L0 with transfer

Knitting cycle for Stoll knit and wear® with a V-neck:



3 Fundamental rules to generate a k&w shape

To generate a k&w pattern, the existing shapes from the shape directory "D:\Stoll\M1\Shapesizer\k&w" can be used, or new shapes can be generated.

Elements of a k&w shape:

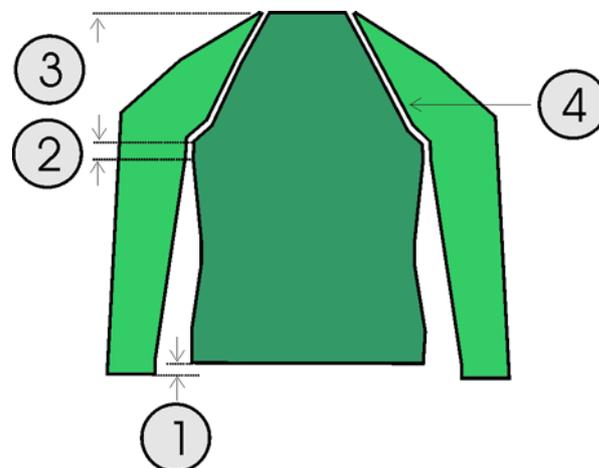
A k&w shape contains several individual shapes.

- 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 shapes of a k&w pattern should be saved in a common directory.

Rules to generate a k&w shape



Shape	Conditions and requirements
1	Even-numbered difference in length between body and sleeve. 30% at maximum
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.

4 Overview to generating shape for k&w

You have different possibilities to determine the shapes and the necessary knitting cycles when generating k&w pattern:

- ShapeSizer
- Shape wizard
- Shape view

ShapeSizer:

- Generate different sizes.
- Quick editing of a STOLL standard shape by grading.
- Quick and easy changes of the shape attributes for different sizes



No own shapes can be saved in the ShapeSizer.

Shape wizard:

- Combine the shape elements.
- Set connecting points.
- Automatical determination of knitting cycles.

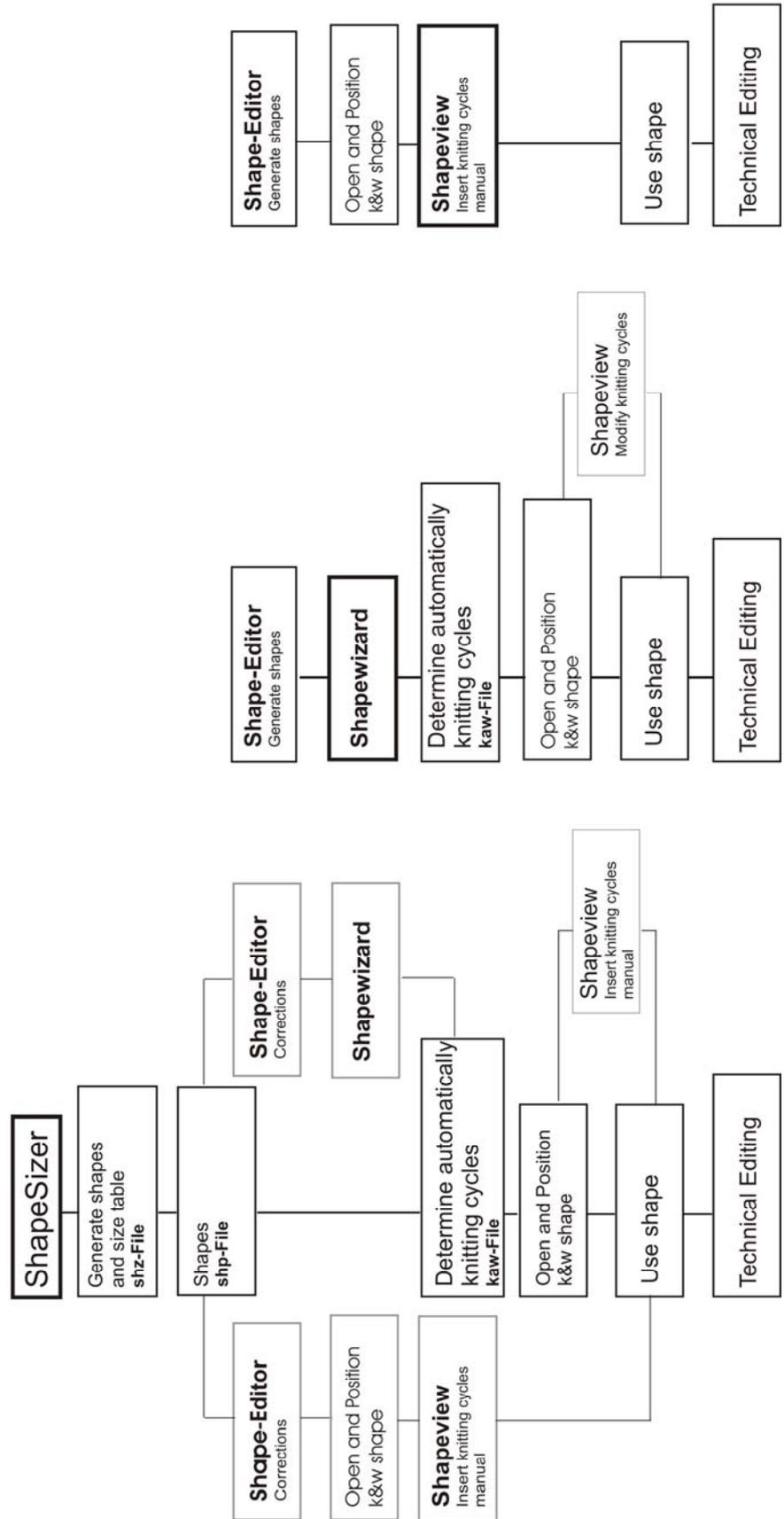
Shape view:

- Drawing in knitting cycles manually
- You can make individual adjustments easily by the use of own knitting cycles

k&w Pattern with Shapeview

k&w Pattern with Shapewizard

k&w Pattern with Shapeszizer



Shapes		Presentation
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 cut-out	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		
Slipover with French shoulder and neck gore	Slipover with french shoulder and neck gore	
Slipover with French shoulder and neck cut-out	Slipover with french shoulder and neck opening	
Slipover with shoulder gore and neck gore	Slipover with shoulder gore and neck gore	
Slipover 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	
Vest with shoulder gore and neck opening	Waistcoat with shoulder gore and neck opening	
Andere / Others		
Cap	Cap	



The standard shapes of the ShapeSizer consist of several shape elements.

6 k&w patterns with shapes from the ShapeSizer

6.1 ShapeSizer: Raglan with neck gore

Pattern data	Pattern picture
Raglan with neck gore Pattern width: 350 Pattern rows: 350	
Machine type	CMS 822
Gauge	6.2
Start	1X1 - Rib
Basic pattern	Jersey
Knitting technique	knit and wear
Description of pattern:	k&w shape "Raglan with neck gore" in single-jersey knitting mode

6.1.1 Procedure in the ShapeSizer: Create a raglan with neck gore

I. Generate a new pattern:

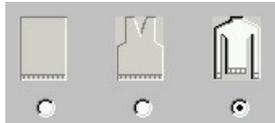
You generate the k&w pattern using the default shape "Raglan with neck gore".

1. Open "File / New..." menu.



2. Select machine.

3. Knit and Wear



4. Specify the pattern size:

Width: 350

Height: 350



Width and Height are depending on the size of the shape.

The size of the pattern field is doubled by the use of k&w technique automatically.

5. Specify the knitting mode: Jersey

6. Confirm specifications with "OK".

The pattern field appears.



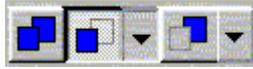
With a k&w pattern you will specify the start later on.

II. Select the presentation of knitting layers:

<u>6</u>	L0	
<u>5</u>	L1	
<u>4</u>	L0	
<u>3</u>	L1	
<u>2</u>	L0	
<u>1</u>	L1	

Display of front and back knitting layers.

- ➔ Select the presentation of the knitting layers with the "k&w Tools" toolbar.

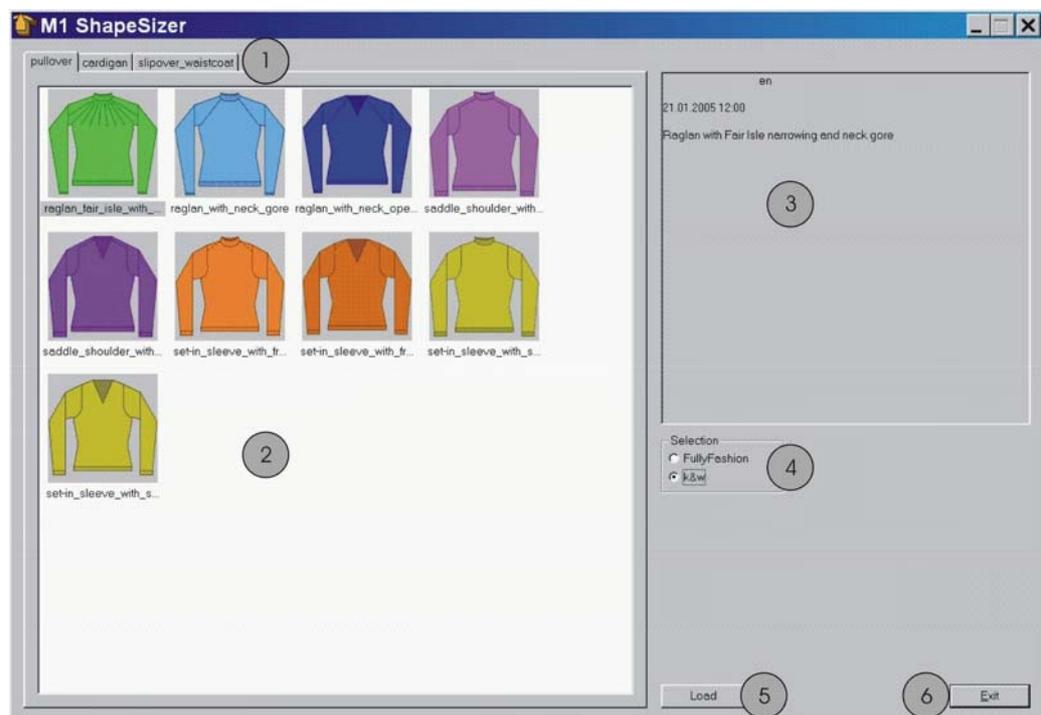


	Name	Function
	All layers	Presentation of front and back layers.
	Front layer	"Display the columns of the knitting layer only"
		or "Display all columns"
	Back layer	"Display the columns of the knitting layer only"
		or "Display all columns"

6.1 ShapeSizer: Raglan with neck gore

6.1.2 Generate shape in the ShapeSizer and position it:
Raglan with neck gore**Open and edit shape with the ShapeSizer:**

1. Open the program "ShapeSizer" with the menu "k&w Shape" / "ShapeSizer...".



No.	Function
1	Tabs of the different directories
2	Overview of the different Stoll standard shapes
3	Display field
4	Select Fully Fashion or k&w shapes
5	Load a saved ShapeSizer file (*.shz) and go to the "Stitch density" page
6	Close the ShapeSizer

2. Open the desired shape in the overview with double click.
The next dialog window of the ShapeSizer gets open.



The selected shape with the Stoll standard attributes gets open.
The default attributes are saved in the files "defaultform_.....shp" in accordance with the shape elements (**FRONT / BACK / SLEEVE / COLLAR**).

3. Set the measure unit and the stitch density.
The measure unit (2) and the stitch density (3) will be used in the further processing.

Stitch density table:

Gauge: E 52

	Stoll	Own 1	Own 2	Own 3	Own 4	Own 5	Own 6
Kommentar	RL						
Wale	28			0	0	0	0
Stitch rows	38			0	0	0	0

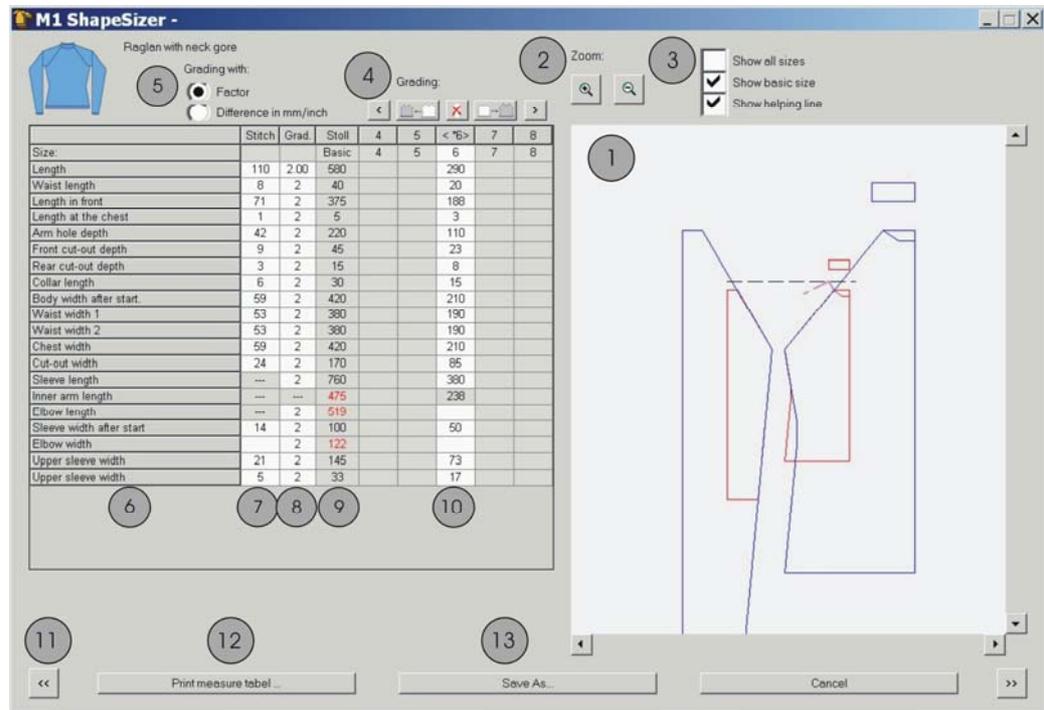
Values in wales - stitch rows / 100 mm

No.	Function
1	Graphic presentation of the selected shape
2	Unit of measure: Select the mm or inch measure unit.
3	Stitch density: Number of stitches in the width (wales) and height (rows) = stitch ratio
4	k&w Standard Knitting k&w pattern in 1x1 technique 730 S Knitting k&w pattern for the machine type CMS 730 S All Needles Knitting k&w pattern for CMS machines with additional beds
5	Selection list for the gauge
6	Gauge-dependent stitch density table
7	Stoll default stitch ratio for the back-layer knitting mode
8	Input fields Own 1-6 : Define your own stitch ratios for the various knitting modes.
9	Transfer of the stitch ratio from the column to the input fields for the stitch density (2)
10	Go back to the "Shape selection" page.
11	Continue to the next dialog window of the ShapeSizer



4. Open the next dialog window with

6.1 ShapeSizer: Raglan with neck gore



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
	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 the sizes with a factor or a difference (mm/ inch)
6	List of the edge lines
7	Measures in stitches referring to the selected size. Conversion from mm to stitches on base of the specified stitch ratio.
8	Factor or difference in mm/inch for 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	Go to the previous page.
12	Print the size table.

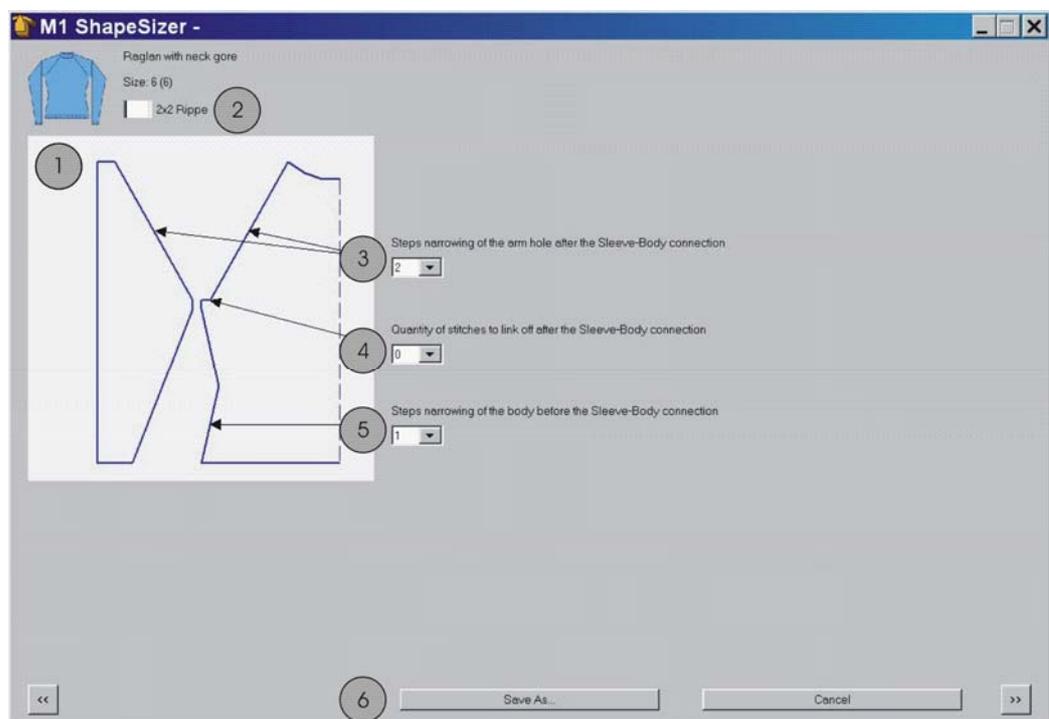
No.	Function
13	Save the ShapeSizer file (*.shz) with all its settings.



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



5. Change to the next dialog window with the >> button.

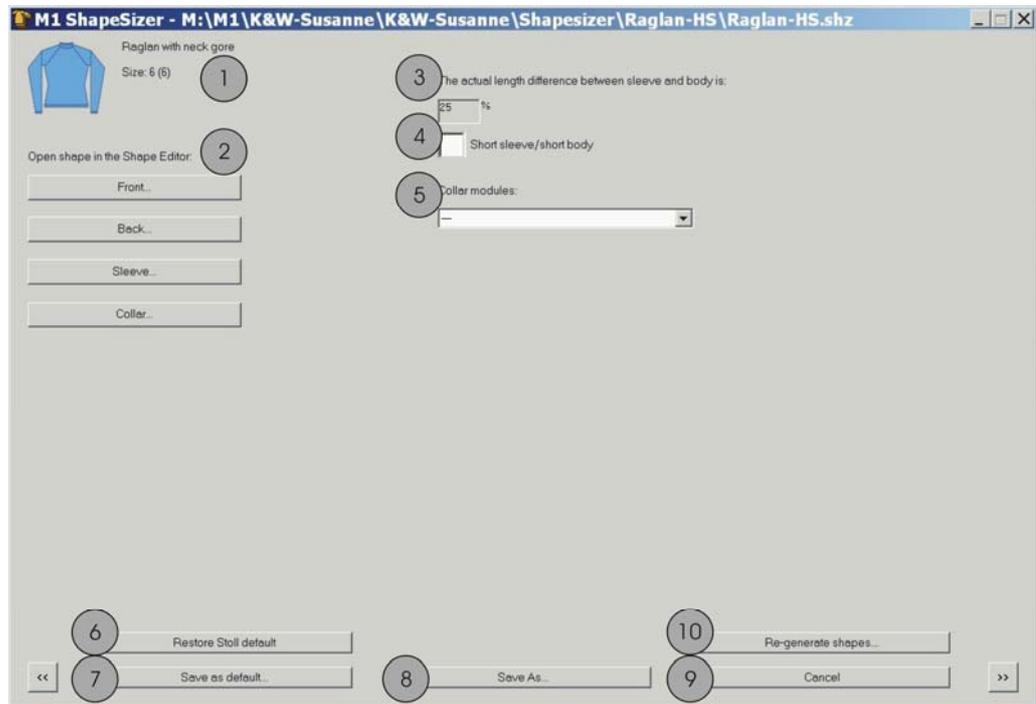


No.	Function
1	Graphic presentation of shape edges
2	Shape settings for a 2x2 rib as basic pattern
3	Definition of the step width of the narrowings following sleeve-body connection
4	Number of stitches in the sleeve hole to be bound-off in the body. The number of stitches is subtracted from the original 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 >>.

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



No.	Function
1	Graphic presentation of the selected shape
2	Open size elements of the size selected in the size table in the shape editor.
3	Difference in length between body and sleeve.
4	Work out shape as short sleeve/short body.
5	Specify the knitting mode of the collar.
6	Own defaults (defaultuser files) are deleted from the directory and the defaultform file is used.
7	Save attribute changes as own default "defaultuser_... .shp". If a directory contains defaultuser files, then these data are used to open the shape.
8	Save size table as *.shz file
9	Knitting cycles are inserted in the shape (selected size). The size is saved with the knitting cycles askaw file.
10	The shape files modified in the Shape Editor (*.shp) will be deleted and new shape files (*.shp) will be generated according to the data of the shz file. The Shape Editor will be opened by the ShapeSizer.

8. Open the next dialog window with  in order to determine the knitting cycles.

Knitting cycles will be determined and saved as kaw file in the directory.

6.1 ShapeSizer: Raglan with neck gore



No.	Function	
1	Open kaw-file in the Shape wizard. The ShapeSizer will not be closed.	
2	Position kaw-file on the M1 basic pattern	
3	activated	The ShapeSizer will be closed after positioning the kaw file on the basic pattern
	deactivated	The ShapeSizer will not be closed after positioning the kaw file on the basic pattern

9. Press the icon with the checkbox (3) activated.
 - The kaw file will be laid on the open pattern.
 - or -
 - The "New module" dialog box appears and the ShapeSizer will be closed then.
 - or -
- Press the icon with the checkbox (3) deactivated.
 - The kaw file will be laid on the open pattern.
 - or -
 - The "New module" dialog box appears.
 - The ShapeSizer remains open and the next size can be edited.
 - or -
- Press the key.
 - The kaw file will be opened in the Shape Wizard.
 - The ShapeSizer remains open and the next size can be edited.

6.1.3 Complete the pattern: Raglan with neck gore

I. Work out pattern:

Shape with knitting cycles lies on the pattern after the ShapeSizer is closed.

1. Position the shape elements **Sleeve** and **Body with collar** on the motif with the  symbol activated and the left mouse button pressed.

- or -

- ➔ Position with the arrow keys.

Different presentations of the shape elements laid on in the pattern:

Icon	Function
	k&w presentation
	k&w presentation with narrowing
	k&w presentation collapsed
	Pattern presentation Undo k&w presentations



Before cutting out, settings can be made in the "Configuration k&w" dialog box.

2. Cut shape.

- ➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



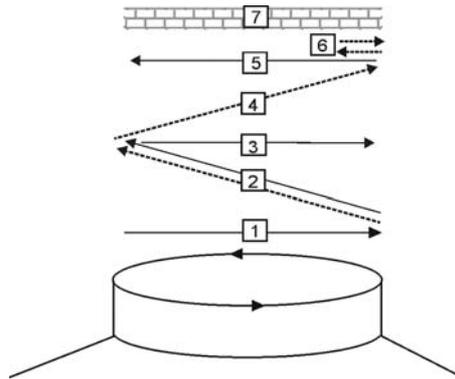
This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
3. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
 - Back layer
 - Front layer

6.1 ShapeSizer: Raglan with neck gore

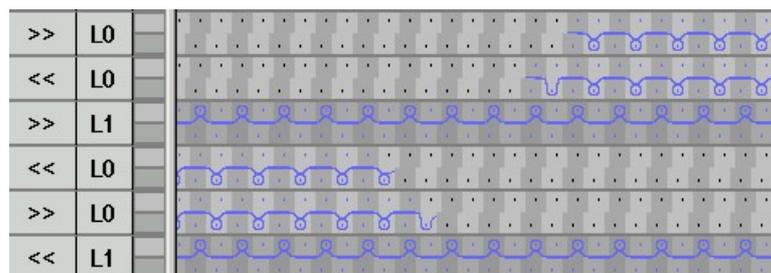
4. Use narrowing and widening.
5. The "Insert/replace k&w start" dialog box appears.
6. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
7. Use binding-off.

Binding-off cycle for stand-up or turtleneck collar



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 right.
4.	Bind off at front.
5.	Knit out draw thread at front.
6.	Fix link-off stitch in place.
7.	Protection rows.

Knitting cycle with gore or V-neck



Knitting cycle for the gore

II. Complete the pattern:

1. "Automatic Technical Editing" or "Stepwise Technical Editing".
 2. Generate a Sintral.
 3. Conduct Sintral Check.
- [Settings in Configuration k&w dialog box](#)*[see page 60]*

6.2 ShapeSizer: Saddle shoulder with neck gore

Pattern data	Pattern picture
Saddle shoulder with neck gore Pattern width: 350 Pattern rows: 350	
Machine type	CMS 822
Gauge	6.2
Start	2x2 - Rib
Basic pattern	Jersey
Knitting technique	knit and wear

The **saddle shoulder with neck gore** shape contains a flat-shaped shoulder in the front and back.

This requires frequent, closely-spaced narrowings.

On the other hand, the sleeve is knit further straight (without narrowing).



6.2.1 Generate shape in the ShapeSizer and position it: Saddle shoulder with neck gore

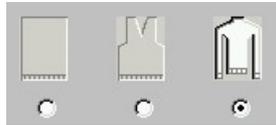
I. Generate a new pattern:

1. Open "File / New..." menu.



2. Select machine.

3. Select **knit and wear** .



4. Specify the pattern size:

Width: 350

Height: 350



Width and Hight are depending on the size of the shape.

5. Specify the knitting mode: **Jersey**
6. Confirm specifications with "OK".
The pattern field appears.

II. Open shape with ShapeSizer:

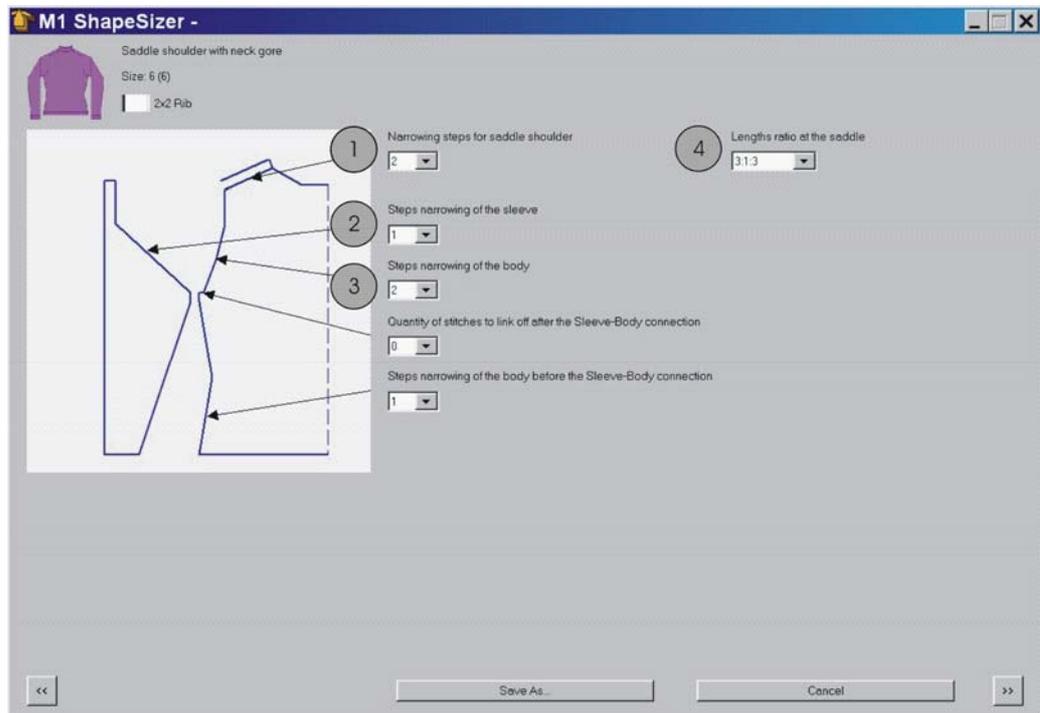
1. Open the program "ShapeSizer" with the menu "k&w Shape" / "ShapeSizer...".
2. Open the desired shape "Saddle shoulder with neck gore" in the overview window with a double-click.
The next dialog window of the ShapeSizer gets open.
3. Enter the stitch ratio.

4. Open the next dialog window with .

5. Generate basic size in the < * 6 > column.

6. Open the next dialog window with .

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 .

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 .

The selected size will be saved asshp file to the directory when opening the window.

10. Open the shape element to be changed with the buttons under "Open shape in Shape Editor:" .

11. Make changes.

For example, narrowing type, narrowing width, widening type, fade-out and fade-out width etc.



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

12. Open the next dialog window with  in order to determine the knitting cycles.

Knitting cycles will be determined and saved as kaw file in the directory.

13. Press the  icon with the checkbox (3) activated.

The kaw file will be laid on the open pattern.

- or -

The "New module" dialog box appears and the ShapeSizer will be closed then.

- or -

→ Press the  icon with the checkbox (3) deactivated.

The kaw file will be laid on the open pattern.

- or -

The "New module" dialog box appears.

The ShapeSizer remains open and the next size can be edited.

- or -

→ Press the  key.

The kaw file will be opened in the Shape Wizard.

The ShapeSizer remains open and the next size can be edited.

- *Generate shape in the ShapeSizer and position it: Raglan with neck gore* [see page 14]

6.2.2 Complete the pattern: Saddle shoulder with neck gore

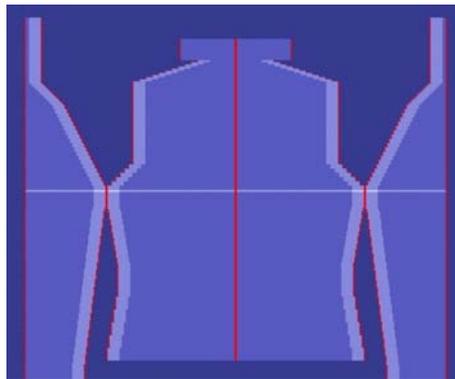
I. Work out pattern:

Shape with knitting cycles lies on the pattern after the ShapeSizer is closed.

1. Position the shape elements **sleeve** and **body with collar** on the basic motif.

Position the elements body and sleeve on the motif with the  symbol activated and the left mouse button pressed or with the arrow keys.

2. Select desired pattern presentations: 



Laid on shape: saddle shoulder



Before cutting out, settings can be made in the "Configuration k&w" dialog box.

3. Cut shape.
The "Do you want a correction of widening steps to be carried out?" prompt appears.
4. Confirm with "Yes".
5. Fade out shape.
The "Replace modules cut into" inquiry appears.
 - Back layer
 - Front layer



The prompt only appears for modules that are cut into by fading-out.

6. Use narrowing and widening.
7. The "Insert/replace k&w start" dialog box appears.
8. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
9. Use binding-off.

II. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.

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

Pattern data	Pattern picture
Inserted sleeve with shoulder gore and V-neck Pattern width: 350 Pattern rows: 350	
Machine type	CMS 822
Gauge	6.2
Start	1x1 rib
Basic pattern	Jersey
Knitting technique	knit and wear

6.3.1 Generate shape in ShapeSizer: Inserted sleeve with shoulder gore and V-neck

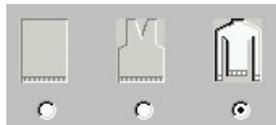
I. Generate a new pattern:

1. Open "File / New..." menu.



2. Select machine.

3. Knit and Wear



4. Specify the pattern size:

Width: 350

Height: 350



Width and Hight are depending on the size of the shape.

5. Specify the knitting mode: Jersey
6. Confirm specifications with "OK".
The pattern field appears.

II. Open shape with ShapeSizer:

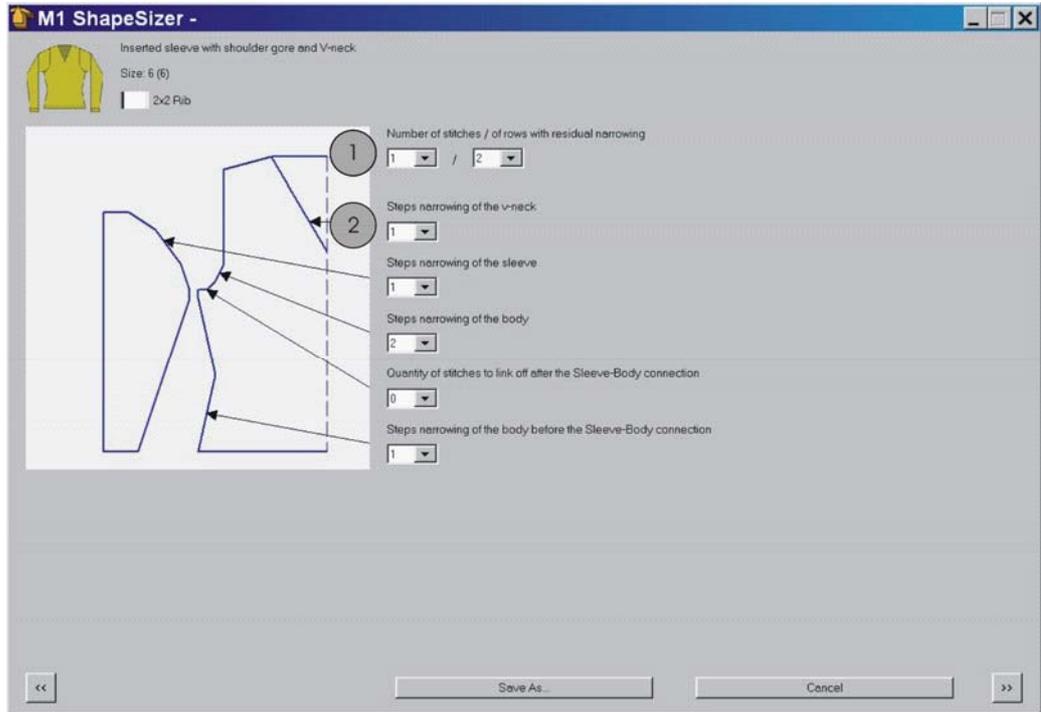
1. Open the ShapeSizer program with the menu "k&w Shape" / "ShapeSizer...".
2. Open the desired shape "Inserted sleeve with shoulder gore and V-neck" in the overview window with a double-click.
The next dialog window of the ShapeSizer gets open.
3. Enter the stitch ratio.

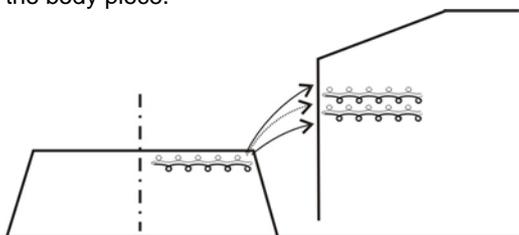
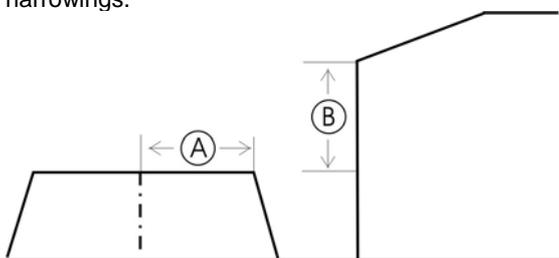
4. Open the next dialog window with .

5. Generate basic size in the < * 6 > column.

6. Open the next dialog window with .

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>In the process, the stepping of the remaining narrowing can be specified. Also the number of knitting rows between the remaining narrowings.</p> 
2	Narrowing stepping in the V-neck

Setting options for remaining narrowing

Stitches	Rows	Function
1	1	<p>Remaining narrowings are carried out with one stitch. 1 stitch row is knit between the narrowings. Stitch rods from edge A have a ratio to stitch rows B of 1:1.</p>

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

Stitches	Rows	Function
1	2	Remaining narrowings are carried out with one stitch. 2 stitch rows are knit between the narrowings. Stitch rods from edge A have a ratio to stitch rows B of 1:2.
2	1	Remaining narrowing is carried out with 2 stitches. 1 stitch row is knit between the narrowings. Stitch rods from edge A have a ratio to stitch rows B of 2:1.
2	2	Remaining narrowing is carried out with 2 stitches. 2 stitch rows are knit between the narrowings Stitch rods from edge A have a ratio to stitch rows B of 1:1.



- 8. Open the next dialog window with

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

- 9. Save size table as *.shz file.
The next dialog window appears.

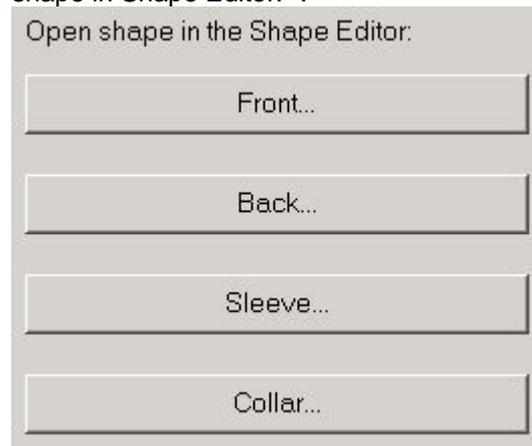
- or -



- Open the next dialog window with

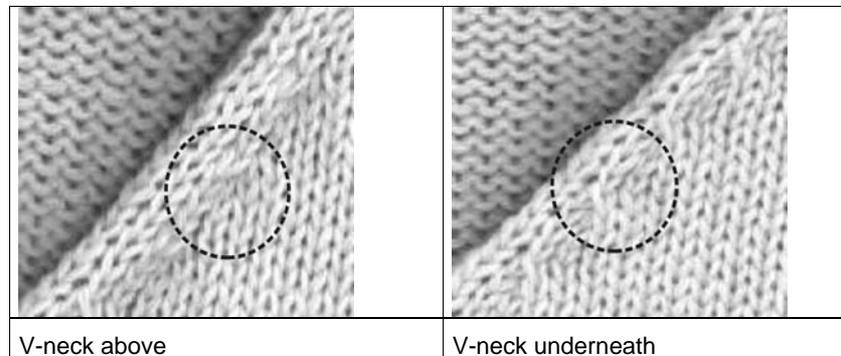
The selected size will be saved asshp file to the directory when opening the window.

- 10. Open the shape element to be changed with the buttons under "Open shape in Shape Editor:" .



11. Make changes.

For example, narrowing type, narrowing width, widening type, fade-out and fade-out width etc.



Changes in the basic size < *6 > are also used for the other sizes.

12. Open the next dialog window with  in order to determine the knitting cycles.

Knitting cycles will be determined and saved as kaw file in the directory.

13. Press the   icon with the checkbox (3) activated.

The kaw file will be laid on the open pattern.

- or -

The "New module" dialog box appears and the ShapeSizer will be closed then.

- or -

→ Press the   icon with the checkbox (3) deactivated.

The kaw file will be laid on the open pattern.

- or -

The "New module" dialog box appears.

The ShapeSizer remains open and the next size can be edited.

- or -

→ Press the  key.

The kaw file will be opened in the Shape Wizard.

The ShapeSizer remains open and the next size can be edited.

6.3.2 Complete the pattern: Inserted sleeve with shoulder gore and V-neck

I. Work out pattern:

Shape with knitting cycles lies on the pattern after the ShapeSizer is closed.

1. Position shape elements **sleeve** and **body** on basic motif.

Position the elements body and sleeve on the motif with the  symbol activated and the left mouse button pressed or with the arrow keys.

2. Select desired pattern presentations:



Before cutting out, settings can be made in the "Configuration k&w" dialog box.

3. Cut shape.
The "Do you want a correction of widening steps to be carried out?" prompt appears.
4. Confirm with "Yes".
5. Fade out shape.
The "Replace modules cut into" inquiry appears.
 - Back layer
 - Front layer



The prompt only appears for modules that are cut into by fading-out.

6. Use narrowing and widening.
7. The "Insert/replace k&w start" dialog box appears.
8. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
9. Use binding-off.

II. Complete the pattern:

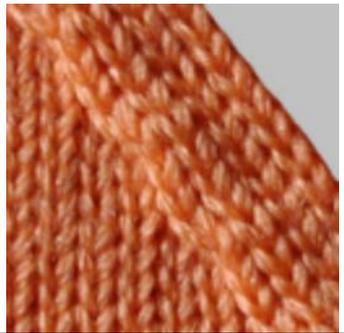
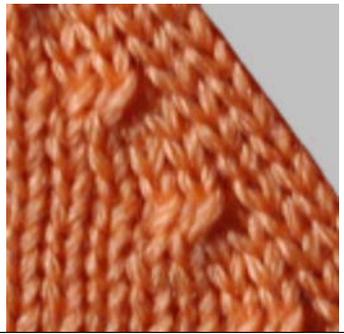
1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.

7 Narrowing, widening and binding-off types

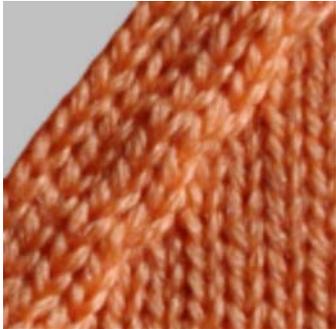
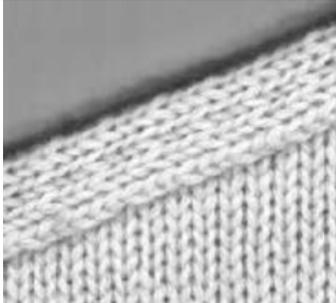
I. Use different narrowing types:

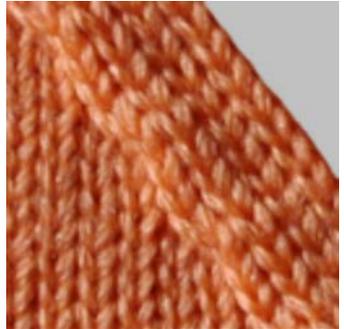
Visually different narrowing markings result by using different narrowing types.

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 are 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 are 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 are narrowed separately => different narrowing widths are possible.	
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.	

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

Designation	Function	Presentation
Body		
Body above Layers apart	Narrowing stitches lie on the basic stitches. The layers L0 and L1 are 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 are 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 are narrowed separately => different narrowing widths are possible.	
Shoulder	In the front and back the shoulder is narrowed instead of goring.	

Designation	Function	Presentation
Neckline		
V-neck above Neckline above Layers apart L0 / L1	Narrowing stitches lie on the basic stitches.	
V-neck underneath Neckline underneath Layers apart L0 / L1	Narrowing stitches lie under the basic stitches.	
Neckline Rib_L0 / L1 Neckline Rib_L0 Neckline Rib_L1	Special transferring cycle for ribs.	



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

II. 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
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.

III. Use different widening types:

If a **widening** edge line is present in the shape, then the type of widening can be specified.

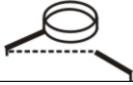
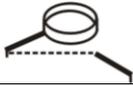
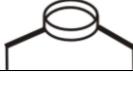
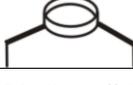
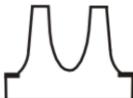
1. Open the Shape Editor.
2. Allocate the desired widening type and widening width to the **widening edges** under "Function".

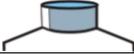
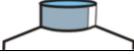
Widening body/sleeve	
Designation	Function
No module	No special technique is used
Standard	Alternating widening technique. Widening of layer 0 and layer 1.
Split	Widening by splitting.
Closing-Stitch	Widening with plugging technique.
Standard Selvedge open	Alternating widening technique. Widening of layer 0 and layer 1, but separated layers.
Darn stitch Layer-separated	Layer-separated widening by plugging technique.

IV. Use different binding-off types:

Setting	Use
Neckline	Binding-off of the round neck or of the body with stitch rows over the entire length.  Example: Turtleneck collar
Fast cut-out	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 by using the maximum racking of the machine. 
Open cut out L0	Binding-off of the body or of the collar without stitch rows over the entire length.  Example: V-neck or waistcoat - open in the front layer
Opening open at the left	Binding off round neck with side opening on left 
Opening on the right	Binding off round neck with side opening on the right 
Opening open left+right	Binding off round neck with side opening on left 
Opening open L0+L1	Binding off a cut-out with an opening in front and back layer 
Neckline open L0 End right	Binding-off of the body or of the collar without stitch rows over the entire length. Yarn carrier stands at right after binding off.  Example: V-neck or waistcoat
Neck with draw thread	Bind off with draw thread in the neck of the back.  Example: V-neck
Neck without draw thread	Bind off without draw thread in the neck of the back piece. 
V-neck start L0 L1	Narrowing in the round neck, in the front or back of the body. 
Shoulder standard - 01	Binding-off the shoulder consecutively (narrow shoulder seam)

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

Setting	Use
	
Shoulder standard - 02	Binding-off shoulder consecutively (wide shoulder seam) 
Shoulder simultaneously 01	Binding-off both shoulders simultaneously. 
Shoulder simultaneously 02	Binding-off both shoulders simultaneously. 
Side binding off	Binding off the sleeve opening 
Shoulder binding-off Top	Binding off fabrics with straps 
French shoulder above V-neck	 The stitches lie on the basic stitches.
French shoulder above	
French shoulder underneath V-neck	 The stitches lie under the basic stitches.
French shoulder underneath	
French Shoulder Neck	Binding off the neck with the french shoulder shape 
Neckline Protection Rows	Neckline with following protection rows. Protection rows will be knit instead of binding-off 
Neckline open L0	Neckline at the front layer knit with all needles and

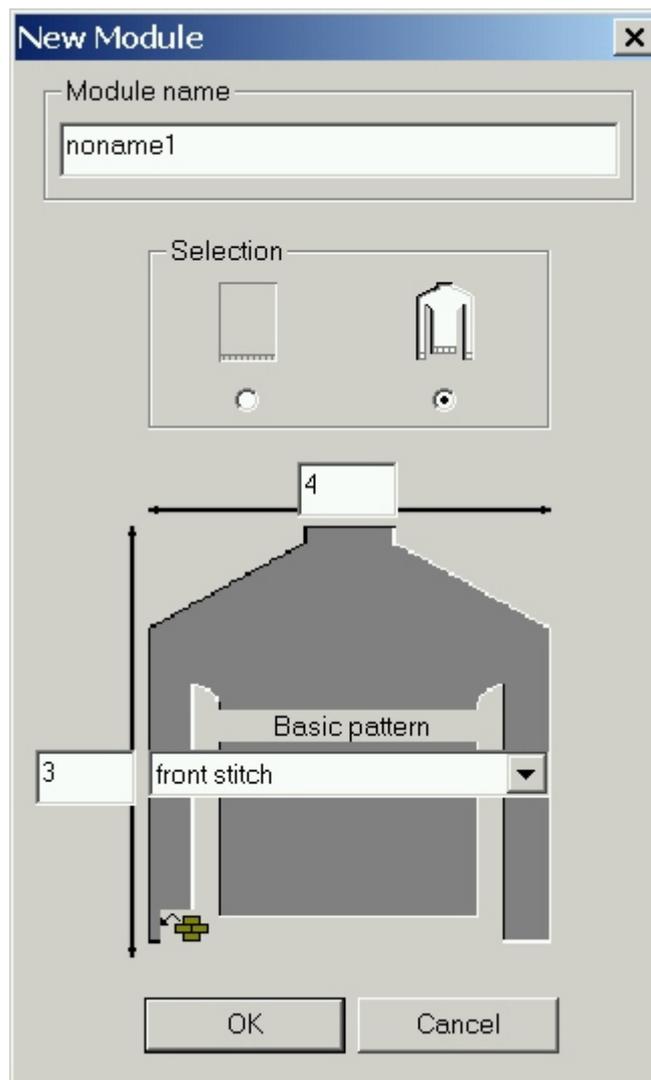
Setting	Use
Protection Rows	with following protection rows at the rear layer 
Neckline open left Protection Rows	Neckline with opening at the left side and following protection rows 
Neckline open right Protection Rows	Neckline with opening at the right side and following protection rows 
Neckline open left + right Protection Rows	Neckline with opening at the left and right side and following protection rows. 
Neckline open L0 + L1 Protection Rows	Neckline at the front and rear layer with following protection rows. 
Cap	Binding-off at the end 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. 
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. 

8 Generate own k&w modules

Generate own k&w modules:

For knit and wear the user can create his own modules.

1. Call up the "New Module" dialog box via "Module" / "New Module...".



2. Make settings:

- Specify module name.
- Set k&w option.
- Specify the size of the module, the width and the height.
- Specify basic pattern.

3. Confirm settings with "OK".

4. The "Properties of: xx" dialog box appears.
Activate "knit & wear module" in the "Technical" tab.

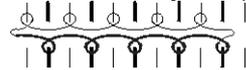
5. Specify the knitting layer (front / back / both).
 6. Confirm the settings in the dialog box with "OK".
 7. Generate the knitting procedure in the "module editor".
The module receives the allocation of the previously set layer.
- ➔ If the module is to be used for a back layer, then it must be set to the desired *Allocate knitting layers* [see page 44].

For this purpose, select the desired rows and press the  or  button.

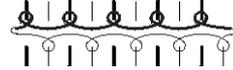


Notes on the knitting cycle:

Modules of layer 0 (front) start always with float on the left side.



Modules of layer 1 (back) start always with stitch on the left side.

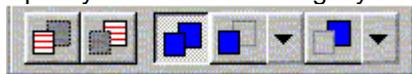


9 Allocate knitting layers

Layer allocation

If you generate a module for k&w or if you insert rows in an existing pattern, then the knitting layer must be specified.

1. To do this, select the desired pattern rows in the "Module editor" or technical view.
2. Specify the desired knitting layer with "k&w Tools"



Icon	Function
	Front row layer
	Back row layer

Switch over to different presentations in the technical and fabric view or in the module editor:

Icon	Name	Function
	All layers	Presentation of front and back layers
	Front layer	"Display the columns of the knitting layer only"
		or "Display all columns"
	Back layer	"Display the columns of the knitting layer only"
		or "Display all columns"

10 ShapeSizer: Raglan with neck gore for TC-T

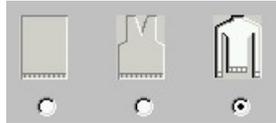
Pattern data	Pattern picture
Raglan with neck gore Pattern width: 300 Pattern rows: 300	
Machine type	CMS 330TC-T
Gauge	7.2
Start	1X1 - Rib
Basic pattern	fine jersey
Knitting Technique	knit and wear
Description of pattern:	k&w shape "Raglan with neck gore" in single-jersey knitting mode with all needles

10.1 Procedure in the ShapeSizer: Generate a raglan pattern with a neck gore for TC-T

Generate new pattern:

You generate the k&w pattern using the default shape "Raglan with neck gore".

1. Generate new pattern.
2. Select machine.
3. Knit and Wear



4. Specify the pattern size:
Width: 350
Height: 350



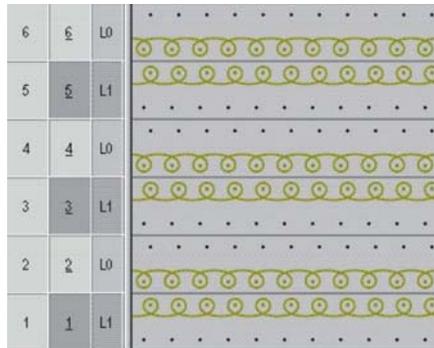
Width and Hight are depending on the size of the shape.
The size of the pattern field is doubled by the use of k&w technique automatically.

5. Specify the knitting mode: Jersey fine.
6. Confirm specifications with "OK".
The pattern field appears.



With a k&w patter you will specify the start later on.

II. Select the presentation of knitting layers:



Display of front and back knitting layers.

➔ Select the presentation of the knitting layers with the "k&w Tools" toolbar.



	Name	Function
	All layers	Presentation of front and back layers.
	Front layer	with the option: "display the columns of the knitting layer only" or: "display all columns"
	Back layer,	with the option: "display the columns of the knitting layer only" or: "display all columns"

- or -

➔ Set one of the following presentations in the fabric and technical view in the context menu:

- k&w highlight layer. (Only possible in the technical view)
- k&w show both layers.
- Display k&w front layer with back columns.
- Display k&w front layer w/o back columns.
- Display k&w back layer with front columns.
- Display k&w back layer w/o front columns.

10.2 Generate shape in the ShapeSizer and position it: Raglan pattern with a neck gore for TC-T

Open and edit shape with the ShapeSizer:

1. Open the program "ShapeSizer" with the menu "k&w Shape" / "ShapeSizer...".
2. Open the desired shape "Raglan with neck gore" in the overview with a double-click.
3. Enter the stitch ratio.



The stitch density (3) is used in the further processing.

The screenshot shows the M1 ShapeSizer interface for the 'Raglan with neck gore' shape. It includes a 'Stitch density' section with input fields for 'Wale / 100 mm' (value 26) and 'Stitch rows / 100 mm' (value 38). A 'Stitch density table' is visible at the bottom, with a 'Gauge' set to 'E 5 2'. The table has columns for 'Stoll', 'Own 1', 'Own 2', 'Own 3', 'Own 4', 'Own 5', and 'Own 6'. The 'Wale' and 'Stitch rows' rows show values of 26 and 38 respectively in the 'Stoll' column, and 0 in the 'Own' columns.

	Stoll	Own 1	Own 2	Own 3	Own 4	Own 5	Own 6
Kommentar	RL						
Wale	26			0	0	0	0
Stitch rows	38			0	0	0	0

	Function
1	Graphic presentation of the shape
2	Unit of measure: Select the mm or inch measure unit.
3	Stitch density: Number of stitches in the width (wales) and height (rows) = stitch ratio
4	All needles: Select k&w-pattern for CMS machines with additional beds.
5	Selection list for the gauge
6	Gauge-dependent stitch density table
7	Stoll default stitch ratio for the back-layer knitting mode
8	Input fields Own 1-6 : Define your own stitch ratios for the various knitting modes.
9	Transfer of the stitch ratio from the column to the input fields for the stitch density (2)
10	Go back to the "Shape selection" page.
11	Continue to the next dialog window of the ShapeSizer

4. Select "k&w all needles" under (4).



The selected shape with the Stoll standard attributes for TC-T gets open. The default attributes are saved in the files "defaultform_.....shp" in accordance with the shape elements (**FRONT / BACK / SLEEVE / COLLAR**).



5. Open the next dialog window with .
6. Generate the size table.



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



7. Open the next dialog window with .
8. Make settings for widening, binding-off the sleeve and narrowing.



9. Open the next dialog window with .



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

The selected size with the Stoll default attributes (defaultformshp) is saved under the same name in the same directory.

When saving, ensure proper directory path!

Save all shape elements in a common directory.

- or -

→ Open the next dialog window with



The selected size will be saved asshp file to the directory when opening the window.

10. Open the next dialog window with



Knitting cycles will be determined and saved as kaw file in the directory.

A "Multiple-step narrowing" module is inserted in the Fair Isle area automatically.

11. Press the icon with the checkbox (3) activated.

The kaw file will be laid on the open pattern.

- or -

The "New module" dialog box appears and the ShapeSizer will be closed then.

- or -

→ Press the icon with the checkbox (3) deactivated.

The kaw file will be laid on the open pattern.

- or -

The "New module" dialog box appears.

The ShapeSizer remains open and the next size can be edited.

- or -

→ Press the key.

The kaw file will be opened in the Shape Wizard.

The ShapeSizer remains open and the next size can be edited.

11 Mirroring module

When generating the k&w motif, you can use so-called mirroring modules. A mirroring module can be allocated to the front knitting layer (L0) or to the back knitting layer (L1).

I. Mirroring modules in the module explorer:

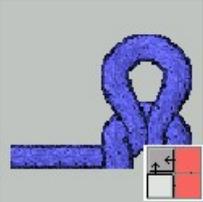
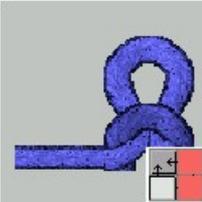
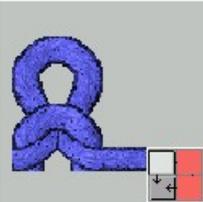
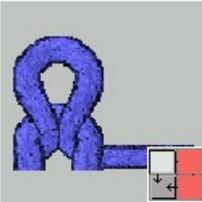
The mirroring modules are stored in the module explorer under "Modules" / "knit and wear" in the subgroups:

- Binding elements
- Ribs
- Cable one side float
- Cable both side float
- Aran
- Petinet
- k&w_basic pattern

II. Example of mirroring modules:

Modules can be inserted mirrored:

- In the front knitting layer (L0)
- In the back knitting layer (L1)
- Mirrored left right

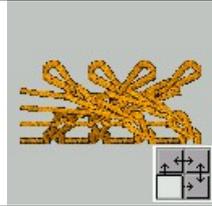
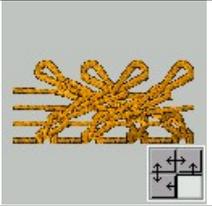
Example of mirroring modules		
	Jersey	Reverse jersey
Modules for L0 (front) 		
Modules for L1 (back) 		

III. Switch over mirroring modules:

→ Mirror the module for Layer 0 with the button  at the bottom.

→ Mirror the module for Layer 1 with the button  at the top.

→ A module containing a racking direction can also be switched over with the  and  buttons.

	
Cable 2X2 <	Cable 2X2 >
Racking direction left	Racking direction right

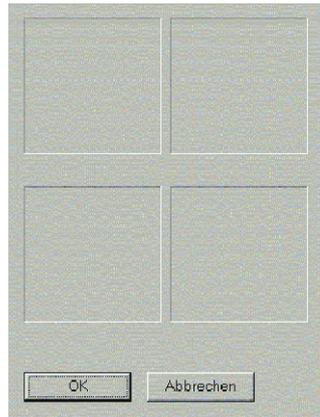


Mirroring modules can be used with ordinary drawing tools.
 Mirroring modules are automatically set to the correct stitch row (layer).

11.1 Generate and edit mirroring modules

I. Generate container module mirroring:

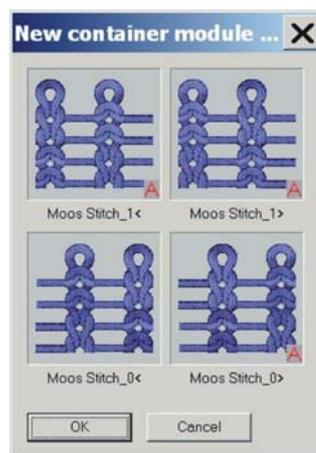
1. Open via the "Module" / "Generate Container Module Mirror...." menu.



2. Drag the module to be mirrored into the container "Mirroring module" to the position at the **bottom left** with drag & drop.



Only modules which are not mirrored may be inserted.



Mirroring positions

Mirrored toward the back (L1)	Mirrored toward the back right (L1)
Original (L0)	Mirrored to the right (L0)

The module is automatically shown in the mirrored positions.

- Mirrored modules are automatically marked with the  symbol.
- Automatically generated modules do not exist in the module database.

- If the original module name contains the ending "_0<", then it changes for the automatically generated modules in accordance with the direction and layer.
 - For mirroring modules that are not wider than one stitch, the module in the right-hand column of the container is inserted without being mirrored. Mirroring is only carried out for the back layer.
 - Self-generated modules can be allocated to the container in one of the four positions with drag & drop.
 - Different modules can be allocated for front and back layer.
3. Click the "OK" button.

The module will be saved under "New Modules".

II. Edit mirroring module:

After a module is inserted in the mirroring tool, 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 mirroring	Mirroring can be deactivated for the right-hand side.
Explorer	The module explorer is opened.

→ With "Edit" the "Module editor" opens and the module can be edited.



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

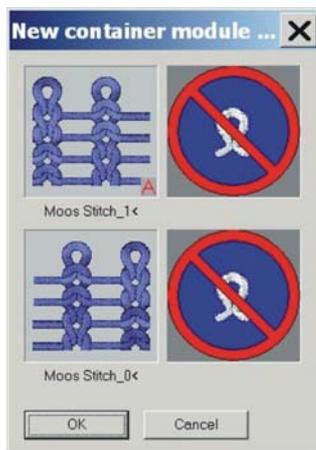
III. Create mirroring module for back layer only:

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

1. Call up the context menu in the mirroring container and activate "Do Not Generate Mirror".



2. Drag the module to be mirrored to the **lower left** position and drop it there.



3. Click the "OK" button.

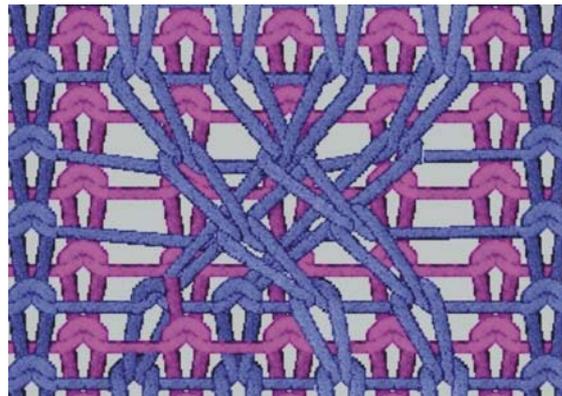
The module will be saved under "New Modules".

12 Auxiliary functions for pattern design

I. Design a pattern:

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

1. Switch the Technical View or the Fabric and Symbol View to the L0 knitting layer via the  icon
 - ➔ Display the columns of the knitting layer only
 - or -
 - ➔ Display all columns
2. Generate the motif by drawing in modules on **knitting layer 0**.



Cable cross-over on layer L0

II. Apply the pattern design from the front (L0) to the back (L1):

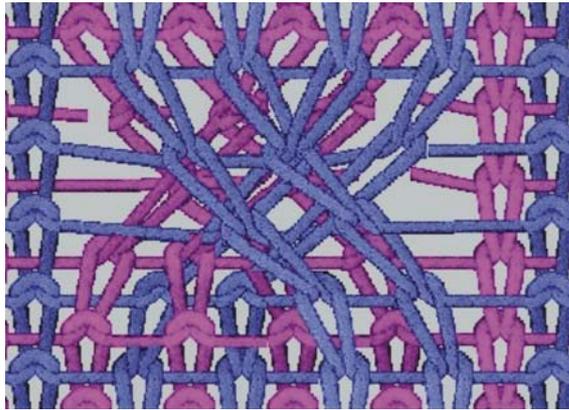


This function is only possible for mirroring modules.

1. Run the auxiliary functions for pattern design via "Module" / "k&w Pattern Design Auxiliary Functions"
2. Click on the "Apply pattern design from front to back" checkbox.
 - ➔ without selection
 - The entire pattern design will be transferred from layer L0 to layer L1.
 - or -
 - ➔ with selection
 - The selected area of layer L0 will be transferred to layer L1.

3. Move the back vertically relative to the front with the "Vertical shift in pattern rows" input field.
 - Specified number without sign up by **n** pattern rows.
 - Specified number with negativ sign down by **n** pattern rows.
4. Activate the option "module", "color" or both.
5. Execute with "Apply".

The design will be transferred from layer L0 to layer L1.



A mirrored module is inserted with the same racking direction.

Example: For layer L0 the module "XX_0<" and for layer L1 the module "XX_1<" will be inserted.

III. Mirror the back at the Y-axes:

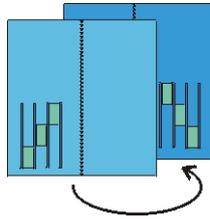
1. Run the auxiliary functions for pattern design via "Module" / "k&w Pattern Design Auxiliary Functions"



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

2. Click on the "Mirror back on vertical center axis" checkbox.
3. You can move the back vertically via the "Vertical shift in pattern rows" entry field:
 - Specified number without sign up by **n** pattern rows.
 - Specified number with negativ sign down by **n** pattern rows.

4. Execute with "Apply".



The design and the modules will be mirrored around the center axis and transferred to the back.

Example: For layer L0 the module "XX_0<" and for layer L1 the module "XX_1>" will be inserted.

13 The module explorer for Stoll knit and wear®

The k&w modules are stored in various groups and subgroups under k&w in the Module Explorer.

Module group	Subgroups	Remarks
"k&w Technique"	"Widening" "Narrowing" "Bind-off" "Start V-neck" "Fade out" "k&w replacement modules" "Intarsia border processing" "Shape correction" "connections" "Transferring inward sleeves" "Shape edge start" "Shape edge end" "Knit-in/knit-out" "Knit-in before Start" "Collar modules" "Multi-step narrowing"	These modules are used automatically by the technical function.
"k&w-Starts"	"Stoll" "Private" "Stoll-TC-T"	The module groups "Stoll" and "Stoll TC" contain the starts for: Sweater/Cardigan Tank top/Top/Vest Short sleeve The type of start will be selected automatically based on the shape.
"k&w Favorites"	Often used module groups can be saved in the "k&w Favorites" module group. 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" "Binding elements-TC-T" "k&w basic pattern" "Pointelle TC-T" "Cable at the shape edge"	Subgroups for pattern generation
"k&w knitting cycles"	"Stoll" "Private" "favorites/basic shape types" "For automatic only"	

14 Settings in Configuration k&w dialog box

With this dialog box you make different settings for **technical editing** that apply to the entire pattern.



Changes in the "Configuration" dialog box made after the **Technical editing** are retained, even if you run the "Load Pattern Before Technical Editing" function in the "Knitting technique" menu.

Call up the "Configuration" dialog box:

1. Open the "Knitting Technique" menu in the menu bar.
2. Call up the "Configuration..." function.

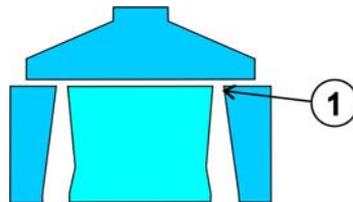
The dialog box will appear with its tabs.

14.1 Knitting zones tab

Distance between body / sleeve

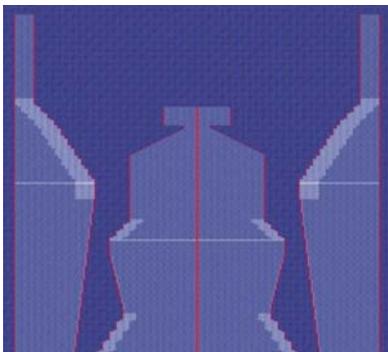
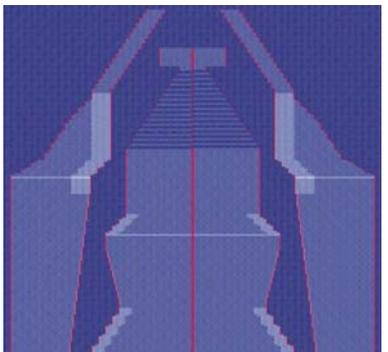
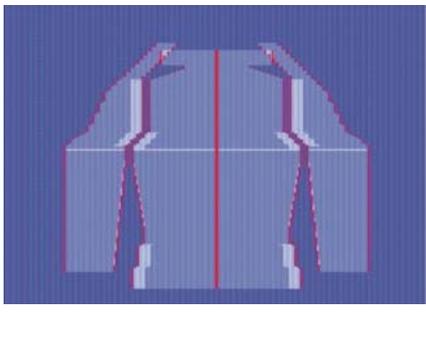
During the production of the fabric pieces sleeve and body, a distance must be taken into account for yarn carriers.

The distance between the sleeve and body (1) for the sleeve cross-over can be set to 0 / 2 / 4 / 6 etc. needles.



Cut

Display modes before cutting out the shape:

"Cut folded out"	"Cut folded inward"	"Cut folded in without length compensation"
		

Knitting-in all yarn carriers before the start

- Checkbox inactive (default setting)

No yarn carrier will be knit in before knitting start.

- or -

- Activated checkbox

All yarn carriers will be knit in before knitting start.

14.2 Transfer tab

Transfer surrounding



Settings apply to the entire pattern.

Setting	Meaning	Result
	Separate layer (Default) Return the surrounding area back to the original layer	
	Collect layer Transfer the surrounding area to a needle bed. (collect)	
Off	Do not return the surrounding area to its layer.	

- "Transfer from racking step" 1 / 2 / 3./.../10.

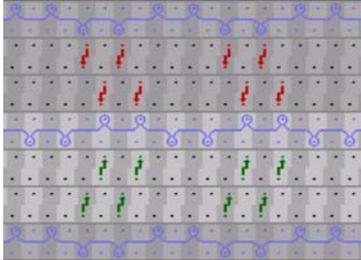
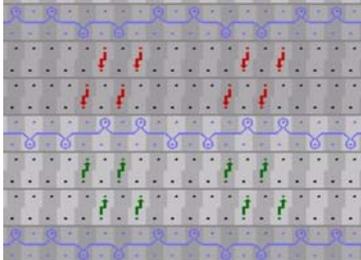
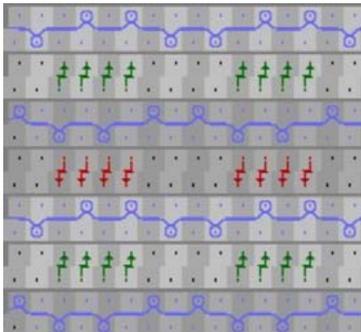


The desired type of "Transfer surrounding" can be inserted in an area with the control column .

Separate transfer layers



Settings apply to the entire pattern.

Setting	Meaning	Result
"Open-layer transferring (1)"	Transfer last knitted layer at first (Default).	
"Transfer covering the layer (2)"	Transfer last knitted layer at last	
"Off"	No setting	



The desired type of "Separate transfer layers" can be inserted in areas with the control column .

14.3 Intarsia and Intarsia all needles TC-T tab

Knitting-in

Adjustments	Meaning
"with knot"	No function
"Binding"	Same function as for intarsia binding.
"Feed-in"	"Cast off in front of layer L0" = feed on L0 with casting off
	"Cast off behind layer L1" = feed on L1 with casting off
	"Float TC-T" = knit-in and knit-out with floats (no connection)
	"Float" = knit-in and knit-out with floats (no binding)

Knots

Adjustments	Meaning
"Shape edge"	"Knots 1 border" A knot can be formed on the shape edge at the start and end of a yarn field. i : Make the setting before the yarn field view is opened the first time.
	"Knots connection of tubes" Knot at end of sleeve-body connection, i.e. before looping-out yarn carrier
	"Knot for connection of tubes TC-T" "Knot for TC-T at end of sleeve-body connection, i.e. before looping-out yarn carrier
	"Knots"
"Connection of tubes"	Same setting options as under "Shape Edge"

Selvedge editing

Adjustments	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 float in 1x1 Module width = 2
	"Tuck fine (2)" Feeding with float and tuck in with all needles Module width = 2
	"Tuck fine (3)" Feeding with float and tuck in with all needles Module width = 3
	"Tuck fine (4)" Feeding with float and tuck in with all needles Module width = 4
	"Front stitch fine" Feeding with stitch on all needles Module width = 1
"Reduce"	No functionality
"Allowed steps"	Same functions as with intarsia

14.4 Additional settings tab

Open Fabric Take-down

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

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

Combine yarn carriers

→ Checkbox inactive (default setting)

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

→ Activated checkbox

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



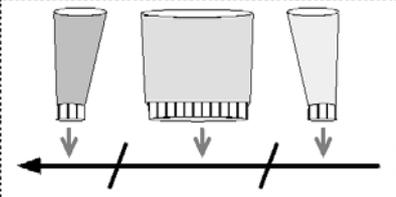
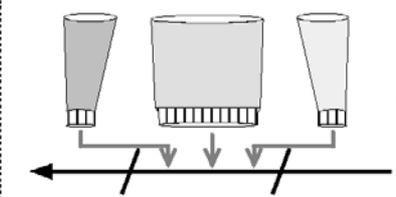
The "Combine Yarn Carriers" setting is recommended for structured patterns, as this frees up knitting systems for transfer.

Not necessary for single jersey patterns, as no transfer is done here.

"Yarn field allocation": Combine yarn carriers within an area:

1. Open yarn field view .
2. Select the area in which the color sequence is to be changed in the row list of the yarn field view.
3. Run "Display technical row data"/"Knitting Sequence..." in the row bar via the context menu.

4. Make setting.

Setting	Result	
 Yarn carriers are not combined	Use 3 systems for sleeve, body, sleeve	
 Yarn carriers combined	Use 1 system for sleeve, body, sleeve	

5. Make settings and confirm with "Apply" or "OK".

The yarn carriers are combined in the selected area.

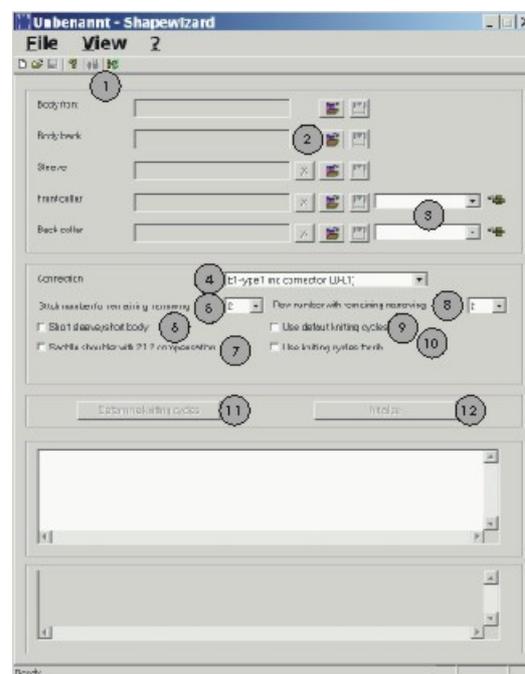
15 Generate k&w pattern with the Shape wizard

15.1 Combine shape elements

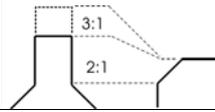
Combine the shape elements to form a k&w shape:

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

➔ Run the program "Shape wizard" via the menu "k&w Shape" \ "Shape wizard (Put Together k&w Shape...)".



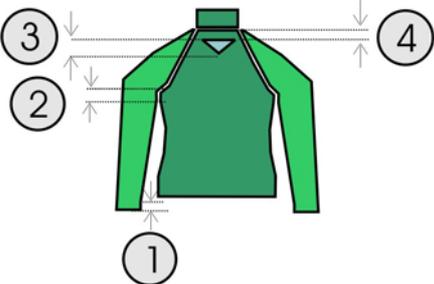
15.1 Combine shape elements

No.	Function	
1		Open the graphic presentation in order to define the docking points.
		Update of the knitting cycles loaded at the start of the shape wizard. Meaning knitting cycles newly saved in the Module Explorer after starting the Shape wizard 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		Specify the type of the sleeve-body crossover.
5		Select the number of stitches per remaining narrowing.
6		Short sleeve/short body
	activated	Length compensation between sleeve and body will be knit with residual yarn.
	deactivated	Length compensation between sleeve and body will be done by suspension.
7		Saddle shoulder with 2:1:2 compensation
	activated	The shape with saddle shoulder will be edited in the 2:1 ratio.
	deactivated	The shape with saddle shoulder will be edited in the 3:1 ratio (default).
		
8		Select the number of knitting rows per remaining narrowing.
9		Use default sequence
	activated	For all areas for which no knitting cycle could be determined, the standard cycle x will be inserted. This one must be overwritten in the shape view later on.
	deactivated	For all areas for which no knitting cycle could be determined, no knitting cycle will be inserted.
10		Use knitting cycles for rib
	activated	Knitting cycles for the knitting mode 2x2 rib will be used.
	deactivated	Knitting cycles matching all other knitting modes will be used.
11		Determine the knitting cycles with the set specifications.
12		Delete the set knitting cycles.

- [Generate k&w pattern with the Shape wizard](#)[see page 68]

15.2 Shape wizard: Raglan with neck gore

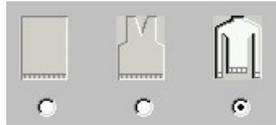
Pattern data	Pattern picture
File: Raglan with neck gore Pattern width: 280 Pattern rows: 280	
Machine type:	CMS822
Gauge:	6.2
Start:	1X1 - Rib
Basic pattern:	Jersey
Knitting technique	knit and wear
Description of pattern:	k&w shape Raglan with neck gore and collar

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

15.2.1 Generate pattern and shape: Raglan with neck gore

I. Generate a knit and wear pattern:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 280
Height: 280



Width and Hight are depending on the size of the shape.
The size of the pattern field is doubled by the use of k&w technique automatically.

5. Knitting mode: "Jersey".
6. Confirm specifications with "OK".



With a k&w patter you will specify the start later on.

II. Generate the shapes for the front and back in the shape editor:

- ➔ Generate the shapes for the elements front and back of the body, sleeve and collar in the shape editor.



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

1. Open the shape editor via "k&w Shape" / "Generate/Edit Shape...".
2. Select a "k&w" entry under "General Shape Data".



3. Set "Input Shape" to **Stitches**.
4. Activate **mirrored** setting under "Elements".

5. Specify starting width.
6. Create the table with "Left Lines>>" and enter the values for the front and 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		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	

Front / Back

7. Allocate the desired attributes **Widening** and **Narrowing** to the edges under "Function".
8. Generate a shape for the back with the same specifications as for the front.

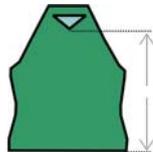
III. Insert the neck gore element in the front:

1. Open the **Raglan Front** shape.
2. Generate a new element in the shape editor via the  icon.
3. Select the **Gore** entry in the "Type" section list.
4. Specify the coordinates for the neck gore.

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		40	-80	12	-24	2	-4	6	0	0	0	
3		6	0	2	0	2	0	1	0	0	0	
4		0	93	0	28	0	29	1	0	0	0	

Neck gore in the front

5. Specify the distance to the "base line" or to the "end line".



Do not connect the gore element to the end line.

IV. Generate the shape for the sleeve in the shape editor:

1. Generate a shape for the sleeve.

15.2 Shape wizard: Raglan with neck gore

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	

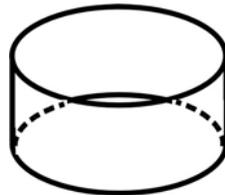
Sleeve

- 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.

V. Generate the element for the collar in the shape editor:



Stand-up or turtleneck 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	33	0	10	0	10	1	0	0	0	Link-off

Collar front and back

- 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 shapes in the directory created beforehand with "File"/"Save" or "Save As".



Save all shape elements in the same directory.

VI. Load shape elements in the Shape wizard:

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

- Run the "Shape wizard" program via the menu "k&w Shape"/"Shape wizard (Put Together k&w 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".



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.

4. Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.
5. Specify the knitting mode of the collar via the selection menu.



Whatch out by the element for the collar:

- 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.

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

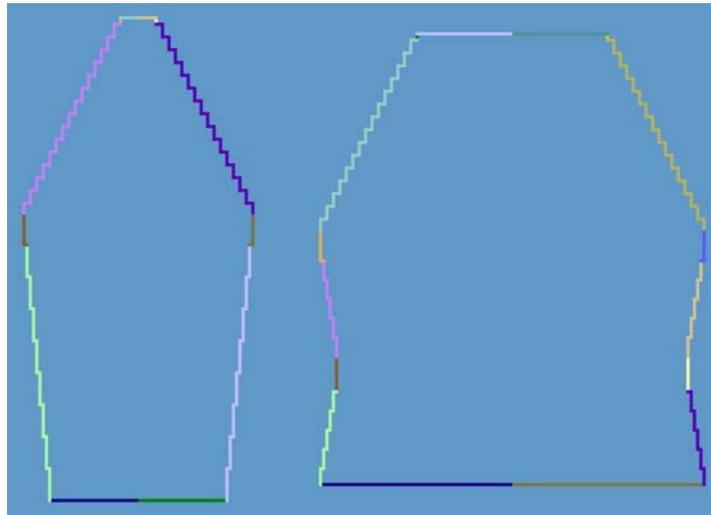
Setting	Use
B1-type 1 (no connection L0-L1)	Continous stitch rows in the front, i.e. no opening. No connection of both knitting layers.
B1 Type 1 TC-T (no connection L0-L1)	Knitting cycle for patterns for CMS machines with additional beds. Continous stitch rows in the front, i.e. no opening. No connection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

15.2.2 Shape wizard: 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:

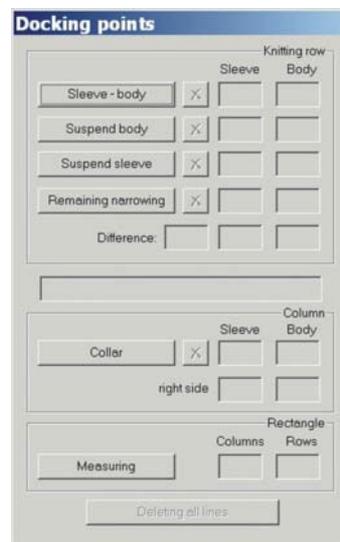
➔ Open the "Docking points" dialog box with the  icon in the toolbar of the "Shape wizard".



Graphical display of the shape



The determined knitting cycles are shown in color in the graphical Shape Display.



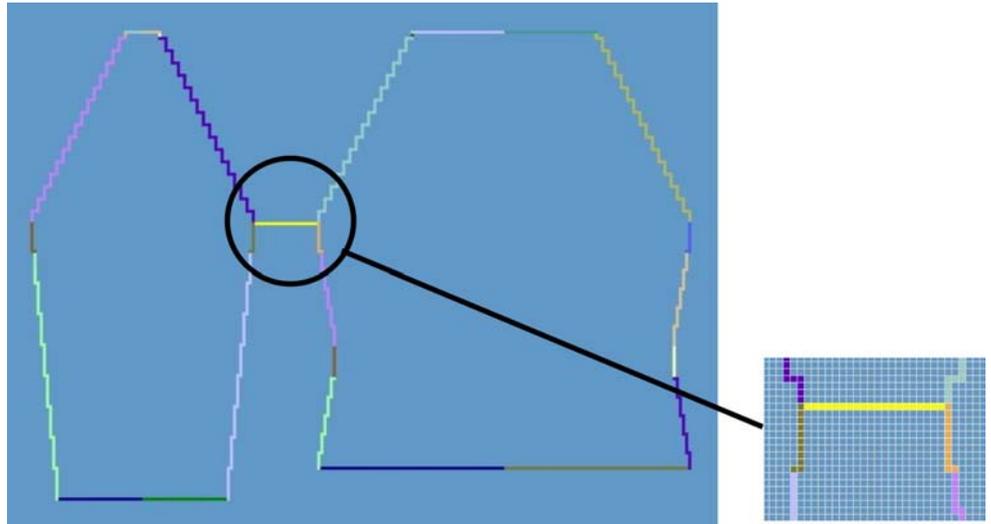
Docking points (dialog box)

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.
"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. Specify the docking points for raglan:

→ Docking point "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.



Docking point sleeve - body

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.

Correction of docking points:

→ Move 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.

→ Docking point "Collar".

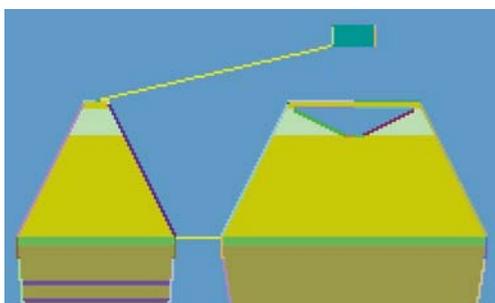


Docking point for the collar

- 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.

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

1. Define the docking points for "Sleeve-Body" and for "Collar" in the "Docking points" dialog box.
2. Press the "Determine knitting cycles" button.



Determined knitting cycles

Key	Function
"Determine knitting cycles"	By pressing the "Determine knitting cycles" button, the shapes are checked and the sequences required for technical editing are determined.
"Initialize"	The determined knitting cycles are deleted and the shapes are reloaded. A redetermination of the knitting cycles is required for further editing.

3. Save the shape as kaw file via the "File" / "Save" or "Save as" menu or .



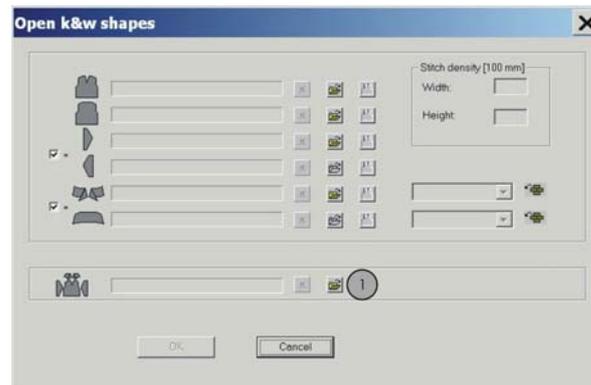
The elements of the shape (front, back, sleeve and collar) and the **kaw** file must all be located in the same directory .

4. Close the "Shape wizard" dialog box.

15.2.3 Position shape and complete pattern: Raglan with neck gore

I. Position and use k&w shape:

1. Open "k&w Shape"/"k&w Open Shape and Position" menu.



2. Load the shape with the extension ... **.kaw** via the  button at (1).
3. Confirm the selection with "OK".
4. Position shape elements sleeve/body on basic motif.
5. Cut shape.
 - ➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



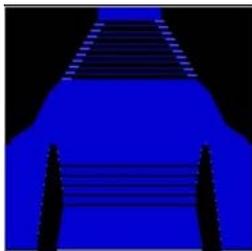
This prompt appears with uneven narrowing widths only.

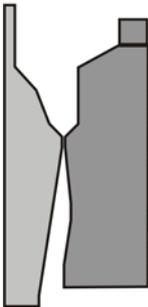
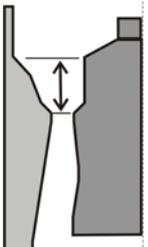
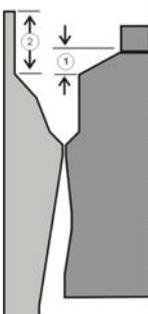
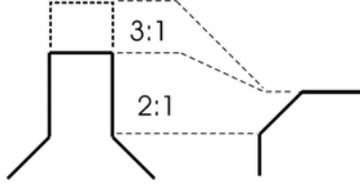
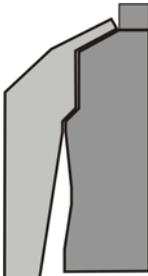
- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
6. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
7. Use narrowing and widening.
8. The "Insert/replace k&w start" dialog box appears.
9. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
10. Use binding-off.

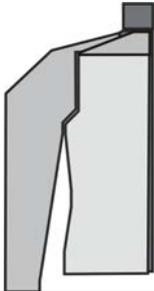
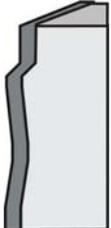
II. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.
 - *Fundamental rules to generate a k&w shape*[\[see page 5\]](#)
 - *Combine shape elements*[\[see page 69\]](#)
 - *Settings in Configuration k&w dialog box*[\[see page 60\]](#)

15.3 Shape wizard: Saddle shoulder with 2x2 rib

Pattern data	Pattern picture
File: saddle shoulder Pattern width: 250 Pattern rows: 280	
Machine type:	CMS822
Gauge:	6.2
Start:	2x2
Basic pattern:	2x2 - Rib
Knitting technique	knit and wear
Shape	 <p>The saddle shoulder shape contains a flat-shaped shoulder in the front and back. This requires frequent, closely-spaced narrowings. On the other hand, the sleeve is knit straight on. This part of the sleeve lies on the flat-shaped shoulder.</p>

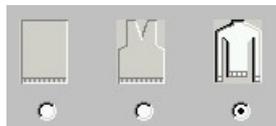
Rule	Presentation	Description
1		<p>Normally with a saddle shoulder the shape of the sleeve is longer than the shape of the body.</p> <p>Length differences between the sleeve and body are compensated automatically with all shapes up to the sleeve body connection.</p>
2		<p>The number of rows in the sleeve and body must be equal from the sleeve-body connection up to the shoulder edge in the body.</p>
3		<p>Specify the number of rows for the saddle: You can have two or three times the number of rows in the saddle (2) than in the shoulder edge of the body (1).</p>
4		<p>Row compensation 3:1 or 2:1 A 3:1 row compensation will be used as default. If a 2:1 compensation shall be used, then activate "Saddle shoulder with 2:1 compensation" in the Shape wizard.</p>
5		<p>Due to the different number of knitting rows, the saddle adapts to the shoulder.</p> <p>The row ratios of the saddle to the body: The shoulder edge in the body should contain a narrowing by three stitches in each row.</p>

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

15.3.1 Generate pattern and shape: Saddle shoulder with 2x2 rib

I. Generate a knit and wear pattern:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 250
Height: 280
5. Knitting mode: 2x2 Rib.
6. Confirm specifications with "OK".



With a k&w patter you will specify the start later on.

II. Generate the shapes for the front and back in the shape editor:

- ➔ Generate the shapes for the elements front and back of the body, sleeve and collar in the shape editor.



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

1. Open the shape editor via "k&w Shape" / "Generate/Edit Shape...".
2. Select a "k&w" entry under "General Shape Data".



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

15.3 Shape wizard: Saddle shoulder with 2x2 rib

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-166	0	-60	0	-60	1	0	0	0	Basis
2	✓	66	22	32	8	0	0	0	0	0	0	Narrowing
3		20	0	10	0	10	0	1	0	0	0	
4		100	-22	48	-8	6	-1	8	0	0	0	Widening
5		20	0	10	0	10	0	1	0	0	0	
6	✓	25	33	12	12	0	0	0	0	0	0	Narrowing
7		79	0	38	0	38	0	1	0	0	0	
8		16	66	8	24	1	3	8	0	0	0	Narrowing
9		4	0	2	0	2	0	1	0	0	0	
10		0	66	0	24	0	24	1	0	0	0	

Front / Back

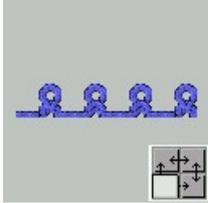
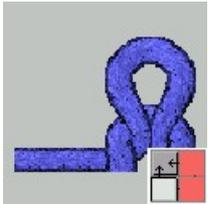
Lines Editor Line 2 left

	Factor Grouped	Group	Height Steps	Width Steps	Factor
			32	8	
	2	1	15	2	1
	0	1	1	2	1

Lines Editor Line 6 left

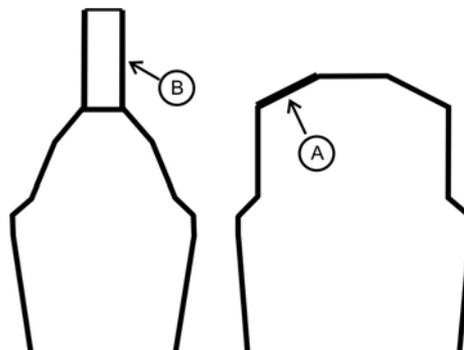
	Factor Grouped	Group	Height Steps	Width Steps	Factor
			12	12	
	3	1	3	2	1
	0	1	1	2	1

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

Adjustments			
Narrowing	Fade-out type	2x2 - Rib	
	Fade-out width	9	
	Type of narrowing	Body-rib	
	Narrowing width	9	
Widening	Fade-out type	Jersey	
	Fade-out width	1	
	Widening type	Standard	
	Widening width	1	

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.

Adjustments			
	Fade-out type	Jersey	
	Widening type	Standard	
	Widening width	1	

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

Setting		
Line 6		
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



Do **not** select the narrowing type for 2x2 rib in the sleeve.

IV. Generate the shape element for the collar:

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

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

Collar

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

Adjustments		
Line 3		
Bind-off	Binding-off type	Neckline Fast cut-out

V. Load shape elements in the Shape wizard:

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

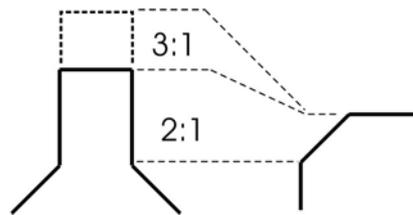
- Run the "Shape wizard" program via the menu "k&w Shape"/"Shape wizard (Put Together k&w Shape...)".
- Load a shape for the "Body front" element with the  button.

15.3 Shape wizard: Saddle shoulder with 2x2 rib

3. Select shape.
4. Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.
5. Specify the knitting mode of the collar.
6. Specify stitch cross-over.

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.
B1 Type 1 TC-T (no connection L0-L1)	Strickablauf für Muster der CMS-Maschine mit Zusatzbetten. 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" if you do not want the default ratio 3:1.



8. Activate the "Use knitting cycles for rib" checkbox if the basic pattern is knit as 2x2 rib.

15.3.2 Shape wizard: Docking points Saddle Shoulder

The docking points form the knitting connection of the singular elements.

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

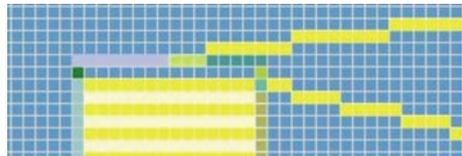
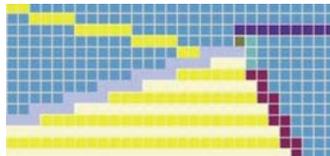
- Open the "Docking points" dialog box with the  icon in the toolbar of the "Shape wizard".

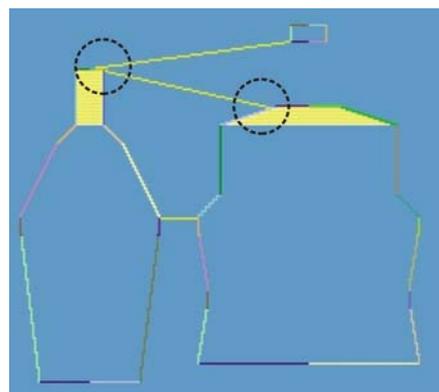
II. Specify the docking points for saddle shoulder:

- Docking point "sleeve - body".
- Docking point "suspend body".
From the third-to-last row of the sleeve to the third-to-last row of the body.



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

Docking point Suspend Body	
Sleeve - saddle	Body - shoulder
	

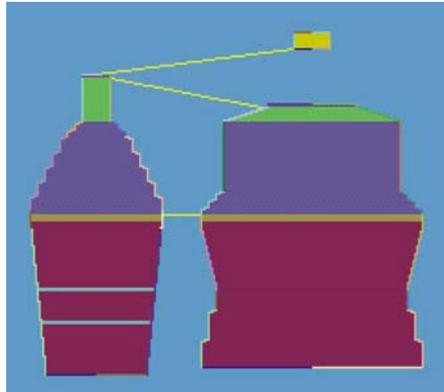


- Docking point "Collar"
Specify the sleeve-collar docking points.

The width of the color element is adopted by the docking point.

III. Determine knitting cycles:

1. Press the "Determine knitting cycles" button.



Shape with knitting cycles



The determined knitting cycles can be deleted with the "Initialize" button.

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



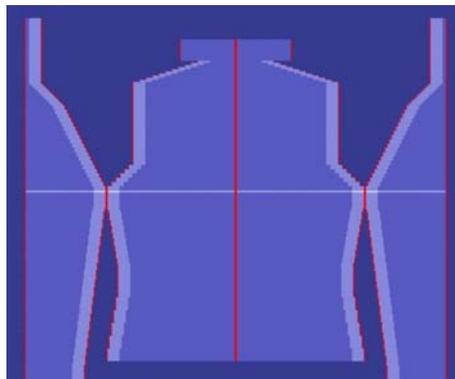
The elements of the shape (front, back, sleeve and collar) and the **kaw** file must all be located in the same directory .

3. Close the "Shape wizard" dialog box.

15.3.3 Position shape and complete pattern: Saddle shoulder with 2x2 rib

I. Position and use k&w shape:

1. Open "k&w Shape"/"k&w Open Shape and Position" menu.
2. Select the shape with the ending **.kaw** and load with "Open".
3. Position shape elements sleeve/body on basic motif.



4. Insert the "Cut", "Fade Out", "Insert Narrowing and Widening" of the shape in individual steps.

- or -

➔ "Use shape (cut, hide, narrow)" in one step.

5. Cut shape.

➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.

6. Fade out shape.

The "Replace modules cut into" prompt appears for modules which are cut into by fading out.

7. Use narrowing and widening.

8. The "Insert/replace k&w start" dialog box appears.

9. Select a start and confirm the dialog box with "OK".

The start will be inserted in the k&w pattern.

10. Call up "k&w Shape / Insert Binding-Off".

- or -

➔ Have binding-off automatically inserted by the technical editing.

11. Open "Yarn field view" and check yarn carriers.

12. Make settings in "configuration".

III. Complete the pattern:

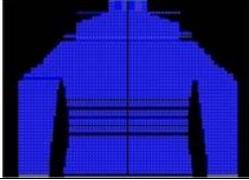
1. Automatical or stepwise technical editing.

2. Generate a Sintral.

3. Conduct Sintral Check.

- *Settings in Configuration k&w dialog box* [see page 60]

15.4 Shape wizard: Cardigan with inserted sleeve

Pattern data	Pattern picture
File: Inserted sleeve Pattern width: 280 Pattern rows: 280	
Machine type:	CMS 822
Gauge:	6.2
Start:	1X1 - Rib
Basic pattern:	Jersey
Knitting technique	knit and wear

For the cardigan, you can use the same shape elements as for **inserted sleeve**.

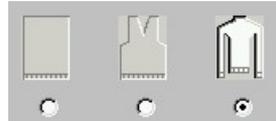
However, in the front you must insert the elements **opening** and **gore**.

Rules for a cardigan with inserted sleeves	
	
1	Front with separation over the entire height
2	Collar in front with separation over the entire height
	Docking points on an even row number of the body

15.4.1 Generate pattern and shape: Cardigan with inserted sleeve

I. Generate knit and wear pattern with shape:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 280
Height: 280



Width and Hight are depending on the size of the shape.
The size of the pattern field is doubled by the use of k&w technique automatically.

5. Knitting mode: Jersey.
6. Confirm specifications with "OK".



With a k&w patter you will specify the start later on.

The basic pattern is shown with the front and back knitting layers.

<u>6</u>	L0	
<u>5</u>	L1	
<u>4</u>	L0	
<u>3</u>	L1	
<u>2</u>	L0	
<u>1</u>	L1	

II. Generate the shapes for the front and back in the shape editor:

Generate the elements for the front and back of the body, sleeve and collar.



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

1. Open the shape editor via "k&w Shape" / "Generate/Edit Shape...".
2. Select a "k&w" entry under "General Shape Data".



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

Schulterausarbeitung auf zwei Arten:

■ **Gored shoulder with binding-off**

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	Gore
9		6	0	2	0	2	0	1	0	0	0	
10		0	60	0	18	0	18	1	0	0	0	

Front and back with gored shoulder

1. Allocate fade-out and fade-out width to the shape edges in the "Function" column.
2. For the shape edge of the shoulder, select the type **Gore** under "Function".
3. Specify the type of binding-off in the "Bind-off" tab.
 - "Shoulder standard - 01"
 - "Shoulder standard - 02"



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

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

- or -

■ **Narrowed shoulder**

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	-16	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		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	

Front and back with narrowed shoulder

1. Create table in the Shape editor.
2. Allocate the necessary settings to the shape edges.
3. Allocate **narrowing** for the shoulder edge (No. 8) under "Function" in the "General" tab.
4. Set the narrowing type **Shoulder** in the "Narrowing" tab under "Module".
5. Also activate the "k&w-Shoulder narrowing [FRONT]" checkbox in the "Connections" tab.
6. Make the same settings for the back.



However, the "k&w-Shoulder narrowing[VT]" needs not to be activated.

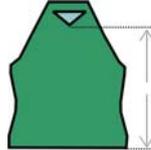
III. Insert the neck gore element in the front:

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 coordinates for the neck gore.

No.	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function
1	0	-6	0	-2	0	-2	1	0	0			
2	20	-40	6	-12	1	-2	6	0	0			
3	6	0	2	0	2	0	1	0	0			
4	0	46	0	14	0	14	1	0	0			

Neck gore element

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



IV. Insert Opening element in the front:

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

- Create a new element for the opening of the cardigan via .
- Select the **Opening** entry in the "Type" section list.
- Insert a new line and specify the height for an opening under "Left Lines".



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

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	

Opening element



Further settings are not necessary for the opening element.

- Save shape.

V. Generate a 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).

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		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	33	0	10	0	10	1	0	0	0	Narrowing

Sleeve

- Assign **Narrowing** to the end line under "Function" in the "General" tab.

2. 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.

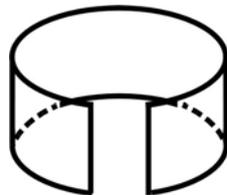
3. Activate the checkbox "k&w Remaining Narrowing (SLEEVE-END)" in the "Connections" tab.
4. Specify the desired number of stitches to be bound-off together with the shoulder in the "Bind off number of stitches with shoulder gore" input field.



With the narrowing of all stitches (remaining narrowing), a little hole arises at the transition from the sleeve to the shoulder. This hole can be closed by binding-off stitches of the sleeve together with the shoulder.

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

For a cardigan or a V-neck element, a collar with an opening in the front is necessary.



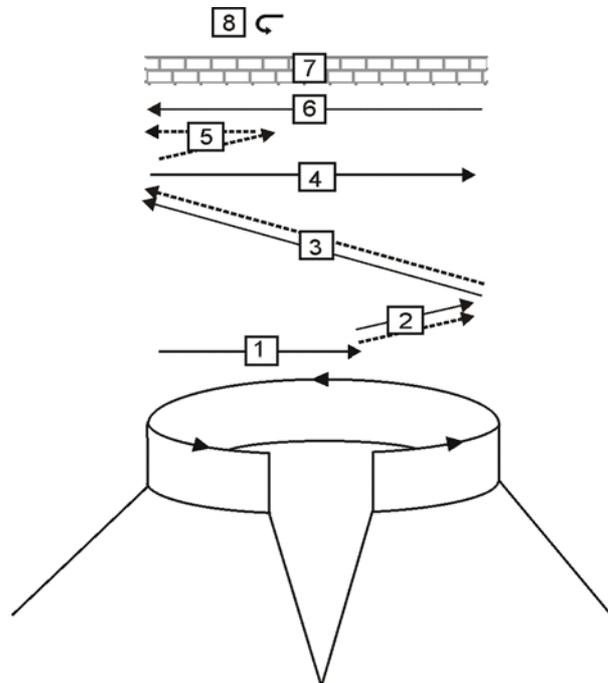
Collar with opening.

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".

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

Basic element collar front and back

4. Set **bind-off** for the end line under "Function" in the "General" tab.
5. Set the binding-off type "Neckline open L0" in the "Bind off" tab for the desired knitting mode.



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 right.
5	Bind off layer 0.
6	Knit draw thread to the left.
7	Protection rows.
8	Fix link-off stitch in place.

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

1. Create a new element under Elements with the  button.
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.



Generate the collar of the back likewise the collar of the front but without the **opening** element.

VIII. Load shape elements in the Shape wizard:

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

1. Run the "Shape wizard" program via the menu "k&w Shape"/"Shape wizard (Put Together k&w 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".



With sleeve and collar the loaded shape can be removed again with the



button.



With the  button you can call up the shape editor in order to correct the loaded shape.

4. Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.
5. Specify the knitting mode of the collar.



Watch out by the element for the collar:

- 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.

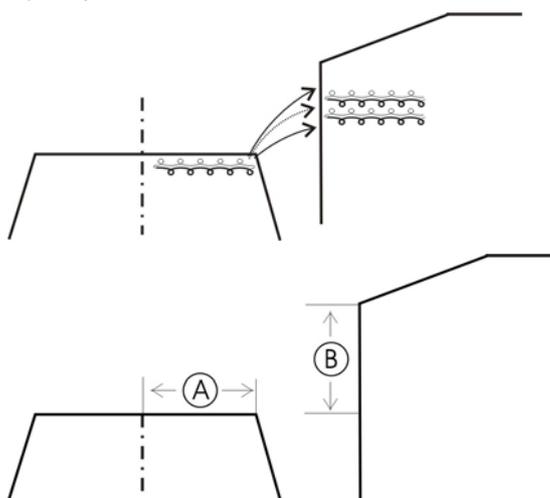


If you change outer dimensions of the front, then you must adapt the back.

6. 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). Verwendung bei k&w-Mustern auf allen Nadeln gestrickt.

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



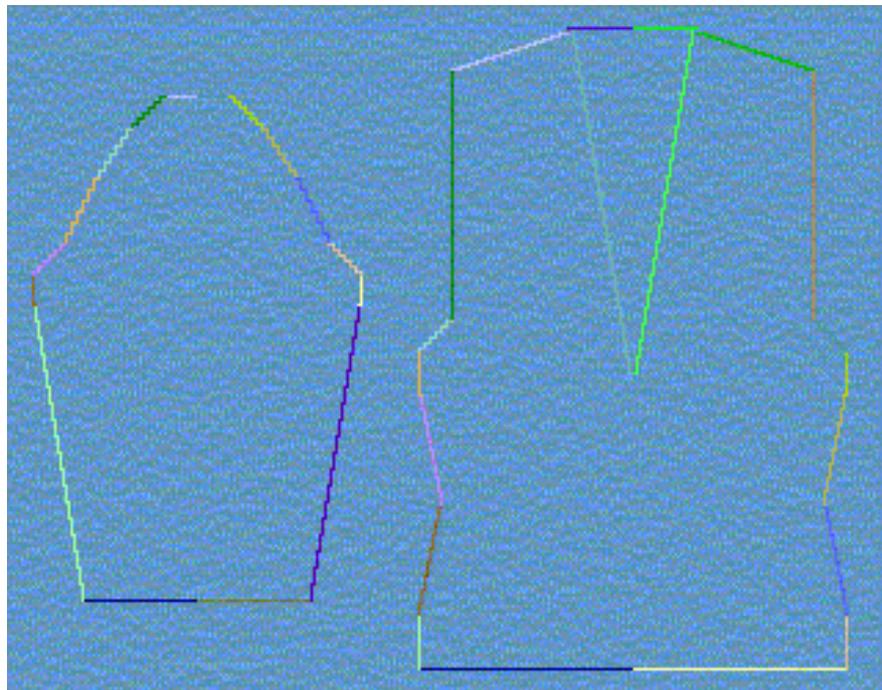
Stitches	Rows	Function
1	1	Remaining narrowings are carried out with one stitch. 1 stitch row is knit between the narrowings. Stitch rods from edge A have a ratio to stitch rows B of 1:1.
1	2	Remaining narrowings are carried out with one stitch. 2 stitch rows are knit between the narrowings. Stitch rods from edge A have a ratio to stitch rows B of 1:2.
2	1	Remaining narrowing is carried out with 2 stitches. 1 stitch row is knit between the narrowings. Stitch rods from edge A have a ratio to stitch rows B of 2:1.
2	2	Remaining narrowing is carried out with 2 stitches. 2 stitch rows are knit between the narrowings Stitch rods from edge A have a ratio to stitch rows B of 1:1.

15.4.2 Shape wizard: Docking points of inserted sleeve

These docking points form the knitting connection of the singular elements.

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

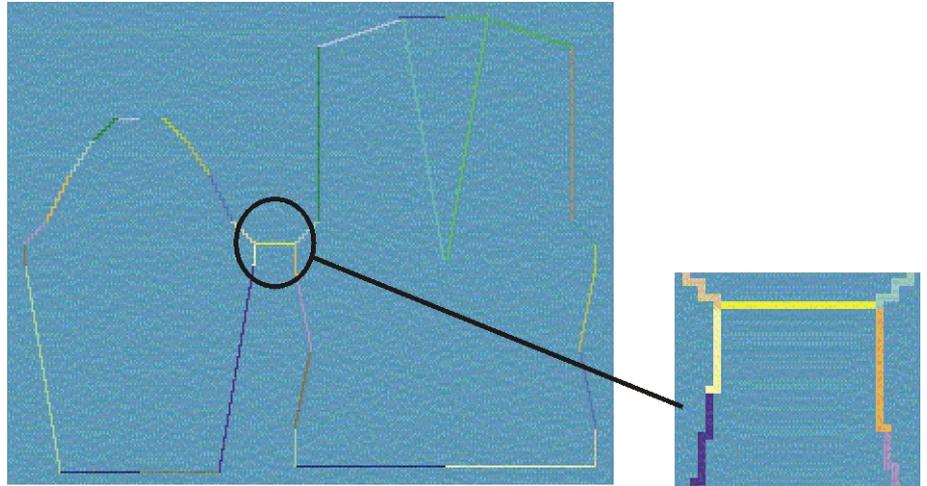
- Open the "Docking points" dialog box with the  icon in the toolbar of the "Shape wizard".



Graphical display of the shape

II. Specify the docking points for Inserted sleeve:

→ Set the docking points for "sleeve-body".



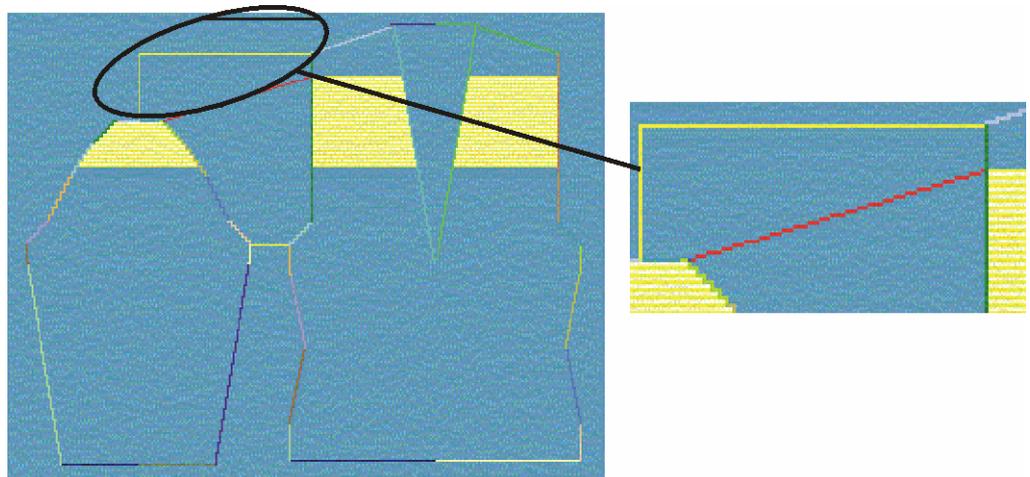
If the "Ctrl" key is pressed while specifying the docking points, then the cursor automatically jumps to the nearest edge start or edge end.

→ Set the docking point for "remaining narrowing".

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.

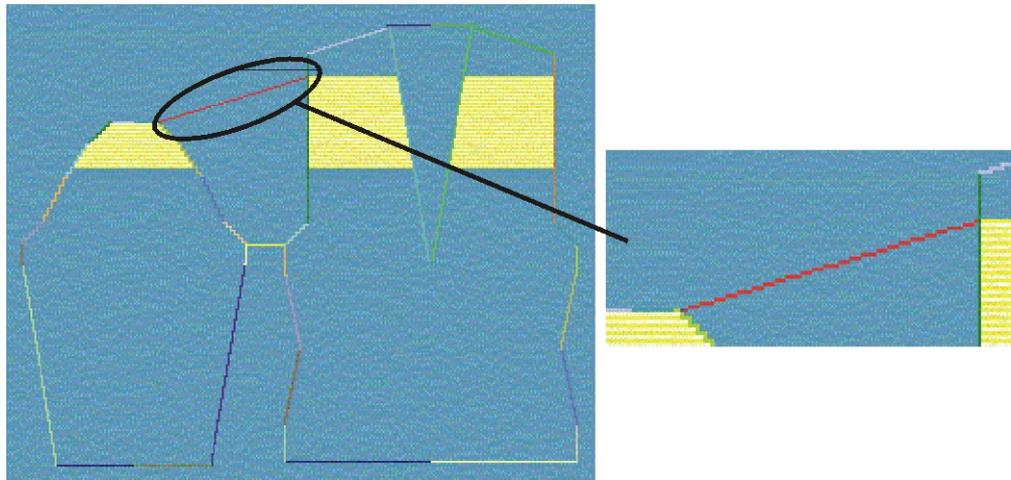




The number of stitches and rows for the remaining narrowing must be set in the "Shape wizard" dialog box.

➔ Set the docking point for "Suspend sleeve".

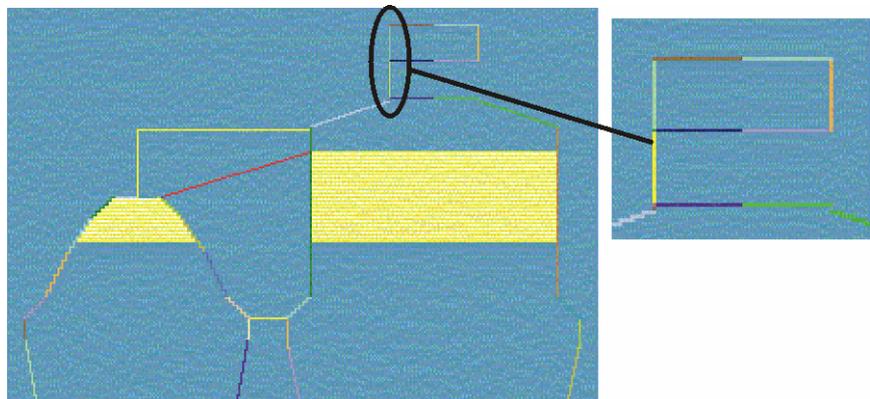
Compensation of the different number of knitting rows of body and sleeve by suspension.



While specifying the docking point for **Suspend sleeve** the cursor automatically jumps to the start point of the end line of the sleeve. The starting point can be set to any desired position if the "Ctrl" key is pressed simultaneously.

➔ Set the docking point for the "Collar".

The width of the color element is adopted by the docking point.

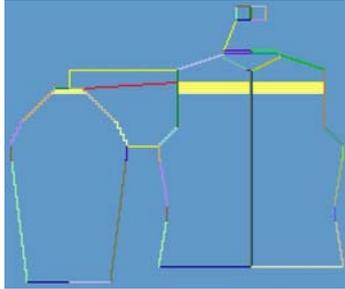


- Always set the connecting line on the left collar side.
- The same position is automatically applied for the right side.

- If the collar shall be positioned asymmetrically, then you can overwrite the position for the right side.

III. Generate a k&w shape for cardigan with inserted sleeve:

1. Define the desired docking points **Sleeve-body**, **Suspend sleeve**, **Remaining narrowing** and **Collar** in the "Docking points" dialog box.



2. Press the "Determine knitting cycles" button.



You can delete the determined knitting cycles with the "Initialize" button.

3. Exchange knitting cycles:

➔ Select the knitting cycle in the "Shape wizard" dialog box by double click.

A window with alternative knitting cycles appears.

➔ Select the suitable sequence and insert it with the "OK" button.

➔ After replacing a knitting cycle, press the "Determine knitting cycles" button again for test purposes.

4. Save the shape as kaw file via the "File" / "Save" or "Save as" menu or .

Save **kaw** file.



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 "Shape wizard" dialog box.

15.4.3 Position shape and complete pattern: Cardigan with inserted sleeve

I. Position and use k&w shape:

1. Open "k&w Shape"/"k&w Open Shape and Position" menu.
2. Select the shape with the ending **.kaw** and load with "Open".
3. Position the shape elements on the basic motif.
4. Insert the "Cut", "Fade Out", "Insert Narrowing and Widening" of the shape in individual steps.
- or -
➔ "Use shape (cut, hide, narrow)" in one step.
5. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
6. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
7. Use narrowing and widening.
8. The "Insert/replace k&w start" dialog box appears.
9. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
10. Call up "k&w Shape / Insert Binding-Off".
- or -
➔ Have binding-off automatically inserted by the technical editing.
11. Open "Yarn field view" and check yarn carriers.
12. Make settings in "configuration".

II. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.
 - *Settings in Configuration k&w dialog box*[\[see page 60\]](#)

15.5 Working in the shape preview

You can make different corrections in the Shape View after the shape is layed on.

15.5.1 Presentation in the shape preview

I. Change presentation in shape preview:

1. Lay shape on.
2. Open the "Shape view" via the "k&w Shape" \ "Shape view" menu.
- or -



→ open with the  buttons.

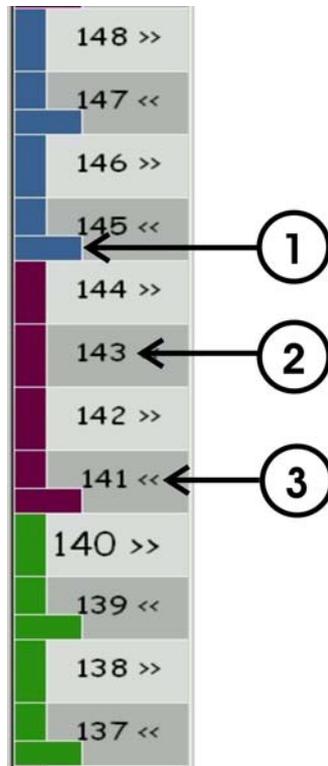
3. Switch over to the desired view in the "Pattern Presentations" toolbar.

Presentation	Property
	knit and wear presentation with narrowing
	knit and wear presentation
	knit and wear presentation collapsed

4. Select the presentation of the fabric layers in the shape view with the "k&w Tools" toolbar.

	Name	Function
	All layers	Presentation of front and back layers.
	Front layer	"Display the columns of the knitting layer only"
		or
	Back layer	"Display the columns of the knitting layer only"
		or
		"Display all columns"

II. Presentation of the knitting cycles:



Knitting cycles in the control column of the shape view

No.	Meaning
1	The different knitting cycles are shown in color, making the height of the knitting cycles visible.
2	Pattern rows with numbering
3	Carriage direction of knitting cycles.

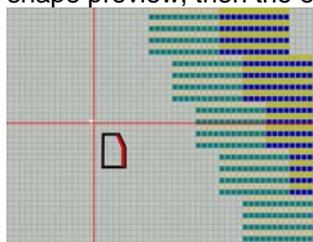


With the right mouse button you can call up a context menu in order to influence the carriage direction.

15.5.2 Shape tools in the shape preview

With the shape tools, existing contours of a shape can be changed in the shape view before the cutting out.

→ If the cursor is moved over the shape presentation while editing the shape preview, then the edge to be edited is shown on the cursor.



The "Shape tools" toolbar before cutting

	Name	Properties and function
	Within shape	Move shape edges Locate shape edge to be changed and press and hold down LMB. Move the cursor ↓ to specify the row selection. The selection is moved by the movement ↔. Narrowing symbols are automatically inserted by the movement and the existing attributes are applied.
	Gore	Non-knitting areas (suspension) can be changed into gores. With gores, a binding is used during the technical editing. Area with "Suspension" can be filled or drawn over with the "Gore" symbol. With the left mouse button pressed, move the cursor or click in a field with the left mouse button to fill the area.
	Suspend	Non-knitting areas (gore) can be changed into suspension. With suspension, no binding is used during editing. Area with "Gore" can be filled or drawn over with "Suspension" symbol. With the left mouse button pressed, move the cursor or click in field with the left mouse button 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 left mouse button pressed. ↔ Change the narrowing width ↓ Select narrowing edges "Shift" + left mouse button. Unequal narrowing actions are set to the cursor position.
	Fade out	Change fade-out width. Position the cursor on the desired fade-out edge and move the cursor ↓ or/and ↔ with the left mouse button pressed. ↔ Change fade-out width ↓ Select fade-out edges "Shift" + left mouse button. Unequal fade-out widths are set to the cursor position.
	Bind-off	Change binding-off width. Position the cursor on the desired binding-off edge and move the cursor ↓

15.5 Working in the shape preview

	Name	Properties and function
		<p>or/and  with the left mouse button pressed.</p> <p> Change the binding-off width</p> <p> Select the binding-off edges</p> <p>"Shift" + left mouse button. Unequal link-off widths are set to the cursor position.</p>
	Stitch length change	Different stitch lengths on shape edge
	Separation of layers	<p>Use when no connection of the layers is desired.</p> <p>Example: Sleeve opening for tank top/vest or remaining narrowing.</p> <p>With the left mouse button pressed, move the cursor . In the process, the symbol for "separation of the layers" is entered on the most outer needle of the edge and this affects the yarn fields.</p> <p>The layers L0 and L1 are knitted with separate yarn carriers.</p>
	Multi-step narrowing	Set markings for multi-step narrowing.
	Delete multi-step narrowing	Delete markings for multi-step narrowing.
	Move lines	<p>For generating own knitting cycles.</p> <p>Knitting rows can be moved within areas with suspension.</p> <p>Move the cursor  with the LMB pressed.</p> <p>Knitting rows can only be moved within a layer.</p>
	Selection	<p>Generate selection in order to copy edges and steps.</p> <p>Move the cursor  or  with the LMB pressed.</p> <p>Copy the selection (Ctrl C) and insert the selection hanging on the cursor.</p> <p>Possibility: insert mirrored with the  button.</p> <p>Press the "Enter" key before the insertion: a selection dialog with the shape data to be inserted appears.</p>
	Fixed step 1	Changing the step width.
	Fixed step 2	Define the end position with the left mouse button on the starting position and by moving the cursor. The selected stepping is applied for the edge length. In the process an uneven upward slope may result.
	Fixed step 3	"Shift" + left mouse button. The step width and the step height are inserted regularly. In the process a residual height without stepping may result.
	Fixed step 4	
	Fixed step 5	
	Fixed step 6	
	Automatic step with copied area.	<p>Change stepping with copied area.</p> <p>Create a selection with  and with the left mouse button pressed.</p> <p>Copy the selection (Ctrl C), select  and insert the selection hanging on the cursor.</p> <p>"Shift" + left mouse button. The stepping is inserted uniformly. In the process a residual height without stepping may result.</p>
	Use on both sides	<p>Changes are also carried out on the opposite shape edge.</p> <p>Also activate this button.</p>

In the case of corrections, several actions can be carried out simultaneously.

For example:

- Fade out and narrowing
- Fade out and link off



With impractical changes in the shape view, comment texts automatically appear that point out the impermissible change.

The messages can be activated or deactivated in the context menu with "Display faults".

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.

- or -

➔ call up the dialog box via "Edit" / "Insert Column".

The "Insert columns" dialog box appears and shows automatically the shape part in which the cursor is located when the dialog box is called up.

3. Specify the number of columns to be inserted.



Only an even number of columns can be inserted.

4. Change the present shape piece in which you want to insert the column via the selection box.

- Body left, Body right
- Sleeve left, Sleeve right

5. Insert the columns with the "OK" button.

The edge of the selected shape piece is moved in accordance with the entry.

II. Delete columns:

1. In the shape view, position the cursor in the shape element in which you want to delete columns.
2. Press the "Del" key on the keyboard.

- or -

➔ call up the dialog box via "Edit" / "Delete Columns".

The "Delete Columns" dialog box appears and shows automatically the shape part in which the cursor is located when the dialog box is called up.

3. Specify the number of columns to be deleted.



Only an even number of columns can be inserted.

4. Delete the columns with the "OK" button.

The edge of the selected shape piece is moved in accordance with the entry.



If you want more columns to be deleted than permissible, then a message appears indicating the maximum number of columns that can be deleted.

III. Insert rows/knitting cycles:

Both layers are active.

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



Always insert rows between the knitting cycles, and not in a knitting cycle.

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

- or -

➔ call up the dialog box via "Edit" / "Insert Rows".

The "Insert rows" dialog box appears.

Selection options in the "Insert rows" dialog box:

- Knit
- Suspend

3. Select "Knit".

4. Select the "shape element / element" in which you want to insert rows.

- Body left, Body right
- Sleeve left, Sleeve right



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

5. Specify the "before/after" setting and the number of rows.
6. Confirm with "OK".



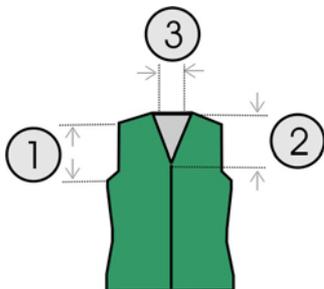
Insert the corresponding knitting cycles into the inserted rows manually.

IV. Delete rows or knitting cycles:

1. Select a row or several rows in the row bar of the shape view.
 2. Press the "Del" key on the keyboard.
- or -
- ➔ call up the dialog box via "Edit" / "Delete Rows".
The selected area will be deleted.

15.6 Shape wizard: Waistcoat with V-neck

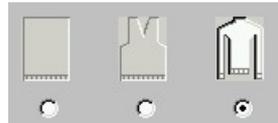
Pattern data	Pattern picture
File: Waistcoat Pattern width: 150 Pattern rows: 200	
Machine type:	CMS 822
Gauge:	6.2
Start:	1x1 rib
Basic pattern:	Jersey
Knitting technique	knit and wear
Description of pattern:	Waistcoat with V-neck

Rules for a cardigan 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	Even-numbered height of the V-neck
3	End line of V-neck on left and right side, two stitch rods less than end line of back for each.

15.6.1 Generate pattern and shape: Waistcoat with V-neck

I. Generate a new pattern:

1. Generate new pattern.
2. Select machine.
3. Select knit and wear.



4. Pattern size:
Width: 150
Height: 200
5. Knitting mode:
Jersey
6. Confirm specifications with "OK".

II. Generate the shapes for the front with V-neck and for the back in the Shape Editor:

1. Open the shape editor via "k&w Shape" / "Generate/Edit Shape...".
2. Select "k&w body front" under **General shape data** in the selection list.
3. Generate the contour for the front under "Left lines".

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	Gore
9		6	0	2	0	2	0	1	0	0	0	
10		0	60	0	18	0	18	1	0	0	0	

Front / Back

4. If necessary, allocate **fade-out** and **fade-out width** to the shape edges under the "Function" column.
5. Allocate the narrowing attributes to the **narrowings** in the "Function" column.



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.

6. Activate for the shape edges No. 6 and 7 (arm hole) under the "Function" column in the "Connections" tab the "k&w outer edge open e.g. slipover [FRONT/BACK]" checkbox.



This setting must be made in both the front and the back.

7. For the shape edge (No.8) of the shoulder, select the type **Gore** under Function.
8. Specify the type of binding-off in the "Bind-off" tab.
- "Shoulder standard - 01"
 - "Shoulder standard - 02"
9. Generate a new element for the V-neck in the Shape Editor under Elements.
10. Select the **Neck opening** entry in the "Type" selection list at "Elements".
11. Generate the contour for a V-neck under "Left lines".

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	

V-neck

12. Assign **narrowing** to the base line (No.1) under "Function" in the "General" tab.
13. Set the narrowing type in the "Narrowing" tab under "Module".
- "V-neck above"
 - "V-neck underneath"
14. Specify the position of the V-neck via "Distance to end line".
15. Save shape.

III. Insert Opening element in the front:



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

1. Create another "New element" for the vest opening.
2. Select the **Opening** entry in the "Type" selection list at "Elements".
3. Insert a new line and specify the height for an opening under "Left Lines".



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

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	

Opening element

4. Save shape.
 - *Narrowing, widening and binding-off types* [\[see page 35\]](#)

15.6.2 Position shape and complete pattern: Waistcoat with V-neck

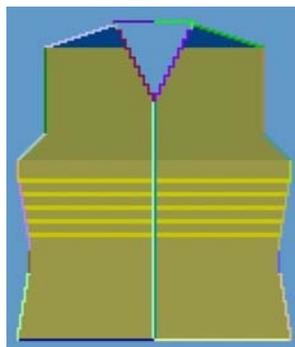
I. Combine shape elements in Shape wizard to make a k&w shape:

1. Open "Shape wizard" program.
2. Load the shape elements.



For a fabric piece that contains no sleeves and no collar, no docking points and other settings need to be made.

3. Determine knitting cycles.



4. Save the shape as a k&w shape via "File"/"Save As" or with the  icon.
5. Close the "Shape wizard" program.

II. Position and use k&w shape:

1. Open "k&w Shape"/"k&w Open Shape and Position" menu.
2. Select the shape with the ending **.kaw** and load with "Open".
3. Position shape elements sleeve/body on basic motif.
4. Insert the "Cut", "Fade Out", "Insert Narrowing and Widening" of the shape in individual steps.

- or -

- ➔ "Use shape (cut, hide, narrow)" in one step.
5. Cut shape.
 - ➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
- 6. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
- 7. Use narrowing and widening.
- 8. The "Insert/replace k&w start" dialog box appears.
- 9. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
- 10. Call up "k&w Shape / Insert Binding-Off".
- or -
➔ Have binding-off automatically inserted by the technical editing.
- 11. Open "Yarn field view" and check yarn carriers.
- 12. Make settings in "configuration".

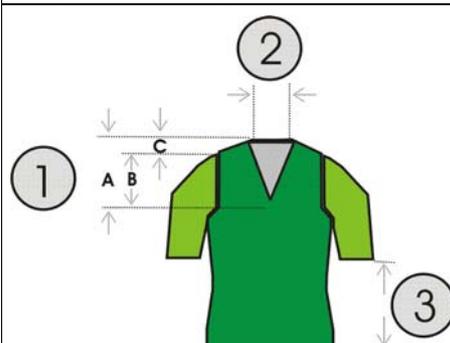
III. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.
 - *Settings in Configuration k&w dialog box* [see page 60]

15.7 Shape wizard: Short sleeve with V-neck

Pattern data	Pattern picture
File: Short sleeve with V-neck Pattern width: 280 Pattern rows: 280	
Machine type:	CMS 822
Gauge:	6.2
Start:	1x1 rib
Basic pattern:	Jersey
Knitting technique	knit and wear
Description of pattern:	Short sleeve with V-neck

Rules for short sleeve with V-neck:

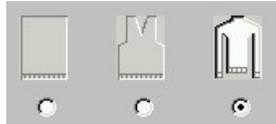


1	A	Even-numbered total height of the V-neck.
	B	Even-numbered height from the start of the V-neck to the start of the shoulder.
	C	Even-numbered height from the start to the end of the shoulder.
2		The end line of V-neck on left and right side must have two stitch rods less than the end line of back.
3		Even-numbered length difference between sleeve and body with at last 20 rows.

15.7.1 Generate pattern and shape: Short sleeve with V-neck

I. Generate knit and wear pattern with shape:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. specify pattern size.
Width: 280
Height: 280



Width and Height are depending on the size of the shape.
The size of the pattern field is doubled by the use of k&w technique automatically.

5. Define "Jersey" as knitting mode.
6. Confirm specifications with "OK".



With a k&w pattern you will specify the start later on.

II. Generate the front shape in the shape editor:

Generate the elements for the front and back of the body, sleeve and V-neck.



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

1. Open the shape editor via "Shape"/"Generate/Edit Shape...".
2. Set "Input Shape" to **Stitches**.
3. Activate **mirrored** setting under "Elements".
4. Specify starting width.
5. Create the table with "Left Lines>>" and enter the values for 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	-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	Gore
9		6	0	2	0	2	0	1	0	0	0	
10		0	60	0	18	0	18	1	0	0	0	

Front and back with gored shoulder

6. Allocate fade-out and fade-out width to the shape edges in the "Function" column.
7. For the shape edge of the shoulder, select the type **Gore** under "Function".
8. Specify the type of binding-off in the "Bind-off" tab.
 - "Shoulder standard - 01"
 - "Shoulder standard - 02"



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

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

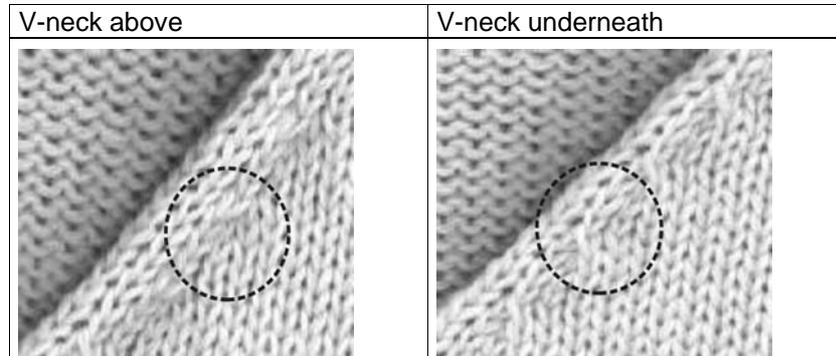
1. Open the shape editor via "k&w Shape" / "Shape Editor (Generate/Edit Shape)...".
2. Load the shape **Short sleeve front** with "File"/"Open .shp shape (stitches)".
3. Create a new element in the "Shape Editor" under "Elements" with the  button.
4. Select the **Neck opening** entry in the "Type" selection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

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	

V-neck

6. Allocate "Narrowing" to the edge under "Function" in the "General" tab.
7. Specify the narrowing width and the narrowing type.
 - "V-neck above"

■ "V-neck underneath"



8. Insert a start module at the start of the V-neck.



Select the element **neck opening** and activate the icon in the shape editor for this purpose.

9. Enter the "Structure single jersey V2" module in the "Start" tab.
10. Specify Horizontal **0** und Vertical **-1** under "Offset".



With the V-neck of the Start with one Needle type the "Structure single jersey V1" module can be used.

11. Position neck on front.



The value **0** must be entered in the V-neck element under "Distance to end line".

IV. Generate the back shape in the shape editor:



No collar is added to this knitting piece, and therefore the neck in the back piece must be bound-off.

1. Generate the back in the same way as the front.
2. Select the end line in the back and allocate "Bind-off" to the edge under "Function" in the "General" tab.
3. Set "Neck with draw thread" in the selection list in the "Bind-off" tab under "Module".
4. Save shape.

V. Generate the short 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).

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	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	33	0	10	0	10	1	0	0	0	Narrowing

Short sleeve

1. Allocate attributes for the remaining narrowing to the end line.
Make the **Narrowing** setting under "Function" in the "General" tab.
2. 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.

3. Activate the checkbox "k&w Remaining Narrowing (SLEEVE-END)" in the "Connections" tab.
4. Specify the number of stitches in the "Bind off number of stitches with shoulder gore" input field.

The specified number of stitches will be bound-off together with the shoulder. The hole at the transition will be closed with it.
5. Save shape.

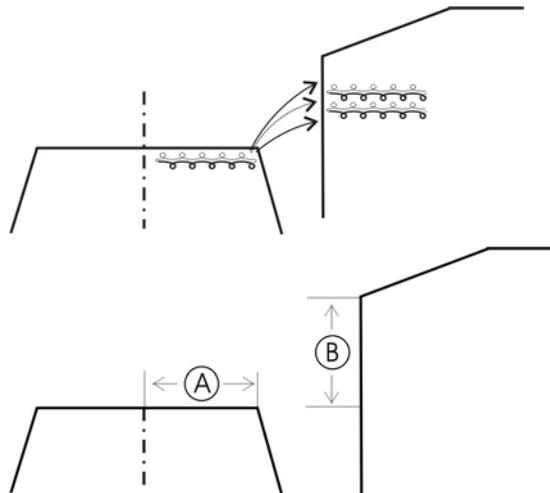
VI. Combine the shape elements in the shape wizard to a k&w shape:

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

1. Run the program "Shape wizard" via the "k&w Shape" / "Shape wizard (Put Together k&w Shape)..." menu.
2. Open the shape elements for front, back and sleeve.
3. Specify the knitting mode of the collar.
4. 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.
B1 Type 1 TC-T (no connection L0-L1)	Strickablauf für Muster der CMS- Maschine mit Zusatzbetten. Continuous 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.

By activating "Short sleeve/Short body" length differences will be knit with residual yarn. Different starts for body and sleeve can be inserted.



Length differences between the sleeve and body are compensated with **Do not knit** as a default.

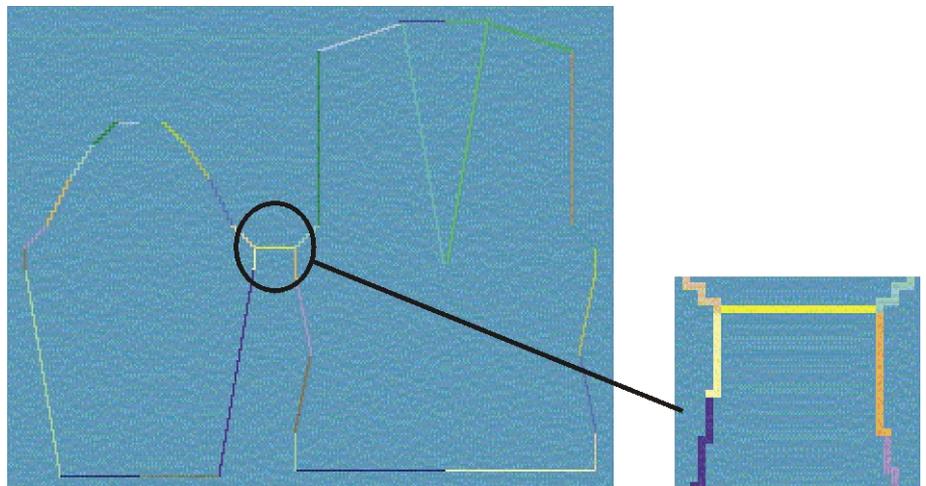
15.7.2 Shape wizard: Docking points Short Sleeve

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

- ➔ Open the "Docking points" dialog box with the  icon in the toolbar of the "Shape wizard".

II. Specify the docking points for Inserted sleeve (short sleeve).

- ➔ Set the docking point for "sleeve-body".



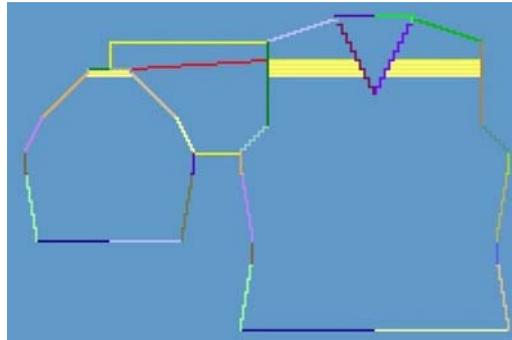
If the "Ctrl" key is pressed while specifying the docking points, then the cursor automatically jumps to the nearest edge start or edge end.

- ➔ Set the docking point for **remaining narrowing**.

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.



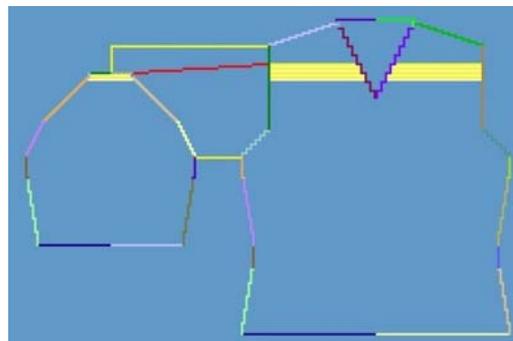
Remaining Narrowing



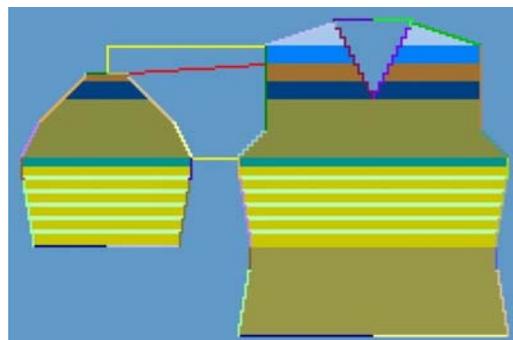
The number of stitches and rows for the remaining narrowing must be set in the "Shape wizard" dialog box.

III. Generate a k&w shape for short sleeve with V-neck:

1. Define the docking points for **Sleeve-Body** and for **Remaining narrowing** in the "Docking points" dialog box.



2. Press the "Determine knitting cycles" button.



You can delete the determined knitting cycles with the "Initialize" button.

3. Exchange knitting cycles:

➔ Selecte the knitting cycle in the "Shape wizard" dialog box by double click.

A window with alternative knitting cycles appears.

➔ Select the suitable sequence and insert it with the "OK" button.

➔ After replacing a knitting cycle, press the "Determine knitting cycles" button again for test purposes.

4. Save the shape as kaw file via the "File" / "Save" or "Save as" menu or .



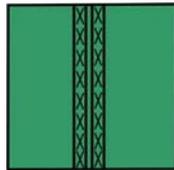
The elements of the shape (front, back, sleeve and collar) and the **kaw** file must all be located in the same directory .

5. Close the "Shape wizard" dialog box.

15.7.3 Draw in structure / Position shape and complete pattern: Short sleeve with V-neck

I. Generate basic motif:

1. Draw in two neighboring and parallel running 2x2 cables with ribs in the middle into the pattern.



2. From the V-neck on, continue with one cable each on the left and right side.
3. Allocate the cable fading-out module in the sleeve opening (arm hole) to the body and move it by the offset value into the sleeve.



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

From the sleeve-body crossover, a cable shall run at the narrowing edge of the **sleeve-body**.

➔ Generate a **module for fading-out** in the Module Editor:

- or -

➔ Generate the **fading-out module** from a selection of the motif.

III. Position and use k&w shape:

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
 2. Select the shape with the ending **.kaw** and load with "Open".
 3. Lay on and position the shape elements on the basic motif.
 4. Cut shape.
- ➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.

IV. Allocate the fading out module to the sleeve openings of the front:

1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.
- or -



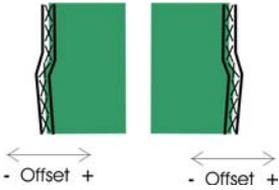
- open with the  buttons.

2. Open the context menu in the "Shape view" and open "Shape attributes...".
3. Select the corresponding edge number of the sleeve opening at the left and right in the "Shape attributes" dialog box.
4. Select the "Fade out" tab and allocate the generated fade-out module.



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

5. Specify fade-out width. (specification matches stitches)
6. Position the fade-out module with offset.

Without offset	With offset	
		
The outer edge of the module is placed on the fabric edge so that the module is always positioned within the shape.	Negative value: Moving the module to the left	Positive value: Moving the module to the right



The Offset setting is only possible via the Shape attributes of the Shape View.

7. Click on the "Apply in shape view" button.
The changed attributes are saved and applied to the shape view.
8. Close the "Shape attributes" dialog box and the "Shape view".
9. Save the shape via the "k&w shape" / "Save Shape As... (shk)" menu.

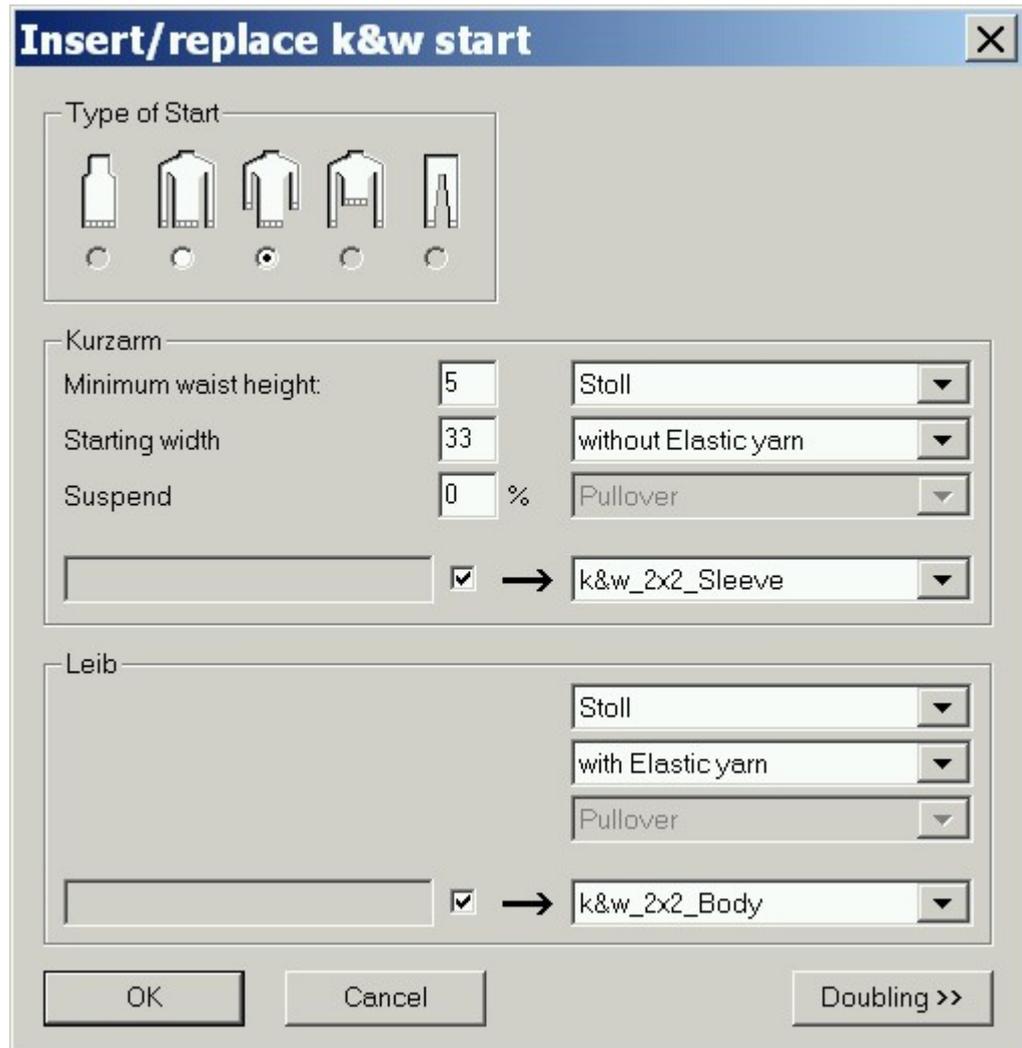
10. Run the "Fade Out" menu.

The "Replace modules cut into" prompt appears for modules which are cut into by fading out.

After fading out, the correct positioning of the fade-out modules becomes visible.

11. Run the "Inserting Narrowing and Widening" menu.

The "Insert/replace k&w start" dialog box appears then.



12. Make setting for "Short sleeve":

- Minimum waist height
- Start-width
- Suspend

13. Select the start for the body and the sleeve

14. Confirm entry with "OK".

15. Run "Insert Binding-Off".

- or -

➔ Have binding-off automatically inserted by the technical editing.

16. Open "Yarn field view" and check yarn carriers.

V. Complete the pattern.

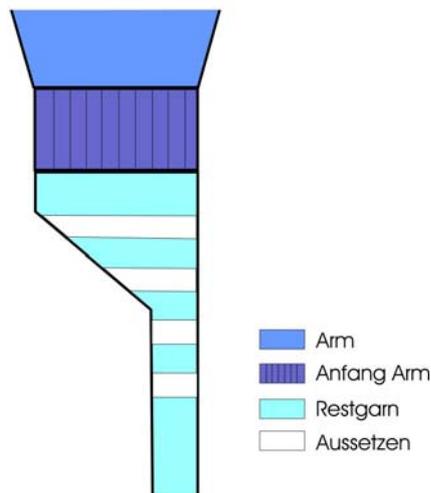
1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.
 - *Short sleeve/short body*[see page 138]

15.8 Short sleeve/short body

Possible settings for "Insert/replace k&w start":

When **Short sleeve/Short body** is used, the following adjustment options are available for "Insert/replace k&w start":

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. Result: Save of 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. Result: stronger take-down in the shorter part

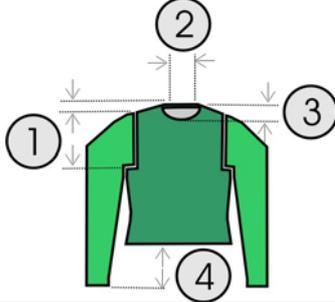


Cycle switches used in start:

Cycle counter	Function
RS1	Length control for start in body.
RS2	Length control for start in sleeve.
RS10	Length suspension with residual yarn between the elastic comb thread and the draw thread

15.9 Shape wizard: Short body with inserted and bound-off sleeve

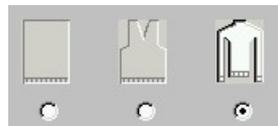
Pattern data	Pattern picture
File: Short Body with inserted+linked sleeve Pattern width: 280 Pattern rows: 280	
Machine type:	CMS 822
Gauge:	6.2
Start:	1x1 rib
Basic pattern:	Jersey
Knitting technique	knit and wear

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 round neck on left and right side must have two stitch rods less than the end line of back.
3	Even-numbered height of the cut-out.
4	The length difference between sleeve and body must be even-numbered and of 20 rows at last.

15.9.1 Generate pattern and shape: Short body with inserted and bound-off sleeve

I. Generate knit and wear pattern with shape:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 280
Height: 280



Width and Hight are depending on the size of the shape.
The size of the pattern field is doubled by the use of k&w technique automatically.

5. Knitting mode: Jersey.
6. Confirm specifications with "OK".



With a k&w patter you will specify the start later on.

II. Generate the front shape in the shape editor:

1. Open the "Shape Editor" via "k&w Shape" / "Shape Editor (Generate/Edit Shape)...".
2. Set "Input Shape" to **Stitches**.
3. Activate **mirrored** setting under "Elements".
4. Specify starting width.
5. Create the table with "Left Lines>>" and enter the values for the front.

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	18	0	18	1	0	0	0		

Front with gored shoulder

- Allocate the desired attribute for **Narrowing** and **Widening** under "Function".



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

- Allocate attributes to the edge no.7.

Adjustments			
Edge number	Tab		
Line 7	General information	Activate Do not knit	
	Narrowing	Fade-out width	0
		Narrowing width	0
		Type of narrowing	Body underneath/above Body underneath/above Layers apart
		Activate Perform narrowing in sleeve	

III. Insert the round neck element in the front:

- Generate a new element in the "shape editor" under "Elements".
- Select the entry **Neck opening** in the "Type" selection list.
- Generate the contour for a round neck under "Left lines".

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	53	0	16	0	16	1	0	0	0	

Round neck

Adjustments		
Edge number	Tab	
Line 1	General information	Specify "Binding-off" in the Function column.
	Bind-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

- Position the V-neck element (round neck) in the front via the "Distance to end line" and the value "0".



No collar is added to this knitting piece, and therefore the neck in the back piece must be bound-off.

- Save shape.

IV. Generate shape for back:

- Create the shape for the back in the same way as with the front.
- Open the "General" tab in the end line (edge no.11) under "Function" and enter "Binding-off".
- Select "Neck with draw thread" in the selection list in the "Bind-off" tab under Module.
- Save shape.

V. Generate shape for the sleeve:

- Generate shape for 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		40	0	12	0	12	0	1	0	0	0	Narrowing
5		53	26	16	8	2	1	8	0	0	0	Narrowing
6		66	66	20	20	1	1	20	0	0	0	Narrowing
7		6	0	2	0	2	0	1	0	0	0	
8		0	33	0	10	0	10	1	0	0	0	Narrowing

Sleeve

Adjustments		
Edge number	Tab	
Line 4	General information	Specify "Narrowing" in the Function column.
	Narrowing	Activate Narrow entire width of sleeve
End line	General information	Specify "Narrowing" in the Function column.
	Narrowing	Select the "Remaining narrowing" module

Adjustments		
	connections	Activate "k&w remaining narrowing (SLEEVE-END)"

I. Combine shape elements in Shape wizard to make a k&w shape:

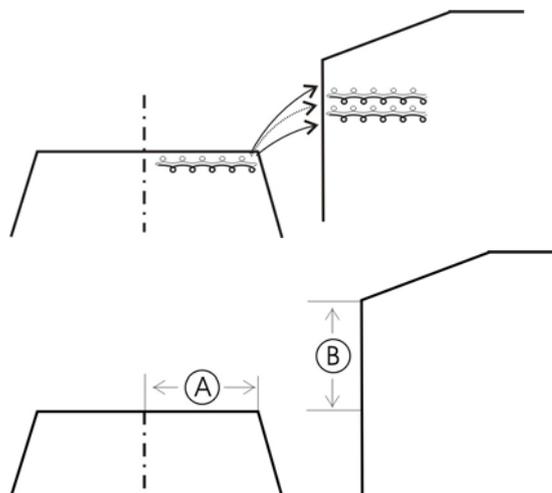
Combine the shapes front, back and sleeve in the "Shape wizard" into a **short body with linked sleeve.kaw** shape.

1. Run the program "Shape wizard" via the menu "k&w Shape"/"Put Together k&w Shape...".
2. Load the shape elements for body, back and sleeve.
3. 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.
B1 Type 1 TC-T (no connection L0-L1)	Strickablauf für Muster der CMS- Maschine mit Zusatzbetten Continuous stitch rows in the front, i.e. no opening. No connection of both knitting layers.

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

- Stitch number for remaining narrowing: **2**
- Number of rows for remaining narrowing: **2**



5. Activate the "Short sleeve/short body" checkbox.

By activating "Short sleeve/Short body" length differences will be knit with residual yarn. Different starts for body and sleeve can be inserted.



Length differences between the sleeve and body are compensated with **Do not knit** as a default.

15.9.2 Verbindungspunkte und Strickabläufe ermitteln: Short body with inserted and bound-off sleeve

I. Verbindungspunkte erstellen:

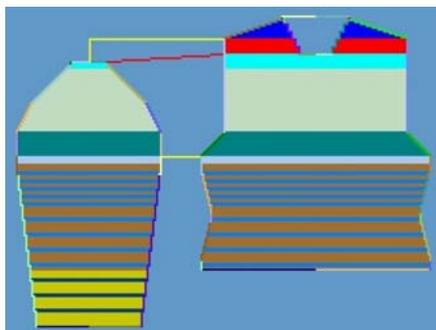
Specify the docking points and determine the knitting cycles in the Shape wizard.

1. Docking point "sleeve - body"
2. Docking point for "remaining narrowing"



Docking points

3. Determine the knitting cycles with the "Determine knitting cycles" button.



Presentation of the knitting cycles:

4. With "File"/"Save As" or the  icon.

15.9.3 Position shape and complete pattern: Short body with inserted and bound-off sleeve

I. Position and use k&w shape:

1. Open "k&w Shape"/"k&w Open Shape and Position" menu.
2. Select the shape with the ending **.kaw** and load with "Open".
3. Position shape elements sleeve/body on basic motif.
4. Insert the "Cut", "Fade Out", "Insert Narrowing and Widening" of the shape in individual steps.

- or -

➔ "Use shape (cut, hide, narrow)" in one step.

5. Cut shape.

➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.

6. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.

7. Use narrowing and widening.

8. The "Insert/replace k&w start" dialog box appears.

■ Define the **Minimum waist height**

9. Select a start and confirm the dialog box with "OK".

The start will be inserted in the k&w pattern.

10. Call up "k&w Shape / Insert Binding-Off".

- or -

➔ Have binding-off automatically inserted by the technical editing.

11. Open "Yarn field view" and check yarn carriers.

12. Make settings in "configuration".

II. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.
 - *Settings in Configuration k&w dialog box*[\[see page 60\]](#)

16 Rules for knit and wear® shapes

You can use the existing shapes from the shape directory or generate new shapes for knit and wear.

➔ Call up existing shapes with: "D / Stoll / M1 / ShapeSizer / k&w".

A knit and wear shape consists of several individual shapes:

- Front (front layer L0)
- Back (back layer L1)
- Sleeves for sweater or cardigan
- Collar

A k&w shape must be generated according to the following rules:

Shape element	Condition/requirements
Shapes for front and back	same width
Starting width of shape.	Shape width as desired, as independent of start
End width of shape elements (body and sleeve)	divisible by the cycle width of the collar knitting mode
Total height of shape	even or odd-numbered
The height up to the start of the V-neck	even or odd-numbered
The height of a V-neck	must be even-numbered
Total height of a gore in the neck area	must be even-numbered the height of a gore step is maximum 2 rows.
Maximum widening in the shape	by 1 stitch after 2 rows.
Widening at the outer edge of the front	after every 2nd row, when using a knitting cycle for gore after every 4th row.
Length difference between sleeve and body	should not be more than 30 %, otherwise length compensation with remaining yarn.
The front and back layer	is always narrowed simultaneously
Maximum narrowing	3 stitches, with steppings larger than 3 needles, binding-off is carried out.
Narrowings in sleeve and body	are possible at the same height.

15.9 Shape wizard: Short body with inserted and bound-off sleeve

Shape element	Situation	Possibility
Narrowings at the outer edge of the front	without V-neck or gore	after each row
	with V-neck or gore	after every 2nd row
	with V-neck or gore when a stitch ratio sleeve-body-sleeve: 1-2-1 is present	after every 4th row
Narrowing 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 sleeve and body		is possible on the same stitch row.
Narrowings on the V-neck		after each pattern row



In the 6 rows below the sleeve-body cross-over, do not carry out widening or narrowing in the sleeve or body.

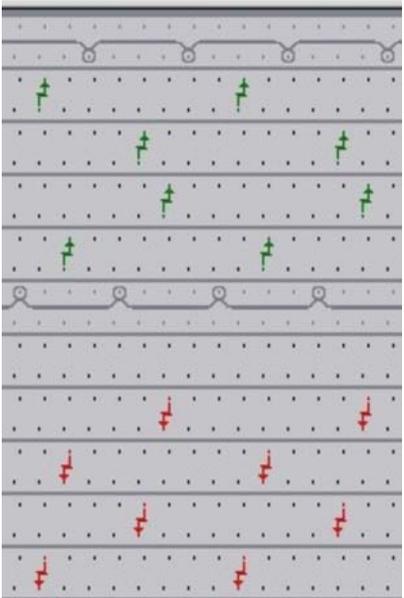
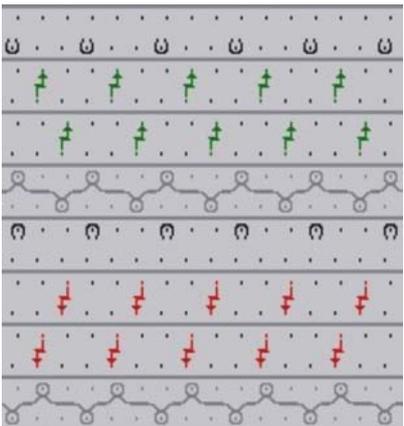
17 k&w starts in the overview

Various starts with different functions can be selected for pattern generation with knit & wear. All starts are available with and without elastic yarn.

Start	Presentation	Function
1X1		The front layer knits on the even-numbered needles in 1x1, and the rear layer on the odd-numbered needles also in 1x1.
1X1 open on side		This start differs from the normal start in that it is open laterally and in a resulting slit. Two yarn carriers are required: one for the front layer and one for the back layer.
2X1		The front layer knits two neighboring stitches on the front needle bed and then leaves out 4 needles. In this area of 4 needles, the second and fourth needle then knits at the back, which is then transferred to the front. Mirror-image knitting is then also carried out on the rear layer. The respective needles knitting inside are transferred after each knitting cycle. To achieve a uniform stitch appearance, loop sinking is carried out for the stitches knitting outside.
2X1 open on side		This 2x1 start differs from the normal start in that it is open laterally and in a resulting slit. Two yarn carriers are required:
2X2		The front layer knits on the even-numbered needles in 2x2, and the rear layer on the odd-numbered needles also in 2x2. A jersey stitch is always knit at the edges so that the outer stitch is never transferred.
2X2 open on side		This 2x2 start differs from the normal start in that it is open laterally and in a resulting slit. Two yarn carriers are required:

15.9 Shape wizard: Short body with inserted and bound-off sleeve

Start	Presentation	Function
Tube		<p>The front layer knits outside on even-numbered needles and inside on the needles 4, 8, 12 etc. The rear layer knits outside on odd-numbered needles and inside on the needles 3, 7, 11 etc.</p> <p>The rear needle bed is moved one needle to the right for the entire cycle. Twice as much is knit outside as inside, which results in the repeat cycle being 6 rows high.</p>
Tube open on side		<p>This tube start differs from the normal tube start in that it is open laterally. Two yarn carriers are required:</p> <p>One cycle of the front layer (3 rows) is knit completely, then transferred and then the same is worked through with the rear layer.</p>

Start	Presentation	Function
1X1 basic		<p>This start begins like the normal 1x1 start, but it ends directly after the tube rows. The purpose of this is to use this start to enable users to generate all rib starts simply themselves.</p> <p>Following the tube rows, the stitches must be transferred to the rib and then the rib must be drawn in manually.</p>
1X1 fine		<p>Each layer knots both outside and inside on every third needle. The respective needles knitting outside are opposite each other, so that two needles remain free between them to transfer the stitches knitting inside back and forth.</p> <p>This results in a fixed 1x1 waistband, as the floats between the stitches are shorter.</p>

Combinations of different starts:

Different starts, which start at the same height on the sleeve and body, can be combined.

There are two models:

- Tube start on body and 1x1 start on sleeve
- Tubular start on body and 2x1 start on sleeve.

Starts for short sleeve/short body:

All starts for short sleeve and short body can be combined with each other as desired.

Sleeve and body starts need not to be identical.

NP settings used in k&w starts from Stoll:

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)
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 for TC-T:

NP Setting	Use
36	Transition from 1x1 start fine to all needles in pattern
37	Transition from 1x1 start fine to all needles in pattern
38	Loose row before Doubling with TC-T

Home position of yarn carriers:

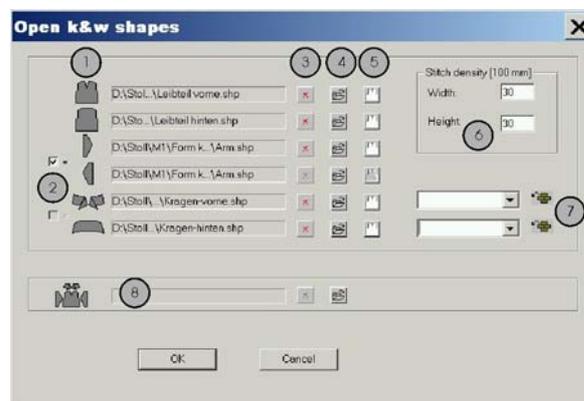
Yarn	Yarn carrier	Basic position
Draw thread	1A	Left
Additional draw thread for short sleeve	1B	Right
Comb elastic	2A	Left
Elastic yarn / Short sleeve right	2B	Right
Additional elastic yarn for short sleeve at the left	7A	Left
Ground thread	3A	Left
	4A	Left
	5A	Right
	6A	Right
Residual yarn	8	Right
Additional residual yarn for short sleeve	8	Left

18 Generation of a k&w shape

I. Combine shape elements to form a k&w shape:

The shape elements for the body, sleeve and collar are generated in the Shape Editor and shall be combined to form a k&w shape.

➔ Call up the "k&w Open Shape and Position" dialog box via the "k&w Shape" / "k&w Open Shape and Position..." menu.



No.	Function	
1	List of the loaded shape elements.	
2	activated	The same elements are used at the right and left and in front and at the back.
	deactivated	Different elements are used right/left and front/back.
3	Delete loaded shape element.	
4	Load shape element.	
5	Open shape editor with loaded element.	
6	Stitch ratio for conversion of a shv file	
7	Knitting mode for front/back of collar	
8	Load shapes (formats: .shk and .kaw)	

II. Load and lay on shape elements:

1. Load the shape element for the front with  icon.
The "Open" dialog box appears.
2. Select the directory in which the shapes are saved.



The Stoll standard shapes are stored under **D:/Stoll/M1/Shapesizer/k&w.**

15.9 Shape wizard: Short body with inserted and bound-off sleeve

3. Select the shape element for the front and load with the "Open" button.

4. Load the shape element for the back likewise.

5. Load the shape element for the sleeve likewise with:

→ the checkbox active

The sleeve element will automatically be used for both sleeve at the left and at the right.

→ the checkbox inactive

You can load different shape elements for the sleeves at the left and right.



You have to generate a separate shape element for each sleeve at the left and at the right.

6. Load the shape element for the collar likewise with:

→ the checkbox active

The collar shape element will automatically be used for the collar in front and back.

→ the checkbox inactive

You can load different shape elements for the collar at the front and back.



You have to generate a separate shape element for each part of the collar at the front and at the back.

7. Close the "Open k&w shapes" dialog box via "OK".

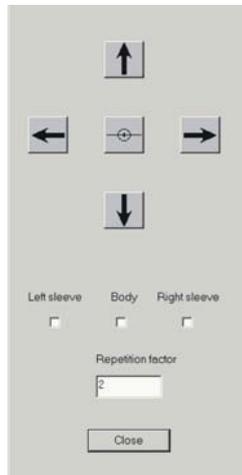
The shape elements will be layed on the pattern.



The joined shape elements cannot be saved.

III. Position shape elements in basic motif:

1. Call up the "k&w Shape / Move Shape" menu.



2. In accordance with the repeat factor and activation of one or more shape elements (left sleeve / body / right sleeve), move the shape elements with the arrow keys.

- or -

- ➔ Press the  button of the toolbar.
Move the elements in the fabric view with the left mouse button or the arrow keys of the keyboard.

IV. Manually draw in k&w knitting cycles in the shape view:

1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.

- or -



- ➔ open with the   buttons.

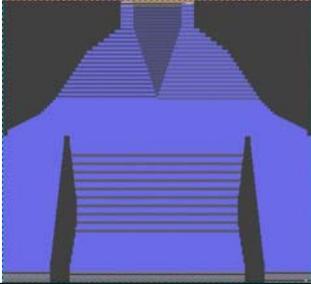
2. Position the elements with the  icon and the left mouse button pressed.
3. Select the knitting cycles in the module bar or the Module Explorer and draw them into the k&w shape.
4. Save the shape via the "k&w shape" / "Save Shape As... (shk)" menu.

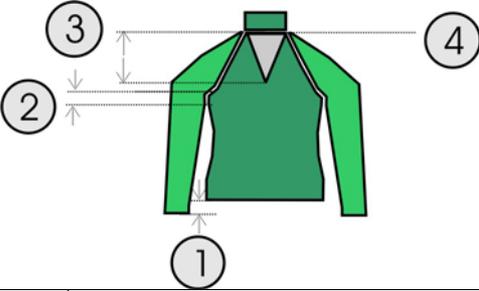


If the pattern with a laid-on and positioned shape is saved as an **.mdv** file, the positioning is retained with restart of the pattern.

19 k&w pattern with manual allocation of knitting cycles in the shape view

19.1 Shape view: Raglan with V-neck

Pattern data	Pattern picture
File: Raglan with V-neck Pattern width: 250 Pattern rows: 200	
Machine type	CMS 822
Gauge	6.2
Start	1x1 rib
Basic pattern	Jersey
Knitting technique	knit and wear
Description of pattern:	k&w pattern Raglan with V-neck and collar

Rules for Raglan with V-neck and collar	
	
1	Even-numbered difference in length between body and sleeve.
2	Minimum row number for body-sleeve crossover: 6 rows (= height of connection module).
3	Even-numbered height of V-neck
4	V-neck and body end lines are at the same height.

19.1 Shape view: Raglan with V-neck

19.1.1 Generate shape and pattern: Raglan with V-neck

I. Generate the shapes for the elements front, back, sleeve and collar in the shape editor:

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	

Front / Back



If you change outer dimensions of the front, then you must adapt 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		120	-60	36	-18	2	-1	18	0	0	0	Narrowing
2		0	60	0	18	0	18	1	0	0	0	

V-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	-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	2	2	6	0	0	0	Narrowing
5		106	53	32	16	4	2	8	0	0	0	Narrowing
6		40	40	12	12	2	2	6	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	

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	-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	Link-off

Collar front / back

Settings for front and back collar		
Line of the edges	"General" tab	"Binding-off tab" tab
End line	Bind-off	Open cut out L0

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-60	0	-18	0	-18	1	0	0	0	
2		33	0	10	0	10	0	1	0	0	0	
3		0	60	0	18	0	18	1	0	0	0	

Element for opening in front of collar



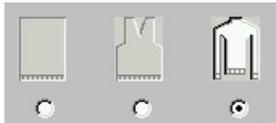
If you change the width of the front or back, then you must adjust the front and back of the collar.

→ **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/back, sleeve and V-neck.

II. Generate new pattern:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 250
Height: 200
5. Knitting mode: Jersey.
6. Confirm specifications with "OK".

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

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
2. Load the shape elements for body, sleeve and collar via
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. Place the form elements into the basic fabric with the "OK" button.
5. Position the elements body and sleeve on the pattern with the icon and the left mouse button pressed.

- *Generation of a k&w shape* [see page 153]

19.1.2 Insert the knitting cycles: Raglan with V-neck

Insert the k&w knitting cycles in the shape view:

1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.
- or -



→ open with the buttons.

2. Position the elements with the  icon and the left mouse button pressed.

3. Select the knitting cycles.

- from the module bar

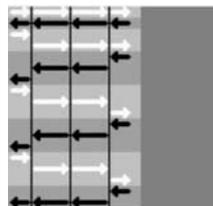
- or -

- in the Module Explorer

4. Insert the selected knitting cycle into the k&w shape.

5. Insert the **Sleeve-Body connection**.

- "k&w knitting cycles" / "Favorites / Basic Shapes" / "Raglan" / "B1 Type 1 (no connection L0-L1)".

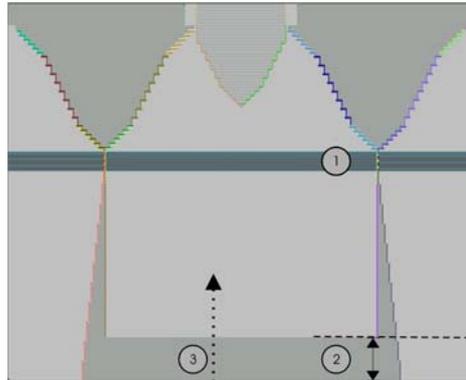
Knitting cycle modules	Name	Function
	B1 Type 1 (no connection L0-L1)	Connection of body and sleeve



Insert the knitting cycle module one time in the shape view at the point of the sleeve-body connection.

→ **Watch out the cursor function when inserting the knitting cycles:**

Meaning of arrows in insert mode	
Red arrow	You can enter the knitting cycle module in downward arrow direction
Green arrow	You can enter the knitting cycle module in upward arrow direction
Red arrow + Green arrow	"Shift" key + knitting cycle You can enter the knitting cycle module in up or downward arrow direction



Picture 1: Shape view

No.	Function
1	Inserted knitting cycle module: "B1 Type 1 (no connection L0-L1)"
2	Difference in length between body and sleeve.
3	Insertion direction for the knitting cycle module: "X Standard".

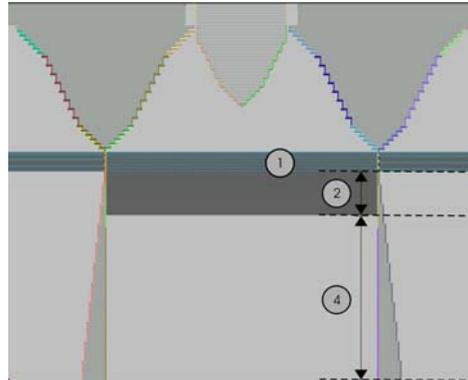
6. Move the **length compensation**.

Move the length compensation (2) between body and sleeve with the k&w knitting cycle module from the lower fabric edge (sleeve) to the center of the fabric (see figure 1):

■ "k&w knitting cycles" / "Stoll" / "X Standard"

Knitting cycle modules	Name	Function
	"X Default"	All three tubes/areas are processed evenly.
Application of the module:	1	To move the length adjustment, only select the module.
	2	Press "Ctrl" and select the module to overwrite previously inserted knitting cycle modules.

19.1 Shape view: Raglan with V-neck



Picture 2: Shape view

No.	Function
1	Inserted knitting cycle module: "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 knitting cycle module: "X Standard".



Length compensation at the fabric start makes it difficult to work with the comb difficult.

➔ **Display when inserting the knitting cycles into the pattern:**

- A **green line** indicates that the knitting cycle module is complete in the height and will be inserted.
- A **red line** indicates that the knitting cycle module is not complete in the height and will not be inserted.

Button assignments for the insertion of knitting cycles modules		
Key	Selection	Function
"Ctrl"	Knitting cycle modules	Overwrite knitting cycle
"Shift"	Knitting cycle modules	Knitting cycle can only be inserted partially as well. (Insert, even with red line)
"Alt"+"Ctrl"	Knitting cycle modules	Insert between existing knitting cycles; additional rows are inserted.
"Alt"	Knitting cycle modules	Inserting with empty rows
"Alt"+"Ctrl" + "Shift"	Knitting cycle modules	Insert between existing knitting cycles; additional rows are inserted. Knitting cycle can only be inserted partially as well

7. Fill the **length difference**.

Fill up steady the difference in length between body and sleeve with the following knitting cycles.

- "k&w knitting cycles" / "Favorites / Basic Shapes" / "Raglan" / "A1-3 Tubular".
- "k&w knitting cycles" / "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 tubes) below the sleeve cross-over.
	A52 tubulars	Knitting of the sleeve elements (= 2 tubes) below the sleeve cross-over.

The area with the "X Standard" knitting cycle is now overwritten with the knitting cycle modules described above.



You can select the inserted knitting cycle modules and copy and paste them with **Ctrl + C** and **Ctrl + V**.

8. **From the sleeve-body connection to the start of the V-neck.**

Insert the knitting cycle module from above the sleeve-body connection to the start of the V-neck:

- "k&w knitting cycles" / "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 cross-over.

19.1 Shape view: Raglan with V-neck

9. Insert the knitting cycle from the **start of V-neck up to the end of the V-neck:**

- "k&w knitting cycles" / "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 cross-over.

10. **Collar**

Insert the knitting cycle into the collar open in the front.

- "k&w knitting cycles" / "Stoll" / "Collar" / "with opening" / "without gore" / "D12 collar with opening (L0)"

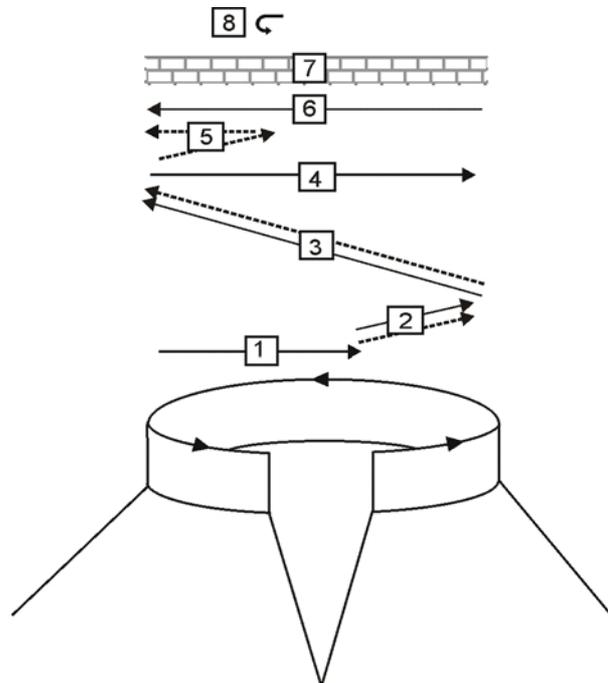
Knitting cycle modules	Name	Function
	D12 collar with opening (L0)	Knitting of the collar element with opening.

11. Binding-off **collar**.

Select the knitting cycle for binding-off the collar and insert it at the last knitting row of the collar.

- "k&w knitting cycles" / "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 the collar with opening in the front layer

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 right.
5	Bind off layer 0.
6	Knit draw thread to the left.
7	Protection rows.
8	Fix link-off stitch in place.

12. Save the shape via the "k&w shape" / "Save Shape As... (shk)" menu.



If you do not save the shape view with the knitting cycles, it is not possible to remove the shape from the pattern.

Afterwards you have to insert the knitting cycles into the shape view again.

13. Close the Shape View.

19.1.3 Apply the shape: Raglan with V-neck

I. Apply the shape:

1. Make settings in the "Configuration" dialog box:
2. Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu
- or -
➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.
3. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
4. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
5. Use narrowing and widening.
6. The "Insert/replace k&w start" dialog box appears.
7. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
8. Insert the binding-off module via "k&w shape" / "Insert Binding-Off" menu into the pattern.
- or -
➔ Call up the "Automatic Technical Editing" and let it insert the binding-off modules automatically.



Insert the binding-off modules before the automatical technical editing for a better overview.



You can undo the editing steps via the "k&w" / "Load Pattern Before Cutting Out".

9. Make changes in the "Yarn field view".

II. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.
 - *Settings in Configuration k&w dialog box*[\[see page 60\]](#)
 - *Overview of the k&w knitting cycles in the Module Explorer*[\[see page 195\]](#)
 - *Generation of a k&w shape*[\[see page 153\]](#)
 - *Presentation in the shape preview*[\[see page 111\]](#)

19.2 Shape view: Inserted sleeve with V-neck

Pattern data	Pattern picture
File: Inserted sleeve with V-neck Pattern width: 250 Pattern rows: 200	
Machine type:	CMS 822
Gauge:	6.2
Start:	1x1 rib
Basic pattern:	Jersey
Knitting technique	knit and wear
Description of pattern:	Inserted sleeve with V-neck

Rules for an inserted 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 of the shoulder to the end of the shoulder
2	End line of V-neck on the left and right front is two stitch rods less than the end line of the back	

19.2.1 Generate shape and pattern: Inserted sleeve with V-neck

I. Generate the shapes for the elements front, back and sleeve in the shape editor:

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

Front and back piece

Settings for the back		
Line of the edges	"General" tab	"Binding-off tab" tab
End line	Bind-off	Neck with draw thread



If you change outer dimensions of the front, then you must adapt 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	✓	113	-73	34	-22	0	0	0	0	0	0	Narrowing
2		0	73	0	22	0	22	1	0	0	0	

Lines Editor Line 1 left					
	Factor Grouped	Group	Height Steps	Width Steps	Factor
			34	-22	
	0	0	2	-2	6
	0	0	4	-2	5
	0	0	2	0	1

V-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	-113	0	-34	0	-34	1	0	0	0	Basis
2		266	-26	80	-8	10	-1	8	0	0	0	Widening
3		26	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	

Sleeve

Settings for the Sleeve			
Line of the edges	"General" tab	"Narrow" tab	"Connections" tab
No. 6	Narrowing	Remaining Narrowing	k&w Non-knitting

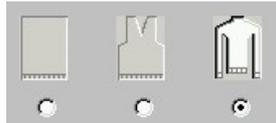
Settings for the Sleeve			
		Narrow entire width of sleeve	k&w remaining narrowing (SLEEVE-END).
		Bind off number of stitches with shoulder gore	



The end width of the sleeve and body must be matched to the module width of the collar used.

II. Generate new pattern.

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 250
Height: 200
5. Knitting mode: Jersey.
6. Confirm specifications with "OK".

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

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
2. Load the shape elements for body, sleeve and collar via .
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. Place the form elements into the basic fabric with the "OK" button.
5. Position the elements body and sleeve on the pattern with the icon  and the left mouse button pressed.

19.2.2 Insert the knitting cycles: Inserted sleeve with V-neck

Insert the k&w knitting cycles in the shape view:

1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.
- or -



→ open with the  buttons.

2. Position the elements with the  icon and the left mouse button pressed.

3. Select the knitting cycles.

- from the module bar

- or -

- in the Module Explorer

4. Insert the selected knitting cycle into the k&w shape.

5. Insert the **Sleeve-Body connection**.

Select the knitting cycle module for the sleeve-body connection in the Module Explorer and insert it:

- "k&w knitting cycles" / "Favorites / Basic Shapes" / "Inserted Sleeve" / "B1 Type 1 (no connection L0 L1)"

6. Move the **length compensation**.

Move the length compensation between body and sleeve with the knitting cycle module from the lower fabric edge to the center of the fabric.

- "k&w knitting cycles" / "Stoll" / "X Standard"



Length compensation at the fabric start makes it difficult to work with the comb difficult.

7. Fill the **length difference**.

Fill up steady the difference in length between body and sleeve with the following knitting cycles.

- "k&w knitting cycles" / "Favorites / Basic Shapes" / "Inserted Sleeve" / "A1-3 Tubular".

- "k&w knitting cycles" / "Favorites / Basic Shapes" / "Inserted Sleeve" / "A5-2 Tubular".

19.2 Shape view: Inserted sleeve with V-neck



You can select the inserted knitting cycle modules and copy and paste them with **Ctrl + C** and **Ctrl + V**.

8. Insert **Remaining Narrowing**.

Insert knitting cycle module for the remaining narrowing in the sleeve from top to bottom:

- "k&w knitting cycles" / "Stoll" / "3 Areas" / "Not knitting remaining narrowing" / "with opening" / "without gore" / "C51 3 areas with opening (L0) 0:2:0-3Y".

Designation	Presentation	Function								
Knitting cycle modules	<p>C51- 3 Areas with opening (L0) 0:2:0-3Y</p>	<p>The knitting cycle modules connects the 3 areas (sleeve-body-sleeve) by knitting 2 rows in the body and narrowing without knitting the sleeves to the body.</p> <p>with opening (V-neck)</p>								
Shape View without knitting cycle module		<table border="1"> <tr> <td>1</td> <td>Sleeve</td> </tr> <tr> <td>2</td> <td>Body</td> </tr> <tr> <td>3</td> <td>Height of the remaining narrowing</td> </tr> <tr> <td>4</td> <td>Height of the body = 2 x height of the remaining narrowing</td> </tr> </table>	1	Sleeve	2	Body	3	Height of the remaining narrowing	4	Height of the body = 2 x height of the remaining narrowing
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 Knitting cycle modules		<table border="1"> <tr> <td>1</td> <td>Sleeve</td> </tr> <tr> <td>2</td> <td>Body</td> </tr> <tr> <td>4</td> <td>Height of the knitting cycle module in stitch ratio 0:2:0</td> </tr> </table>	1	Sleeve	2	Body	4	Height of the knitting cycle module in stitch ratio 0:2:0		
1	Sleeve									
2	Body									
4	Height of the knitting cycle module in stitch ratio 0:2:0									

9. **From below of the remaining narrowing up to start of V-neck**
insert the knitting cycle module.

- "k&w knitting cycles" / "Favorits / Basic Shapes" / "Inserted Sleeve"
/
"C112- 3 Areas with opening (L0)-1:1:1"

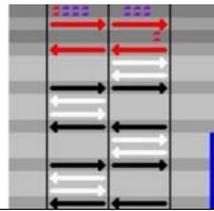
10. **Between the start of V-neck and the sleeve-body connection**
insert the knitting cycle module.

- "k&w knitting cycles" / "Favorites/Basic Shape Types" / "Inserted Sleeve" / "C37-3 Area 1:1:1"

11. Insert **shoulder gore**.

Insert the knitting cycle module in the area of the shoulder.

- "k&w knitting cycles" / "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 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 the shoulder area (with three yarn carriers) in goring technique and following binding-off of the shoulder and of the neck.

12. Save the shape via the "k&w shape" / "Save Shape As... (shk)" menu.



If you do not save the shape view with the knitting cycles, it is not possible to remove the shape from the pattern.
Afterwards you have to insert the knitting cycles into the shape view again.

13. Close the Shape View.

19.2.3 Complete the pattern: Inserted sleeve with V-neck

I. Apply the shape:

1. Make settings in the "Configuration" dialog box:
2. Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu
- or -
➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.
3. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
4. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
5. Use narrowing and widening.
6. The "Insert/replace k&w start" dialog box appears.
7. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
8. Insert the binding-off module via "k&w shape" / "Insert Binding-Off" menu into the pattern.
- or -
➔ Call up the "Automatic Technical Editing" and let it insert the binding-off modules automatically.



Insert the binding-off modules before the automatical technical editing for a better overview.



You can undo the editing steps via the "k&w" / "Load Pattern Before Cutting Out".

9. Make changes in the "Yarn field view".

II. Complete the pattern:

1. Automatical or stepwise technical editing.
 2. Generate a Sintral.
 3. Conduct Sintral Check.
- *Generation of a k&w shape*[see page 153]
 - *Settings in Configuration k&w dialog box*[see page 60]

19.3 Shape view: Saddle shoulder with V-neck

Pattern data	Pattern picture
File: saddle shoulder Pattern width: 250 Pattern rows: 280	
Machine type:	CMS 822
Gauge:	6.2
Start:	As desired
Basic pattern:	Front stitch with transfer
Knitting technique	knit and wear
Description of pattern:	Saddle shoulder with V-neck and narrowed collar

Rules for saddle shoulder with V-neck	
1	Even-numbered height from the start of the V-neck to the start of the shoulder. Even-numbered total height of the V-neck.
2	Even-numbered height from the start to the end of the shoulder.
3	Even-numbered height of the collar.

19.3.1 Generate shape and pattern: Saddle shoulder with V-neck and collar

I. Generate the shapes for the elements front, back, sleeve and collar in the shape editor:

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	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		0	66	0	20	0	20	1	0	0	0	

Front and back piece

Settings for front and back		
Line of the edges	"General" tab	"Narrow" tab
No. 5	Narrowing	Body above / underneath. - or - Body above / underneath Layers apart
No. 7	Narrowing	No entry of a narrowing module Narrowing in the sleeve



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

V-neck element

Settings for the V-neck element		
Line of the edges	"General" tab	"Narrow" tab
No. 1	Narrowing	V-neck above / underneath - or - Body above / underneath Layers apart L0/ L1

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	

Sleeve

19.3 Shape view: Saddle shoulder with V-neck

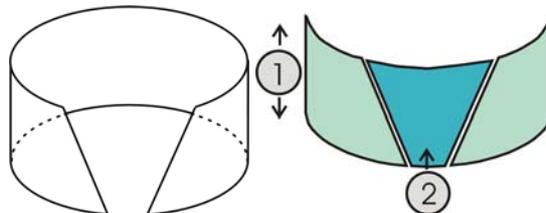
Settings for Sleeve		
Line of the edges	"General" tab	"Narrow" tab
No. 4	Narrowing	Sleeve above / underneath - or - Sleeve above / underneath Layers apart
No. 5	Narrowing	Sleeve above / underneath - or - Sleeve above / underneath Layers apart
		Narrow entire width of sleeve
		Narrowing width: 0

II. Generate the elements for a narrowed collar.

A narrowed collar has an opening at the front.



Different collar shapes must therefore be produced for the front and back piece of the collar.



No.	Meaning
1	Both elements must have the same height
2	The element opening lays as not knitting area above the basic element collar

1. Generate a new shape for the collar front in the shape editor.
2. Specify the width and height for the 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

Basic element for the collar at front and back

Settings for the Collar		
Line of the edges	"General" tab	"Binding-off tab" tab
End line	Bind-off	Open cut out L0

3. Create a new element **Neck opening** in the front collar shape element.

The element defines the **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	-8	2	-1	8	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	

Activate the Neck cut-out element for the front of the collar



When generating the collar front watch out:

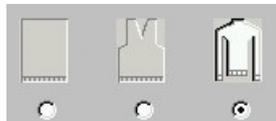
- The **Neck opening** element must be as high as the **basic element** for the collar.
The end lines of the collar elements **Basic shape** and **Neck opening** therefore do not need to be connected.
 - Only in the case of a different height must a connection be made or the position of the **Neck opening** specified.
4. Allocate "bind-off" to the basic element in the end line under "Function" in the "General" tab.
 5. Select the "V-neck open L0" type of binding-off in the "Bind-off" tab.
 6. Save collar shape.
 7. Create element for collar back.



Use same specifications as for front collar, but without non-knitting area.

III. Generate new pattern.

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear**.



4. Pattern size:
Width: 250
Height: 280
5. Knitting mode: Jersey.
6. Confirm specifications with "OK".

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

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
2. Load the shape elements for body, sleeve and collar via .
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. Place the form elements into the basic fabric with the "OK" button.
5. Position the elements body and sleeve on the pattern with the icon  and the left mouse button pressed.

19.3.2 Insert knitting cycles: Saddle shoulder with V-neck and collar

Insert the k&w knitting cycles in the shape view:

1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.
- or -



→ open with the buttons.

2. Position the elements with the  icon and the left mouse button pressed.
3. Select the knitting cycles.
 - from the module bar
- or -
 - in the Module Explorer
4. Insert the selected knitting cycle into the k&w shape.
5. Insert the **Sleeve-Body connection**.
Insert the knitting cycle module once for the sleeve-body connection.
 - "k&w knitting cycles" / "Favorites / Basic Shapes" / "Saddle Shoulder" / "B1 Type 1 (no connection L0-L1)"
6. Move the **length compensation**.
Move the length compensation between body and sleeve with the knitting cycle module from the lower fabric edge to the center of the fabric.
 - "k&w knitting cycles" / "Stoll" / "X Standard"



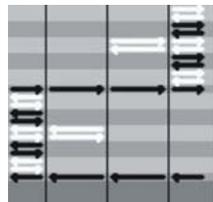
Length compensation at the fabric start makes it difficult to work with the comb difficult.

7. Fill the **length difference**.
Fill up steady the difference in length between body and sleeve with the knitting cycles.
 - "k&w knitting cycles" / "Favorites / Basic Shapes" / "Saddle Shoulder" / "A1-3 Tubular".
 - "k&w knitting cycles" / "Favorites / Basic Shapes" / "Saddle Shoulder" / "A5-2 Tubular".



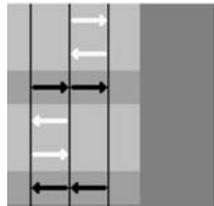
You can select the inserted knitting cycle modules and copy and paste them with **Ctrl + C** and **Ctrl + V**.

8. **From the sleeve-body connection up to start of the V-neck** insert the knitting cycle module.
 - "k&w knitting cycles" / "Favorites/Basic Shape Types" / "Saddle Shoulder" / "C37-3 Area 1:1:1"
9. **From the start of the V-neck up to the start of the saddle** insert the knitting cycle then.
 - " k&w knitting cycles" / "Stoll" / "3 areas" / "1:1:3 ratio" / "with opening" / "without gore" / "C112-3 Areas 1:1:1 with opening (L0)"
10. **From the start to the end of the saddle** insert the knitting cycle module.
 - " k&w knitting cycles" / "Stoll" / "3 areas" / "3:1:3 ratio" / "with opening" / "without gore" / "C68-3 Areas 3:1:3 with opening (L0)"

Knitting cycle modules	Name	Function
	C68-3 Areas 3:1:3 with opening (L0)	Knitting the saddle shoulder in 3:1 ratio between sleeve and body in the area of the V-neck.

11. **End of the saddle shoulder**
Insert the knitting cycle module in the area between saddle shoulder and start of the collar.
 - "k&w knitting cycles" / "Favorites/Basic Shape Types" / "Saddle Shoulder" / "C37-3 Area 1:1:1"
12. **Collar**
Insert the knitting cycle module in the collar.

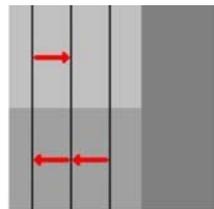
- "k&w knitting cycles" / "Stoll" / "Collar" / "with opening" / "without gore" / "D12-Collar with opening (L0)"

Knitting cycle modules	Name	Function
	D12-Collar with opening (L0)	Knitting the collar with opening in the front layer.

13. Binding-off Collar.

Insert the binding-off module for the collar in the last knitting row.

- "k&w knitting cycles" / "Stoll" / "1 Area" / "bind off collar" / "with opening" / "D10-neckline front open bind off"

Knitting cycle modules	Name	Function
	D10-neckline front open bind off	Binding-off the collar element with opening in the front layer.

14. Save the shape via the "k&w shape" / "Save Shape As... (shk)" menu.



If you do not save the shape view with the knitting cycles, it is not possible to remove the shape from the pattern.

Afterwards you have to insert the knitting cycles into the shape view again.

15. Close the Shape View.

19.3.3 Form anwenden Muster fertigstellen: Saddle shoulder with V-neck and collar

I. Apply the shape:

1. Make settings in the "Configuration" dialog box:
2. Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu
- or -
➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.
3. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
4. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
5. Use narrowing and widening.
6. The "Insert/replace k&w start" dialog box appears.
7. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
8. Insert the binding-off module via "k&w shape" / "Insert Binding-Off" menu into the pattern.
- or -
➔ Call up the "Automatic Technical Editing" and let it insert the binding-off modules automatically.



Insert the binding-off modules before the automatical technical editing for a better overview.



You can undo the editing steps via the "k&w" / "Load Pattern Before Cutting Out".

9. Make changes in the "Yarn field view".

II. Complete the pattern:

1. Automatical or stepwise technical editing.
 2. Generate a Sintral.
 3. Conduct Sintral Check.
- *Generation of a k&w shape*[see page 153]
 - *Settings in Configuration k&w dialog box*[see page 60]

19.4 Shape view: Waistcoat with V-neck

Pattern data	Pattern picture
File: Waistcoat Pattern width: 180 Pattern rows: 180	
Machine type:	CMS 822
Gauge:	6.2
Start:	1x1 rib
Basic pattern:	Jersey
Knitting technique	knit and wear
Description of pattern:	Vest with V-neck at the front and back

Rules for vest with V-neck L0/L1	
1	Even-numbered height up to the start of cut-out (front + back)
2	Even-numbered height of the V-neck (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 left and right side: Two stitch rods 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.

19.4.1 Generate shape and pattern: Waistcoat with V-neck

I. Generate the shapes for the front and back elements in the shape editor:

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

Lines Editor Line 5 left

	Factor Grouped	Group	Height Steps	Width Steps	Factor
			48	18	
	1	0	3	1	1
	5	1	2	1	1
	0	1	3	1	2
	1	0	2	1	1
	1	0	3	1	1

Front and back piece

Settings for front and back

Line of the edges	Tab "General information"	Tab "Widen" / "Narrow"	Module	Tab "connections"
No. 3	Widening	Widening width: 1 - or - Widening width: as desired	Standard - or - Closing-Stitch / Layers apart	
No. 4+ 5	Narrowing	Narrowing width: as desired	Body above / underneath. - or - Body above / underneath Layers apart.	k&w border open e.g. Slipover (VT/ RT) (not required with manual insertion of the knitting cycle)
End line	Bind-off		Top end of straps	



If you change outer dimensions of the front, then you must adapt 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		633	0	190	0	190	0	1	0	0	0	
2		0	0	0	0	0	0	1	0	0	0	

Opening in the front (vest)

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	

front V-neck

19.4 Shape view: Waistcoat with V-neck

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	56	0	20	0	20	1	0	0	0	

rear V-neck

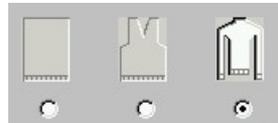
Settings for front and back V-neck		
Line of the edges	Tab "General information"	Tab "Narrowing"
No.1	Narrowing	V-neck above Layers apart - or - V-neck underneath Layers apart



If necessary you can allocate a start module to the opening on the back.
"k&w-Technical" / "Start-V-neck" / "L1_k&w"

II. Generate new pattern:

1. Generate new pattern.
2. Select machine.
3. Selection: knit and wear.



4. Pattern size:
Width: 180
Height: 180
5. Knitting mode: Jersey
6. Confirm specifications with "OK".

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

Combine the individual cutting shapes to form a k&w shape.

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
2. Load the shape elements for body, sleeve and collar via .
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. Place the form elements into the basic fabric with the "OK" button.
5. Position the elements body and sleeve on the pattern with the icon  and the left mouse button pressed.

19.4.2 Insert the knitting cycles: Waistcoat with V-neck

Insert the k&w knitting cycles in the shape view:

1. Open the "Shape view" via the "k&w Shape" \ "Shape view" menu.
- or -



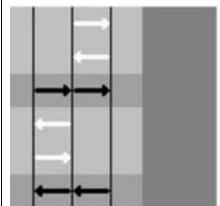
→ open with the buttons.

2. Position the elements with the  icon and the left mouse button pressed.

3. Select knitting cycles in the module bar or in the module explorer.
4. Insert the selected knitting cycle into the k&w shape.

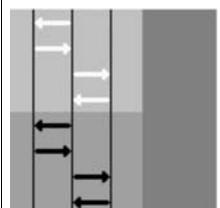
5. **From start up to beginning of rear cut-out.**
Select the knitting cycle module and insert it from the bottom to start of the cut-out at the back.

- "k&w knitting cycles" / "Favorites/Basic Shape Types" / "Waistcoat" / "A 3-1 tubular-with opening (L0)"

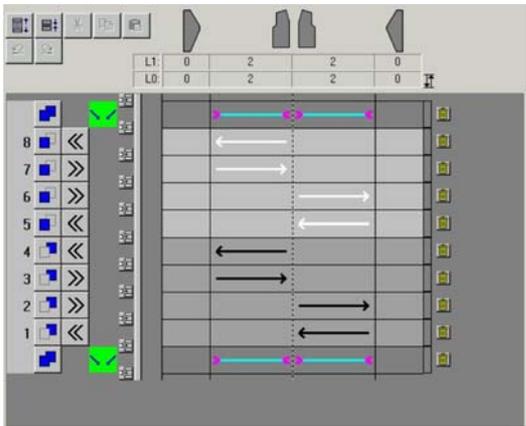
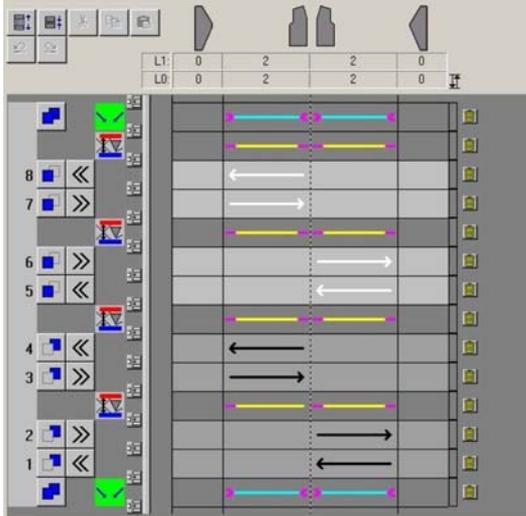
Knitting sequence	Function
	Knitting the body with an opening in the front

6. **Start of the back cut-out up to the sleeve narrowing.**
Insert the knitting cycle module up to the narrowing (arm hole).

- "k&w knitting cycles" / "Stoll" / "1 area" / "splipover/top/skirt" / "with opening" / "without gore" / "C76-1 area with opening (L0) and opening (L1)-2Y"

Knitting sequence	Function
	Knitting the area: - front opening - V-neck at the back.

7. **From the start of the sleeve narrowing up to the last but one row**
For the following area (from the sleeve narrowing on) insert the knitting cycle module up to the last but one complete row before the end of the shape.
- Either copy and modify the following knitting cycle:
 - "k&w knitting cycles" / "Stoll" / "1 area" / "splipectop/skirt" / "with opening" / "without gore" /
 - "C76-1 area with opening (L0) and opening (L1)"

Knitting cycle modules	
Original	
Modified	 <p style="text-align: center;">  Insert the icon Yarn carrier may not change the layer into a row before knitting. </p>

You can knit the vest with normal yarn carriers when using the modified knitting cycle.

- or -

- Use the following knitting cycle as it is:
 - "k&w knitting cycles" / "Stoll" / "1 area" / "splipectop/skirt" / "with opening" / "without gore" /
 - "C121-1 area with opening (L0) and opening (L1) -borders opened-4Y"

19.4 Shape view: Waistcoat with V-neck

Knitting sequence	Function
	Knitting the area: - front opening - V-neck at the back - Borders open (arm hole)

You have to knit the vest with intarsia yarn carriers when using this knitting cycle.

Otherwise normal yarn carriers must be kicked.

8. **Binding-off the straps**

Select the following knitting cycle module and enter it in both the last complete rows.

"k&w Technique" / "bind off" / "Standard" / "Top Straps End"

Knitting sequence	Function
	Binding-off the straps of the top

9. Save the shape via the "k&w shape" / "Save Shape As... (shk)" menu.



If you do not save the shape with the knitting cycles, it is not possible to remove the shape from the pattern.

Afterwards you have to insert the knitting cycles into the shape view again.

10. Close the Shape View.

19.4.3 Complete the pattern: Waistcoat with V-neck

I. Apply the shape:

1. Make settings in the "Configuration" dialog box:
2. Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu
- or -
➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.
3. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
4. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
5. Use narrowing and widening.
6. The "Insert/replace k&w start" dialog box appears.
7. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
8. Insert the binding-off module via "k&w shape" / "Insert Binding-Off" menu into the pattern.
- or -
➔ Call up the "Automatic Technical Editing" and let it insert the binding-off modules automatically.



Insert the binding-off modules before the automatical technical editing for a better overview.



You can undo the editing steps via the "k&w" / "Load Pattern Before Cutting Out".

9. Make changes in the "Yarn field view".

II. Complete the pattern:

1. Automatical or stepwise technical editing.
 2. Generate a Sintral.
 3. Conduct Sintral Check.
- *Knitting cycle editor*[\[see page 199\]](#)
 - *Generation of a k&w shape*[\[see page 153\]](#)
 - *Settings in Configuration k&w dialog box*[\[see page 60\]](#)

20 Overview of the k&w knitting cycles in the Module Explorer

I. "Stoll" / "Own" module group



The module group **Own** is empty and is used for storing k&w knitting cycles generated by the user.



Designation	Knitting cycle for	Application
3 areas	Sleeve/Body/Sleeve	Above Sleeve-Body connection.
1 area	- /Body/ -	Tank top, top, collar.
connections	Sleeve-Body connection	Connection of sleeve and body
3 tubulars	Sleeve/Body/Sleeve	Below Sleeve - Body connection.
2 tubulars	Sleeve/ - /Sleeve,	Below Sleeve - Body connection.
1 tubular	- /Body/ -	Below Sleeve - Body connection.
Collar	Collar	Collar without / with opening, without gore
Intarsia	- /Body/ -	Intarsia knitting technique for the body

19.4 Shape view: Waistcoat with V-neck

II. Subgroups in "3 areas"



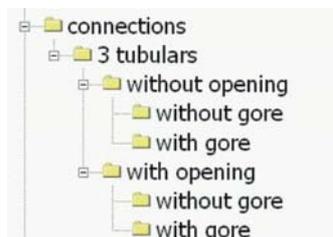
Designation	Use and stitch ratio				
ratio	Stitch rows Sleeve		Stitch rows body	Stitch rows sleeve	Application
1:1:1	1		1	1	
1:2:1	1		2	1	Sleeve length compensation
1:3:1	1		3	1	Sleeve length compensation
2:1:2	2		1	2	Body-saddle shoulder length compensation
3:1:3	3		1	3	Body-saddle shoulder length compensation
2:0:2:- 2:2:2	Front layer	2	0	2	Sleeve-back body length compensation
	Back layer	2	2	2	
Remaining narrowing not knitting	knitting cycle for inserted sleeve or effect linked off sleeve with not knitting the left-over narrowing.				
Bind-off	Knitting cycles for binding-off neck with/without opening				
F-Shoulder Sleeve	Knitting cycles for the French shoulder shape				

III. "Opening" / "Gore" subgroups



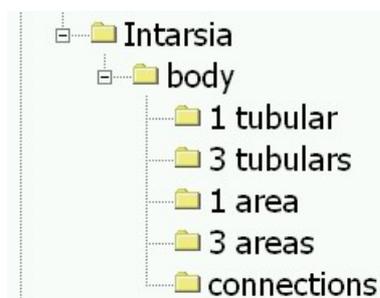
Designation		knitting area	Knitting sequence
without opening	without gore	Sleeve/Body/Sleeve	Tube in sleeve/body/sleeve
	with gore		Gore with binding in body in L0 or L1 Example: Neck gore
with opening	without gore		Opening in body in L0 or L1
	with gore		Gore with binding and opening in body in L0 or L1

IV. "Connections" subgroup



Designation		knitting area	Knitting sequence
without opening	without gore	Sleeve/Body/Sleeve	B1 Type1 (no connection L0-L1)
			B1 Type1 TC-T (no connection L0-L1)
	with gore		B5 Type1 with gore (L0) no connection L0-L1
			B6 Type1 with gore (L0+L1) no connection L0-L1
with opening	without gore		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		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		I17-Type 1 no connection L0-L1 +I L0 Body

V. "Intarsia" subgroup



Designation		Application
Body	1 tubular	Intarsia knitting technique for the body below the sleeve-body connection (slipover)
	3 tubulars	Intarsia knitting technique for the body below the sleeve-body connection (pullover)
	1 area	Intarsia knitting technique for the body above the sleeve-body connection (slipover)
	3 areas	Intarsia knitting technique for the body above the sleeve-body connection (pullover)
	connections	Intarsia knitting technique in the area of the sleeve-body connection at the front layer

VI. "Favorites / Basic Shape Types" module groups



Standard shape	Contents
set in sleeve	Knitting cycles for standard shapes
set in sleeve as cardigan	
saddle shoulder	
saddle shoulder as cardigan	
raglan	
raglan as cardigan	
slipover	
Waistcoat	
Intarsia	Knitting cycles for the intarsia knitting technique of the body

VII. Designation of the k&w knitting cycles and their use:

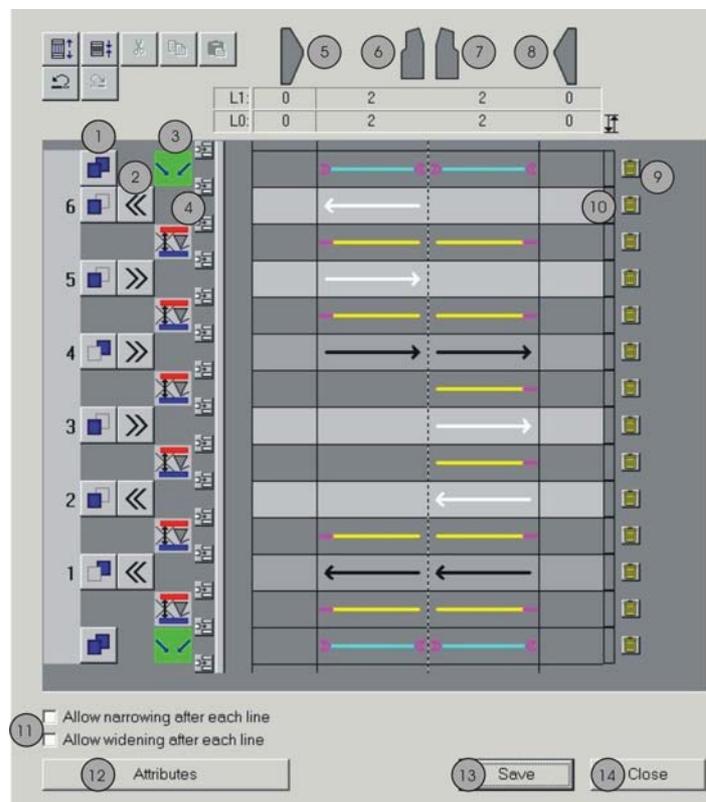
Various characters are used to mark the various k&w knitting cycles.

Designation	Knitting sequence	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	Binding-off and collar		Neck, shoulder, collar
I	1 tubular	Body	Intarsia knitting technique below the sleeve-body connection
	3 tubulars	Sleeve/Body/Sleeve	
	Connection	with opening	Intarsia knitting technique in the area of the sleeve-body connection
	1 area with opening		Intarsia knitting technique from above the sleeve-body connection to the start of the collar
	3 areas with opening		

21 Knitting cycle editor

You can create and modify knitting cycle modules with the knitting cycle editor.

1. Call up the Knitting Cycle Editor via the "Module" / "Generate k&w Knitting Cycle..." menu.
The "Properties of: <Module name>" dialog box appears.
2. Enter a name for the knitting cycle under "Group name".
3. A color can be specified for the knitting cycle under "Module color".



	Presentation	Meaning
		Display of the technical rows in the Knitting Cycle Editor
		Display of the knitting rows in the Knitting Cycle Editor
1		Definition of layers
		Back layer
		Front layer
2		Specification of the carriage direction.
3	Definition and	Additional rows = technical rows (without knitting)

	Presentation	Meaning	
	display of the function of an additional row	Symbols for the <i>Knitting rows or additional rows in the Knitting Cycle Editor [see page 201]</i> .	
4		Insert a row.	
5	Sleeve on the left	Display of the row ratio of the knitting row in the shape elements	
6	Left body		
7	Right body		
8	Sleeve on the right		
9		Delete a row	
10	Button for cycles	Display cycles by two colors.	
11		Checkbox	
	"Allow narrowing after each line"	Deactivated	Width alteration by narrowing or widening after each line is not allowed. Specifications must be entered in column (3) in accordance with the knitting cycles.
	"Allow widening after each line"	Activated	Width alteration by narrowing or widening after each line is allowed. Specifications in column (3) will be ignored .
12	"Attributes"	Knitting cycle attributes Entry of attributes to use the knitting cycle in the ShapeWizard.	
13	"Save"	Save k&w knitting cycle.	
14	"Close"	Close dialog box without saving the knitting cycle.	

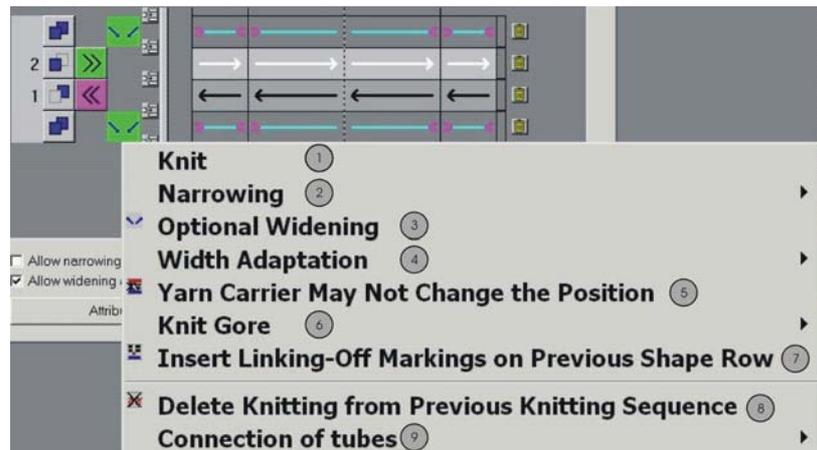
Additional options for calling up the Knitting Cycle Editor:

- double-click the selected knitting cycle module in the module explorer.
- with the **Edit** function in the context menu of a selected knitting cycle module in the module explorer.
- by double-clicking the selected knitting cycle module in the module bar.

21.1 Knitting rows or additional rows in the Knitting Cycle Editor

Knitting rows and additional rows are defined in a knitting cycle.

You can run the functions for the additional rows via the context menu in column (3).



Knitting rows



No symbol is entered in column (3).

- ➔ Entry of knitting information by clicking with the left mouse button in the corresponding column of the shape element.
- ➔ Deleting of an entry by clicking again with the left mouse button.

Additional rows



Symbols for the corresponding function are entered in column (3).

- ➔ Additional rows **without** position lines and markings

The specification refers to the all shape elements, meaning the whole row.

- ➔ Additional rows **with** position lines and markings

The specification refers to the shape element marked with a colored position line.

Colored markings can be set at the line ends (= shape edges) in addition. These mark the shape edges at which the additional information is to be carried out.

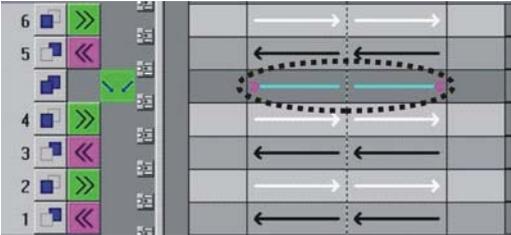
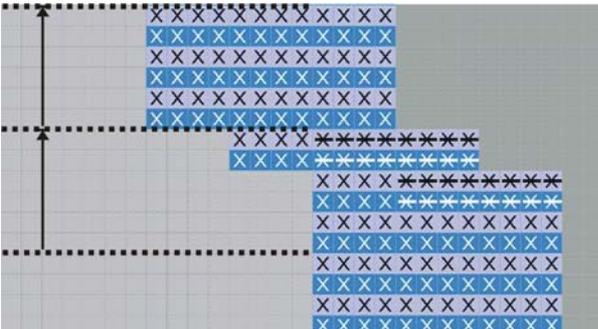
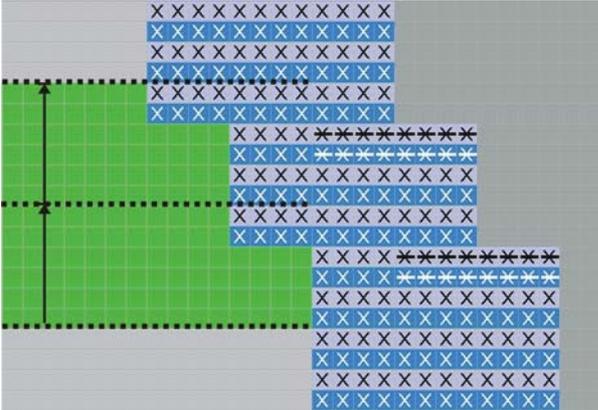
21.1.1 Knit

No.	Function	Icon	Meaning
1	Knit		Allocate the "Knit" function to a row in the knitting cycle editor via the column (3).
Submenu for Knitting			
1	Knit		<p>Knitting row</p> <p>Color of arrows defines the knitting layer: Black: Layer L1 White: Layer L0</p> <p>The specification of the carriage direction in column (2) defines the direction of the arrow.</p>
2	Do not knit		<p>Non-knitting row</p> <p>The row is edited in the shape view. You can specify knitting layer and carriage direction. Example: Remaining Narrowing</p>
3	Not knitting additional row		<p>Additional non-knitting row</p> <p>Row is originally not present in the shape view; the row is inserted. You can specify knitting layer and carriage direction. Example: Optimization of narrowings</p>
4	Additional row		<p>Additional knitting row</p> <p>Row is originally not present in the shape view; the row is inserted. You can specify knitting layer and carriage direction. Example: Binding-off the collar</p>
5	Binding		<p>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 specify knitting layer and carriage direction. Example: Knitting cycle for neck gore</p>

21.1.2 Narrowing

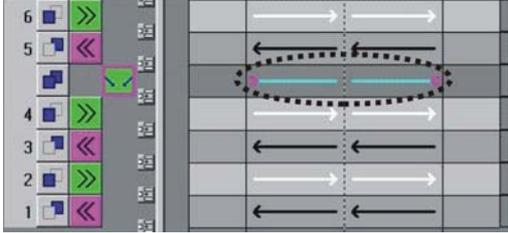
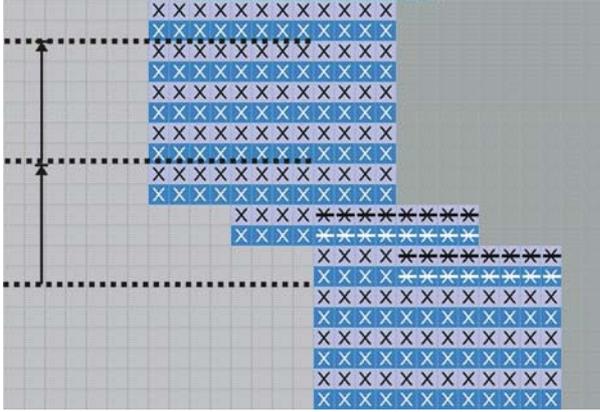
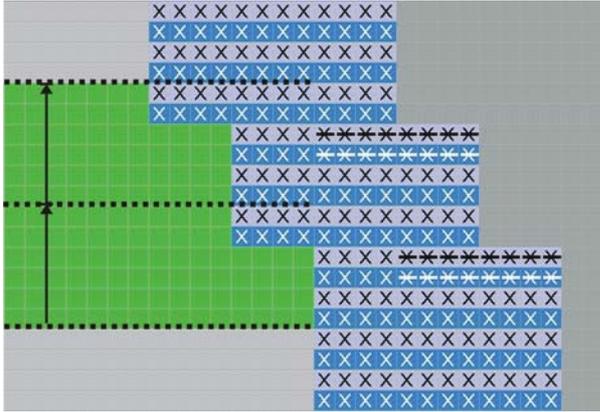


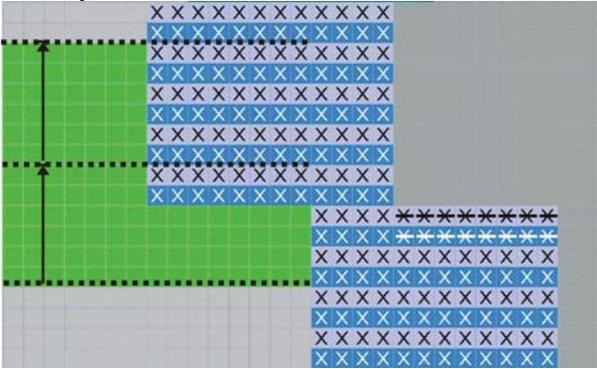
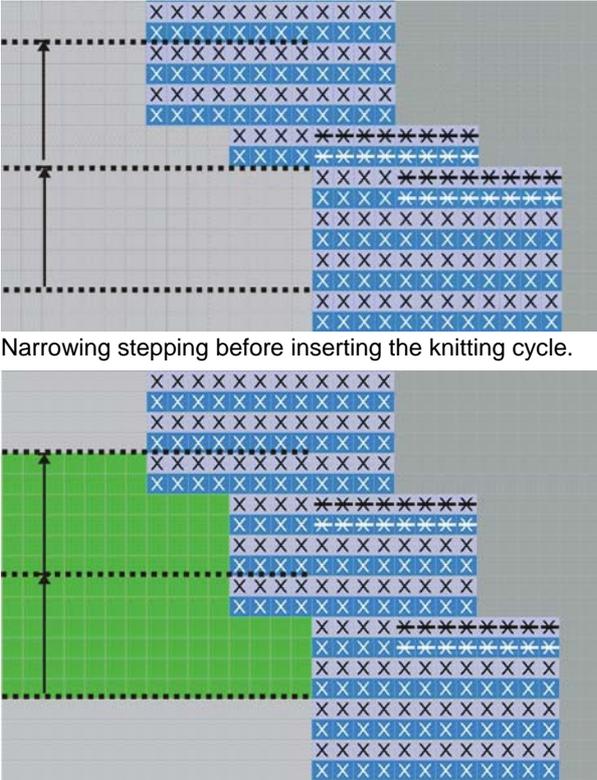
The shape counters are moved in accordance with the narrowing.

No.	Function	Icon	Meaning
2	Narrowing		<p>Optional Narrowing</p>  <p>Narrowing can be carried out after every third k&w complete row (L1 +L0 knit), inasmuch as a narrowing is present in the shape.</p> <p>The shape is retained!</p>  <p>Narrowing stepping before inserting the knitting cycle.</p>  <p>Narrowing stepping after inserting the knitting cycle.</p>

21.1 Knitting rows or additional rows in the Knitting Cycle Editor

		<p>Forced narrowing by 1 needle</p> <p>k&w in 1x1: no narrowing k&w all needles (TC-T): Narrowing by 1 needles</p>  <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> <p>k&w in 1x1: Narrowing by 1 stitch k&w all needles (TC-T): Narrowing by 2 stitches</p>
		<p>Forced narrowing by 3 needles</p> <p>k&w in 1x1: no narrowing k&w all needles (TC-T): Narrowing by 3 stitches</p>
		<p>Forced narrowing by 4 needles</p> <p>k&w in 1x1: Narrowing by 2 stitches k&w all needles (TC-T): no narrowing</p>
		<p>Forced narrowing by 5 needles</p> <p>k&w in 1x1: - k&w all needles (TC-T): -</p>
		<p>Forced narrowing by 6 needles</p> <p>k&w in 1x1: Narrowing by 3 stitches k&w all needles (TC-T): no narrowing</p>

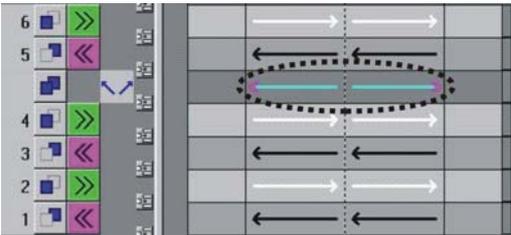
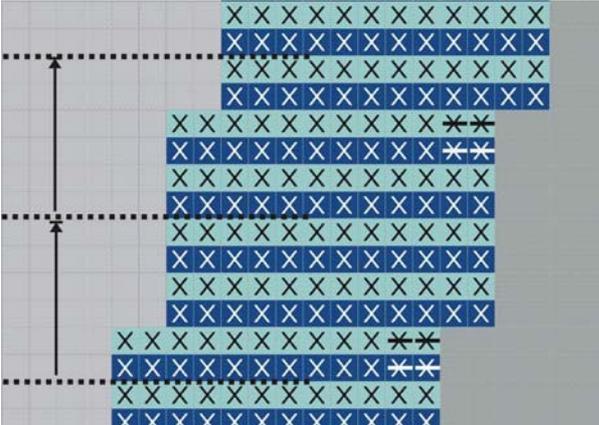
No.	Function	Icon	Meaning
2	Narrowing		<p>Optional or Anticipatory Narrowing</p>  <p>The knitting cycle basically behaves like the knitting cycle with "Optional Narrowing". In addition, two additional rules are observed:</p> <p>First Rule: A narrowing step not carried out is carried out separately from the second narrowing step during the next narrowing permission.</p> <p>The second narrowing step is moved to the next narrowing permission in the knitting cycle.</p>  <p>Narrowing stepping before inserting the knitting cycle.</p>  <p>Narrowing stepping after inserting the knitting cycle with "Optional or Anticipatory Narrowing".</p>

No.	Function	Icon	Meaning
			<p>In comparison:</p>  <p>Narrowing stepping after inserting the knitting cycle with "Optional narrowing". Narrowing steps are combined.</p>
			<p>Second Rule: If no shape stepping is present up to the narrowing permission in the knitting cycle, then the subsequent shape row is also checked. An existing narrowing step is given preference.</p>  <p>Narrowing stepping before inserting the knitting cycle.</p> <p>Narrowing stepping after inserting the knitting cycle.</p>

21.1.3 Widening



The shape counters are moved in accordance with the widening.

No.	Function	Icon	Meaning
3	Optional Widening		<p>Optional Widening</p>  <p>Widening can be carried out after every third k&w complete row (L1 +L0 knit), inasmuch as a widening is present in the shape. The shape is retained!</p>  <p>Stepping of the widening before inserting the knitting cycle.</p>  <p>Stepping of the widening after inserting the knitting cycle. The first widening is moved to the row with widening permission.</p>

21.1.4 Width adaptation

For knitting cycles with a closed outer edge, the narrowings of both knitting layers must be executed simultaneously so that the outer edge will be closed.

For some knitting cycles, the number of knitted rows up to the narrowing varies for both knitting layers.

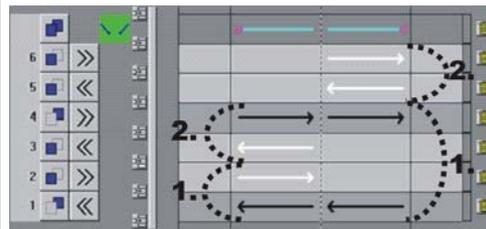
No.	Function	Icon	Meaning
4	Width adaptation		Width adjustment of layers via narrowing a layer. If the widths of the two knitting layers (L0+L1) differ, the wider knitting layer is adapted to the narrower knitting layer.
			Width adjustment of layers via widening a layer. If the widths of the two knitting layers (L0+L1) differ, the narrower knitting layer is adapted to the wider knitting layer.



The shape changes.

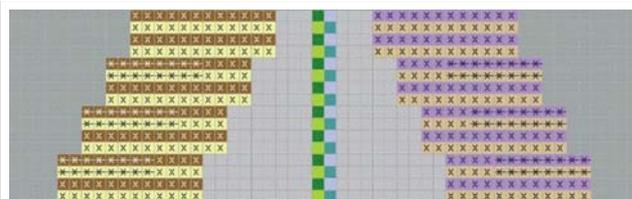
Examples without width adjustment (not necessary):

Knitting cycle with opening, narrowing on outer edge



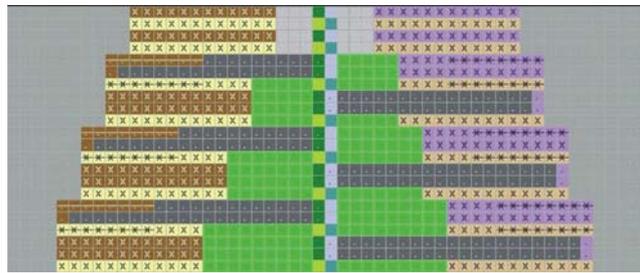
In both body elements, 2 complete rows (L0+L1) are knit before the first narrowing.

Narrowing is carried out on both layers.



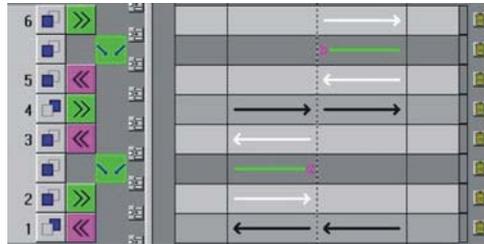
Narrowing steps before inserting the knitting cycle.

Examples **without** width adjustment (not necessary):

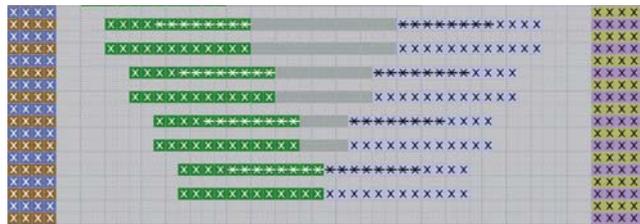


Narrowing steps after inserting the knitting cycle.
Both layers (L0+L1) are narrowed at the same time, as both layers have been worked through equally often before the narrowing permission.

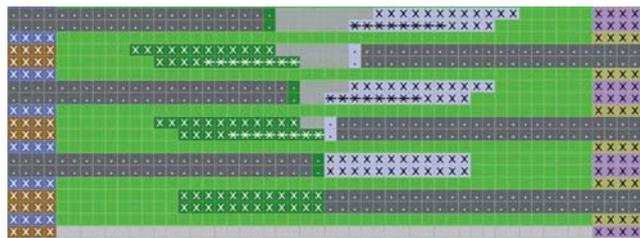
Knitting cycle with narrowing in the V-neck



In the knitting cycle only the layer L0 in the V-neck is narrowed.



Narrowing steps before inserting the knitting cycle.

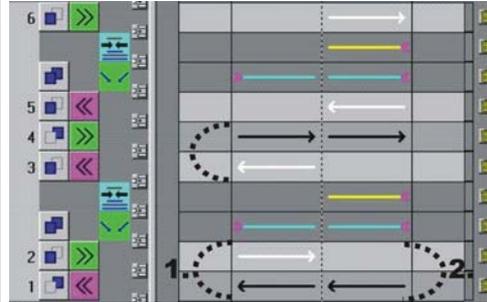


Narrowing steps after inserting the knitting cycle.
Only layer L0 is narrowed, and therefore no width adjustment is necessary.

21.1 Knitting rows or additional rows in the Knitting Cycle Editor

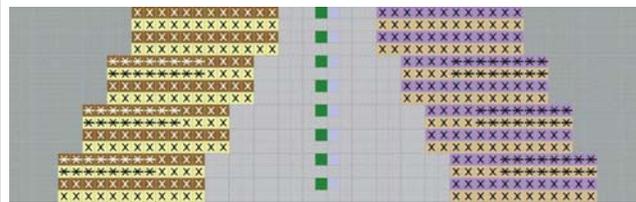
Examples **with** width adjustment:

Knitting cycle with opening, narrowing on outer edge



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 carried out on layer L1 only. Layer L0 is not narrowed.



Narrowing steps before inserting the knitting cycle.



Narrowing steps after inserting the knitting cycle with width adjustment.

The wider layer L0 is adjusted to the narrower layer L1.

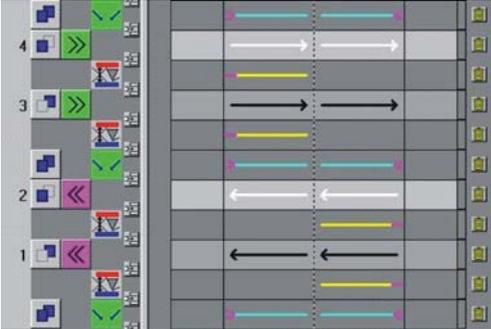


In comparison:

Narrowing steps after inserting the knitting cycle without width adjustment.

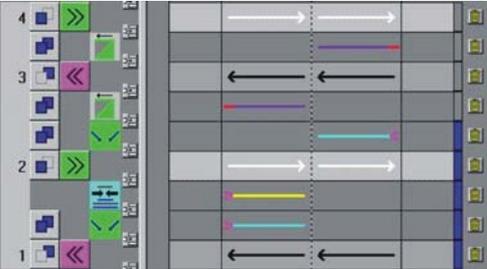
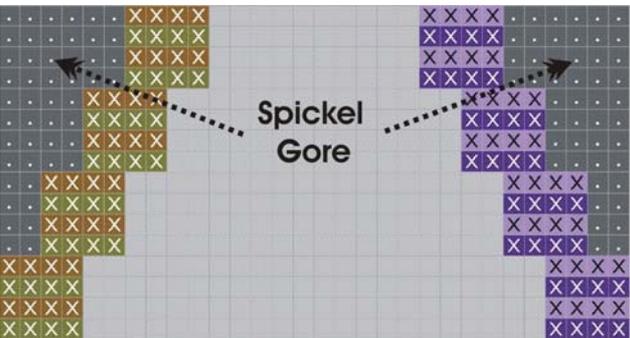
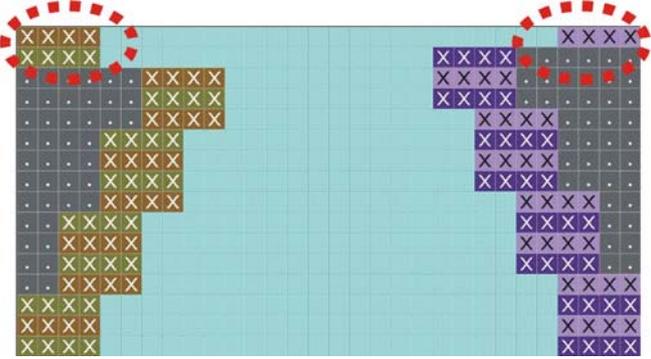
Not knittable!

21.1.5 Yarn carrier may not change the layer

No.	Function	Icon	Meaning
5	Yarn Carrier May Not Change the Layer		<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.</p> <p>Specification always directly before a knitting row, i.e. no other specifications in between.</p>

21.1.6 Knit off Gore

No.	Function	Icon	Meaning
6	Knit off Gore		<p data-bbox="534 474 1396 539">Generate Extension of the Following Pattern Row with Shape Data. You can specify the layer.</p> <div data-bbox="534 548 1029 817"> </div> <div data-bbox="534 828 1173 1153"> </div> <p data-bbox="534 1164 1061 1198">Gore stepping before inserting the knitting cycle.</p> <div data-bbox="534 1209 1204 1556"> </div> <p data-bbox="534 1568 1396 1626">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 for the entire width.</p>

No.	Function	Icon	Meaning
6	Knit off Gore		<p data-bbox="571 367 1010 427">Extension of the following pattern row You can specify the layer.</p>   <p data-bbox="571 1055 1086 1081">Gore stepping before inserting the knitting cycle.</p>  <p data-bbox="571 1453 1401 1529">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 existing width.</p>

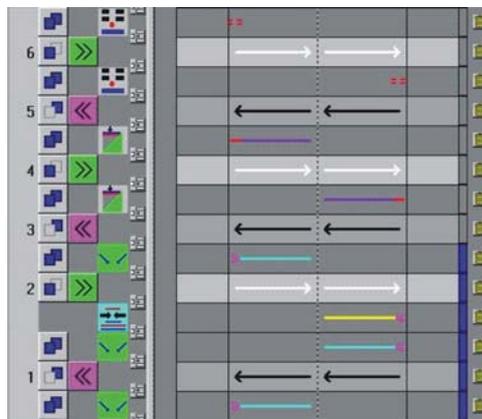
21.1.7 Insert Linking-Off Markings on Previous Shape Row

No.	Function	Icon	Meaning
7	Insert Linking-Off Markings on Previous Shape Row		Binding-off markings are set on the previous knitting row.

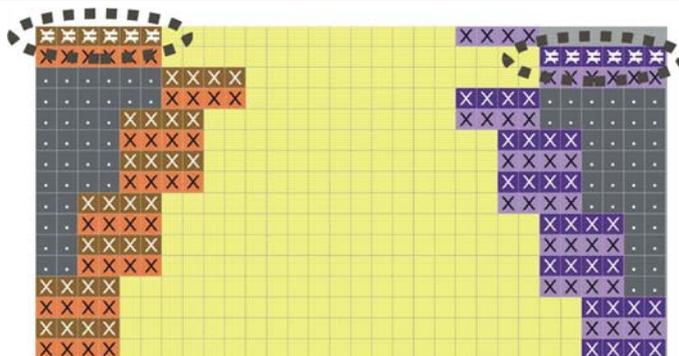
Examples:

Shoulder binding-off

Knitting cycle shoulder gore + shoulder binding-off - 1Y



Knitting cycle 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.

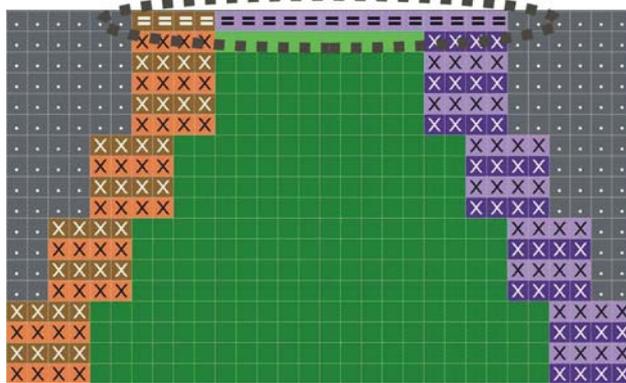


Examples:

Binding-off of all shape elements

Knitting cycle binding off neck closed

Knitting cycle with 2 additional rows in which binding-off is inserted.
 The markings (purple) in the entire rows mean binding-off within the shape.
 You can specify the layer.
 The color of the markings is layer-dependent.



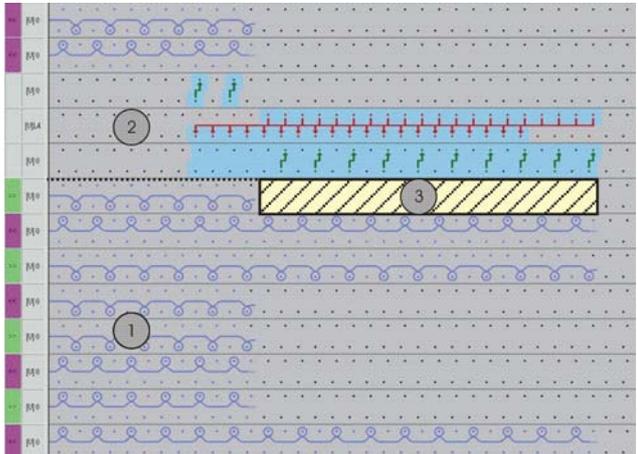
21.1.8 Delete Knitting from Previous Knitting Cycle

No.	Function	Icon	Meaning
8	Delete Knitting from Previous Knitting Cycle		The last knitting information of the previous knitting row will be deleted.

Example

Knitting cycle for remaining narrowing with additional row

1	Knitting cycle before remaining narrowing
2	Knitting cycle for remaining narrowing
3	Last knitting row in the sleeve below the remaining narrowing

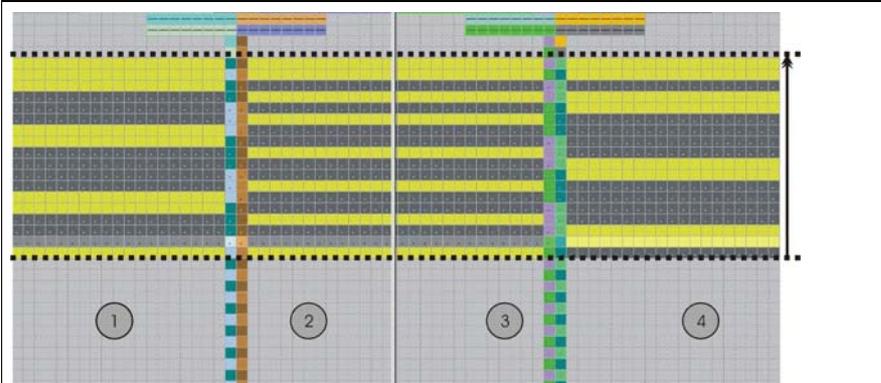
Example	
	<p>The knitting information is deleted in the sleeve element by the additional row  in the knitting cycle (2).</p> 
3	<p>Deleting the knitting information will affect the yarn carrier positions</p>

21.1.9 Connection of tubes

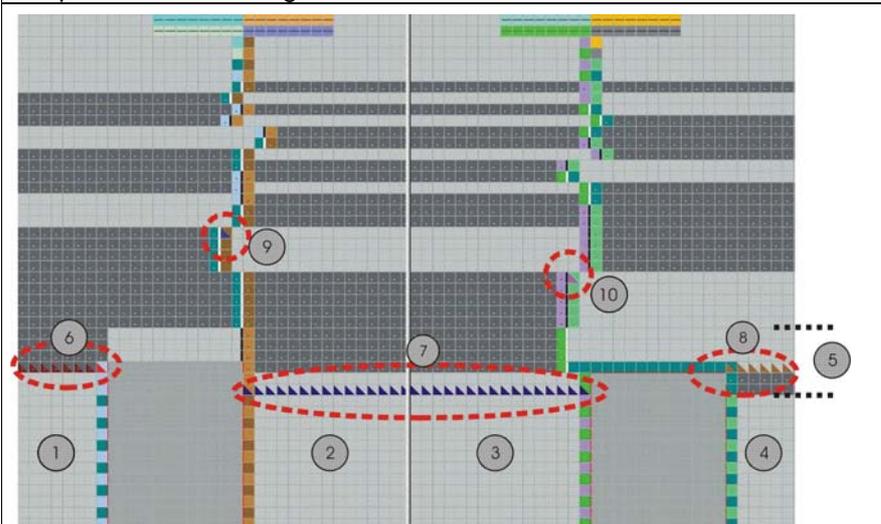
No.	Function	Icon	Meaning
9	Connection of tubes		Prepare The selected shape elements are transferred to a needle bed. By this the transferring inward of other area is prepared.
			Transfer inward The selected shape elements are transferred inward to the left or right.

Knitting cycle for sleeve-body connection	
<p>Connection of tubes knitting cycle</p>	<p>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).</p>

Shape view with inserted knitting cycle before cutting out

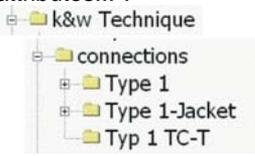
	
1	Left sleeve element
2	Left body element
3	Right body element
4	Right sleeve element

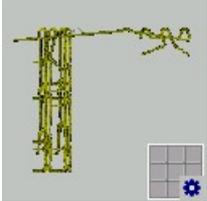
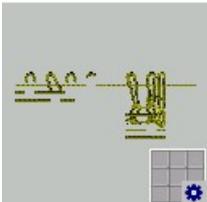
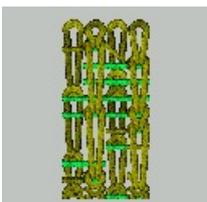
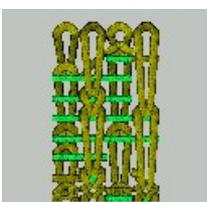
Shape view after cutting out

	
--	--

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 <ul style="list-style-type: none"> ▣ Combine Sleeves <ul style="list-style-type: none"> ▣ Type 1 <ul style="list-style-type: none"> ▣ prepare ▣ Combine << ▣ Combine >>
7	<p>Pre-widening A module is allocated to the markings in the shape view under "Shape attributes...".</p>
8	<p>Transferring inward of right sleeve (Transferring inward <<) A module is allocated to the markings in the shape view under "Shape attributes...".</p>

Shape view after cutting out	
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>
10	<p>Marking for right connection. A module is allocated to the markings in the shape view under "Shape attributes...".</p>

Module 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.</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>
	<p>Module for connecting the right sleeve to the body.</p>



The allocation of the modules to the respective markings in the sleeve-body connection is made in the knitting cycle editor under "Attributes".

21.1.9.1. Knots connection of tubes

In the configuration menu in the "Intarsia" tab under "Knot", the knot type for the sleeve-body connection is defined.

The knot is inserted by technical editing at the end of the knitting cycle "Tube connection".



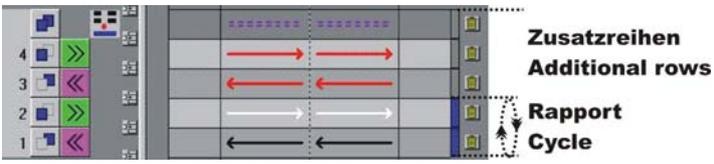
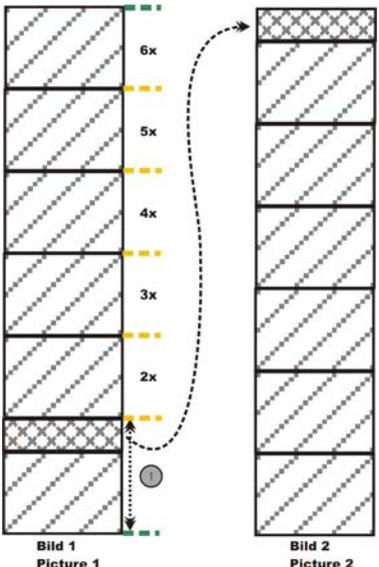
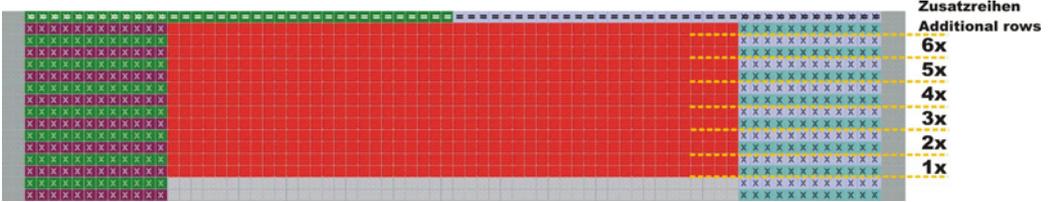
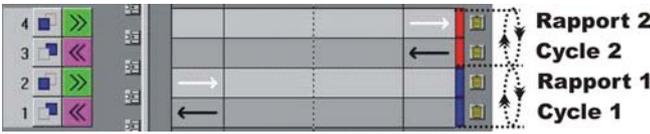
- ➔ Open the "Yarn field allocation" dialog box with the  button. The knot can be activated/deactivated in the "Yarn field allocation" dialog box.

21.1.10 Cycles in the knitting cycle

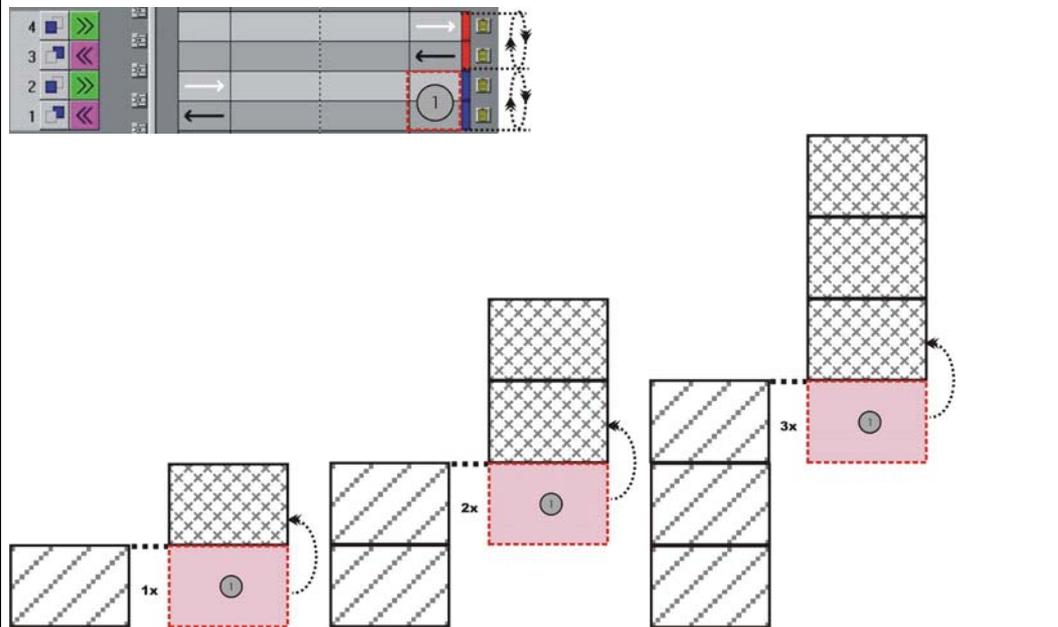
Cycles can be defined in the knitting cycle with the "Button for cycles" column.

Definition of cycles:

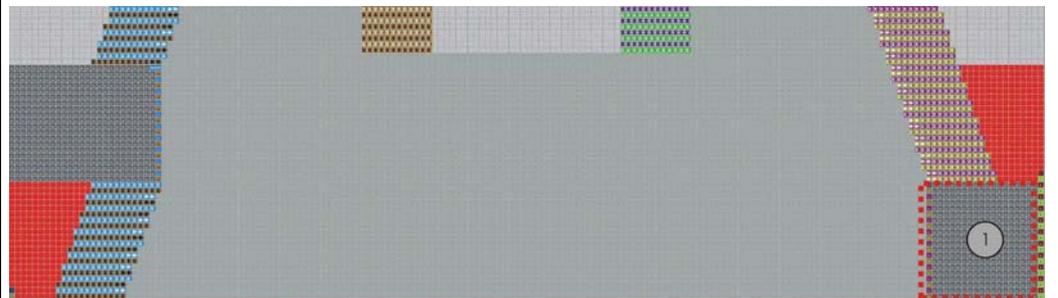
- With the colors red and blue
- Any number of cycles can be used in the knitting cycle.

Examples	
<p>Knitting cycle with a cycle</p>	 <p>In this knitting cycle, 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>Picture 1 The knitting cycle 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.</p> <p>Picture 2 After inserting the knitting cycle in the entire area (height), the cycles are combined and the additional rows are added on at the end.</p>
<p>Result after inserting the knitting cycle</p>	
<p>Knitting cycle with two cycles</p>	 <p>The cycles 1 and 2 are knit consecutively.</p>

Examples



The shape rows in the right arm piece (1) not processed in cycle 1 are moved upward and processed in the subsequent cycle 2.

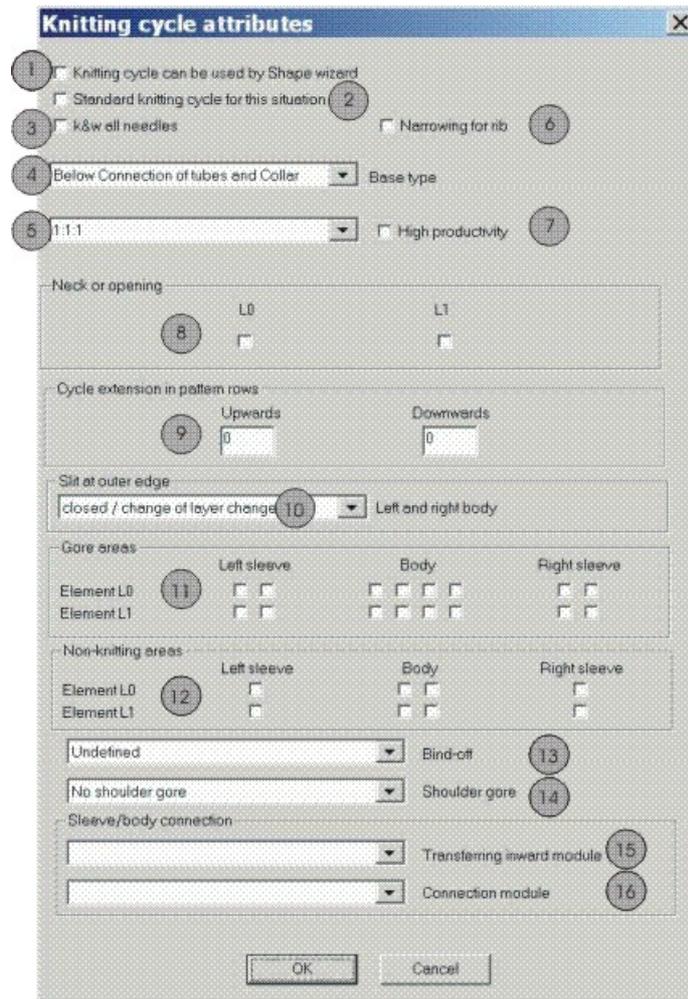


Result after inserting the knitting cycle: Cycles are knitted consecutively.

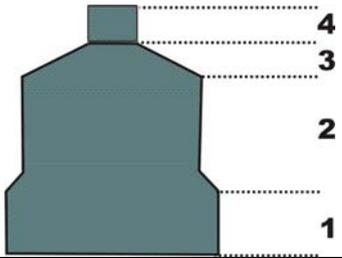
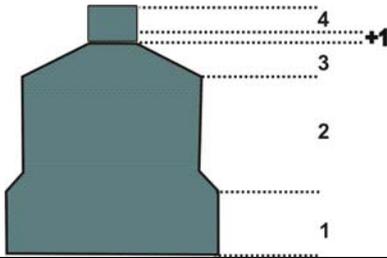
1 Area with suspension by moving the non-processed rows from cycle 1.

21.2 Define attributes in the knitting cycle editor

The settings in this dialog box are evaluated by the **Shape wizard** and **ShapeSizer** when determining the knitting cycles.



	Meaning	
1	Activated	The knitting cycle is used for editing the k&w shape in the Shape wizard.
	Deactivated	The knitting cycle is not used for editing the k&w shape in the Shape wizard.
2	Activated	The knitting cycle is used as the default when editing a k&w shape if several knitting cycles with the same specifications are available. Behavior of the M1 when inserting knitting cycles: If a knitting cycle 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 knitting cycle from the "Stoll" module group is used. Attention: Do not define several of the same knitting cycles as the default.
	Deactivated	A knitting cycle from the "Stoll" module group defined as the default is used when editing a k&w shape.
3	Activated	The knitting cycle is used for the TC-T machine if knitting is carried out with all needles

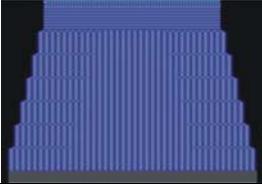
	Meaning	
		for a k&w pattern.
	Deactivated	The knitting cycle is used for all k&w machines if the k&w pattern is knit in the 1x1 technique.
4	Select a type of knitting cycle. Types: Tube/tube connection/area	
5	Select a stitch ratio in the sleeve/body/sleeve knitting cycle of the Area basic type.	
6	Activated	Indication for knitting cycles with "Narrowing 2x2 rib".
7	Activated	Indication for knitting cycles with "Narrowing without S0". Example: Knitting cycles for TC-T / T
8	During knitting cycles 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.	
9	Cycle extension in pattern rows (= complete rows). The specification moves the end line of the area in which the knitting cycle is to be inserted.	
	Example: Shoulder gore	
	Without cycle extension	With cycle extension
		
	All knitting cycles (1-4) are inserted in the shape. The height is determined by the shape.	All knitting cycles are inserted in the shape. In knitting cycle 3 1 (upward) is specified as knitting cycle attribute "Cycle extension in pattern rows". Result: The knitting cycle 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 knitting cycle 3 are moved upward by one pattern row.
10	Left and/or right body outer edge open or closed	
	closed / change of layer	The yarn carrier changes the layer. Result: The outer edge is closed.
	open	Knitting is carried out with two yarn carriers. The yarn carriers do not change the layer. Result: The outer edge(s) remain(s) open.
	closed / crossing threads	Knitting is carried out with two yarn carriers. These change the layer. Result: A cross hair results on 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. Result: The left outer edge(s) remain(s) 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 body piece for the left and right edges and for the layers L0/L1.
	Sleeve on the right	left and right edge for layer L0/L1
12	Definition of the element and the layer with suspension (non-knitting areas)	

21.2 Define attributes in the knitting cycle editor

	Meaning	
	Sleeve on the left	Layer L0 / L1
	Body	Left/right body piece 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 Further k&w pattern

22.1 Shape view: Skirt with 2X2 rib

Pattern data	Pattern picture
File: Skirt Pattern width: 200 Pattern rows: 200	
Machine type:	CMS 822
Gauge:	6.2
Start:	Tube open on side
Basic pattern:	Rib 2X2
Knitting technique:	knit and wear
Description of pattern:	Skirt with 2x2 rib

22.1.1 Generate shape and pattern: Skirt with 2x2 rib

I. Generate the shapes for the elements front, back, sleeve and collar (=waist) in the shape editor:

1. Generate a new shape for a skirt.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-233	0	-84	0	-84	1	0	0	0	Basis
2		31	5	15	2	15	2	1	0	0	0	Narrowing
3		2	5	1	2	1	2	1	0	0	0	Narrowing
4		31	5	15	2	15	2	1	0	0	0	Narrowing
5		2	5	1	2	1	2	1	0	0	0	Narrowing
6		31	5	15	2	15	2	1	0	0	0	Narrowing
7		2	5	1	2	1	2	1	0	0	0	Narrowing
8		31	5	15	2	15	2	1	0	0	0	Narrowing
9		2	5	1	2	1	2	1	0	0	0	Narrowing
10		31	5	15	2	15	2	1	0	0	0	Narrowing
11		2	5	1	2	1	2	1	0	0	0	Narrowing
12		31	5	15	2	15	2	1	0	0	0	Narrowing
13		2	5	1	2	1	2	1	0	0	0	Narrowing
14		33	0	16	0	16	0	1	0	0	0	
15		0	166	0	60	0	60	1	0	0	0	

Front and back piece of the skirt



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

Settings for narrowing and fading out				
Line of the edges	Narrowing width	Narrowing module	Fade-out width	Fade-out module
2, 4, 6, 8, 10, 12, 14	odd Example: 41	Body-rib	No fading-out	No fading-out
3, 5, 7, 9, 13	odd Example: 41	Body-rib	odd Example: 41	"2X2 SJ-Rib"



The total width of the shape should be divisible by 4. (Module width of the 2x2 Rib)

2. Generate an collar element that will be used for the skirt waistband.

Nr.	Linien Editor	Höhe mm	Breite mm	Höhe Maschen	Breite Maschen	Höhe Stufen	Breite Stufen	Faktor	Höhe Rest	Breite Rest	Gruppe	Funktion
1		0	-166	0	-60	0	-60	1	0	0	0	Basis
2		12	0	6	0	6	0	1	0	0	0	
3		0	166	0	60	0	60	1	0	0	0	Abketteln

Skirt waistband (collar)

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

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
2. Load the shape elements for body front and back and waist (collar) via the  button.
3. Specify the knitting mode of the collar (=waist) via the selection menu. Example: "1x1 Collar"



4. Place the form elements into the basic fabric with the "OK" button.
5. Position the elements body and sleeve on the pattern with the icon  and the left mouse button pressed.



Watch the position of the shape in order to get the same rib structure on the left and right.



If an additional structure is to be knit in the waistband, like in the example **purl**, then you can draw it into the basic motif manually.

- or -

Generate a module for the desired knitting mode. And assign this to the shape elements front and back of the edge no.: 14 as narrowing module.

22.1.2 Insert the knitting cycles: Skirt with 2x2 rib

I. Insert the k&w knitting cycles without side opening in the shape view:

Skirt without side opening (slit).

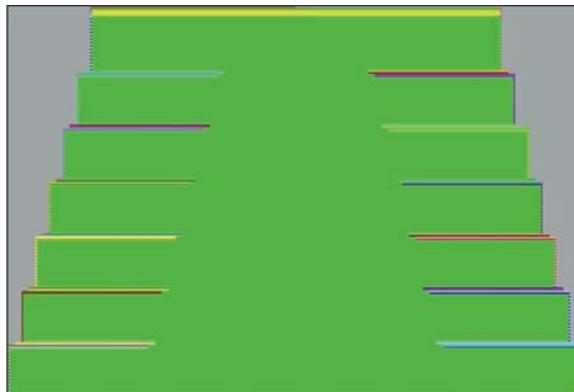
1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.

- or -



→ open with the buttons.

2. Select the knitting cycle in the module bar or in the module explorer: "1 tube" / "without opening" / "without gore" / "A2-1 tubular".
3. Insert the selected knitting cycle into the k&w shape.
4. Insert the knitting cycle for binding-off at the end as completion of the skirt:
"1 area" / "bind off collar" / "without opening" / "D9 bind-off neck closed"



Shape view with inserted knitting cycle

5. Save shape with drawn-in knitting cycles as **.shk**.
6. Close the Shape View.

II. Insert the k&w knitting cycles with side opening in the shape view:

Skirt with side openings (slit) on both sides.

1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.

- or -



2. open with the  buttons.

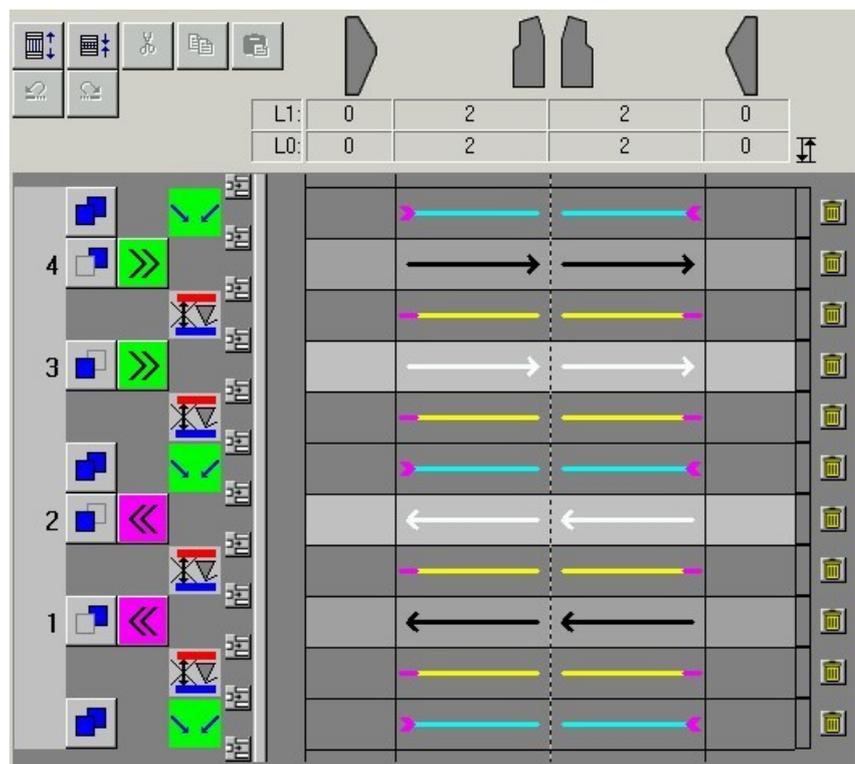
3. Generate a knitting cycle **with side openings**.

Either copy and modify the following knitting cycle:

"1 tube" / "without opening" / "without gore" / "A2-1 tubular".

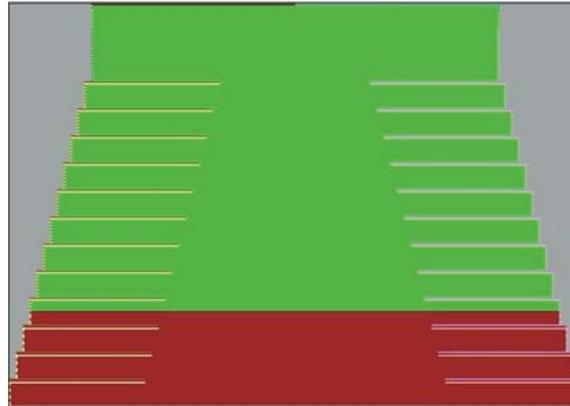
or -

- Generate a new knitting cycle.



Knitting cycle with side openings on both sides

4. Insert the knitting cycle with the openings on both sides over the desired height from bottom to top and thereby overwrite the previous knitting cycle.



Shape view with inserted knitting cycles

5. Save shape with drawn-in knitting cycles as **.shk**.
6. Close the Shape View.

22.1.3 Apply the shape: Skirt with 2x2 rib

I. Apply the shape:

1. Make settings in the "Configuration" dialog box:
2. Edit the shape in the single steps **cutting out, fading out, narrowing** and **widening** via the "k&w Shape" menu
- or -
➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.
3. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes".
4. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
5. Use narrowing and widening.
6. The "Insert/replace k&w start" dialog box appears.
7. Select start "k&w_tube_open" and confirm with "OK".

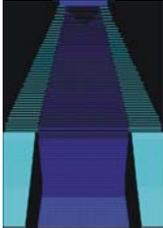


For a skirt with lateral openings you have to use a start with openings. Der Schlauchanfang mit Öffnung wird mit zwei Fadenführern gestrickt. Die Außenseiten des Schlauches werden in 1x1-Technik und die Innenseiten in 1x3-Technik gestrickt.

The start will be inserted in the k&w pattern.

8. Insert the binding-off module via "k&w shape" / "Insert Binding-Off" menu into the pattern.

22.2 Shape view: Raglan with different-colored sleeves

Pattern data	Pattern picture
File: Raglan with different-colored sleeves Pattern width: 360 Pattern rows: 340	
Machine type:	CMS 822
Gauge:	6.2
Start:	1X1
Knitting mode:	single jersey
Knitting technique	knit and wear
Description of pattern:	k&w pattern with raglan and different colors in the sleeves.



For this pattern example, an existing shape for raglan from the shape file can be used.

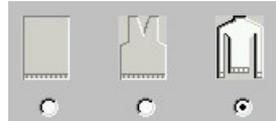
This is saved under

D:/Stoll/M1/Shapesizer/k&w/pullover/raglan_with_neck_gore.

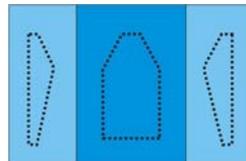
22.2.1 Generate pattern and shape: Raglan with different-colored sleeves

I. Generate a new pattern:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 360
Height: 340
5. Knitting mode: Jersey
6. Confirm specifications with "OK".
7. Generate the left and right side with a different color in the pattern field.



II. Generate the shapes for the elements front, back, sleeve and collar in the shape editor:

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-166	0	-60	0	-60	1	0	0	0	Basis
2		62	13	30	5	6	1	5	0	0	0	Narrowing
3		20	0	10	0	10	0	1	0	0	0	
4		62	-13	30	-5	6	-1	5	0	0	0	Widening
5		20	0	10	0	10	0	1	0	0	0	
6		133	88	64	32	4	2	16	0	0	0	Narrowing
7		8	0	4	0	4	0	1	0	0	0	
8		0	77	0	28	0	28	1	0	0	0	

Front and back piece

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-11	0	-4	0	-4	1	0	0	0	
2		12	-33	6	-12	2	-4	3	0	0	0	
3		20	-27	10	-10	2	-2	5	0	0	0	
4		0	72	0	26	0	26	1	0	0	0	

Neck gore for front piece

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-77	0	-28	0	-28	1	0	0	0	Basis
2		166	-22	80	-8	10	-1	8	0	0	0	Widening
3		20	0	10	0	10	0	1	0	0	0	
4		133	88	64	32	4	2	16	0	0	0	Narrowing
5		8	0	4	0	4	0	1	0	0	0	
6		0	11	0	4	0	4	1	0	0	0	

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	-88	0	-32	0	-32	1	0	0	0	Basis
2		41	0	20	0	20	0	1	0	0	0	
3		0	88	0	32	0	32	1	0	0	0	Bind-off

Collar



The shape elements used must be generated according to the usual k&w rules.

Due to the knitting cycle used, narrowing may only be carried out after an even number of knitting rows.

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

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
2. Load the shape elements for body, sleeve and collar via .
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. Place the form elements into the basic fabric with the "OK" button.
5. Position the elements body and sleeve on the pattern with the icon  and the left mouse button pressed.



Position the sleeves on the additional color fields on the left and right.

- [The module explorer for Stoll knit and wear®](#) [see page 59]

22.2.2 Insert the knitting cycles: Raglan with different-colored sleeves

Insert the k&w knitting cycles in the shape view:

1. Open the "Shape view" via the "k&w Shape" \ "Shape view" menu.
- or -



→ open with the  buttons.

2. Select the knitting cycles.

- from the module bar

- or -

- in the Module Explorer

3. Insert the selected knitting cycle into the k&w shape.

4. Insert **sleeve - body connection**.

Select the knitting cycle module for the sleeve-body connection in the module explorer and insert it.

- "k&w knitting cycles" / "Favorites / Basic Shapes" / "Raglan" / "B1-Type 1 (no connection L0-L1)".



Insert the knitting cycle module in the shape view once at the point of the sleeve-body connection.

5. Move the **length compensation**.

Move the length compensation between body and sleeve with the knitting cycle module from the lower fabric edge (sleeve) to the center of the fabric.

- "k&w knitting cycles" / "Stoll" / "X Standard"

6. Fill the **length difference**.

Fill up steady the **difference in length** between body and sleeve with the knitting cycles.

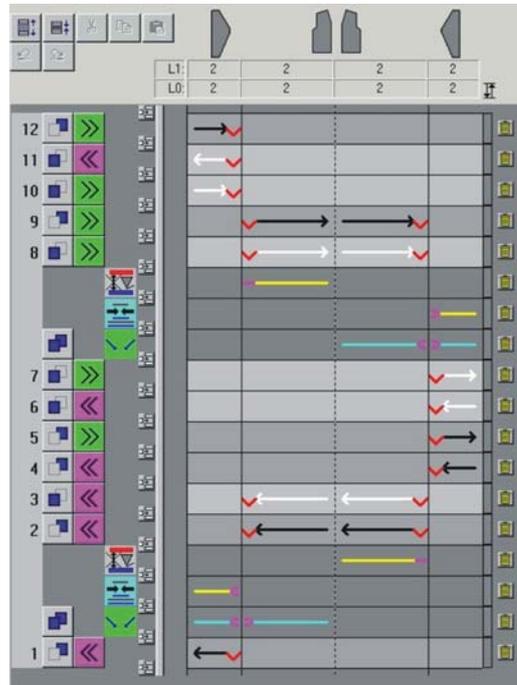
- "k&w knitting cycles" / "Favorites / Basic Shapes" / "Raglan" / "A1-3 Tubular".

- "k&w knitting cycles" / "Favorites / Basic Shapes" / "Raglan" / "A5-2 Tubular".



Pay attention to the stitch ratio between body and sleeve.

7. Enter the knitting cycle in the remaining area of the body.
 - "A1-3 tubulars"
8. Generate own **knitting cycle without gore** and enter it from the sleeve-body connection up to the start of the gore.

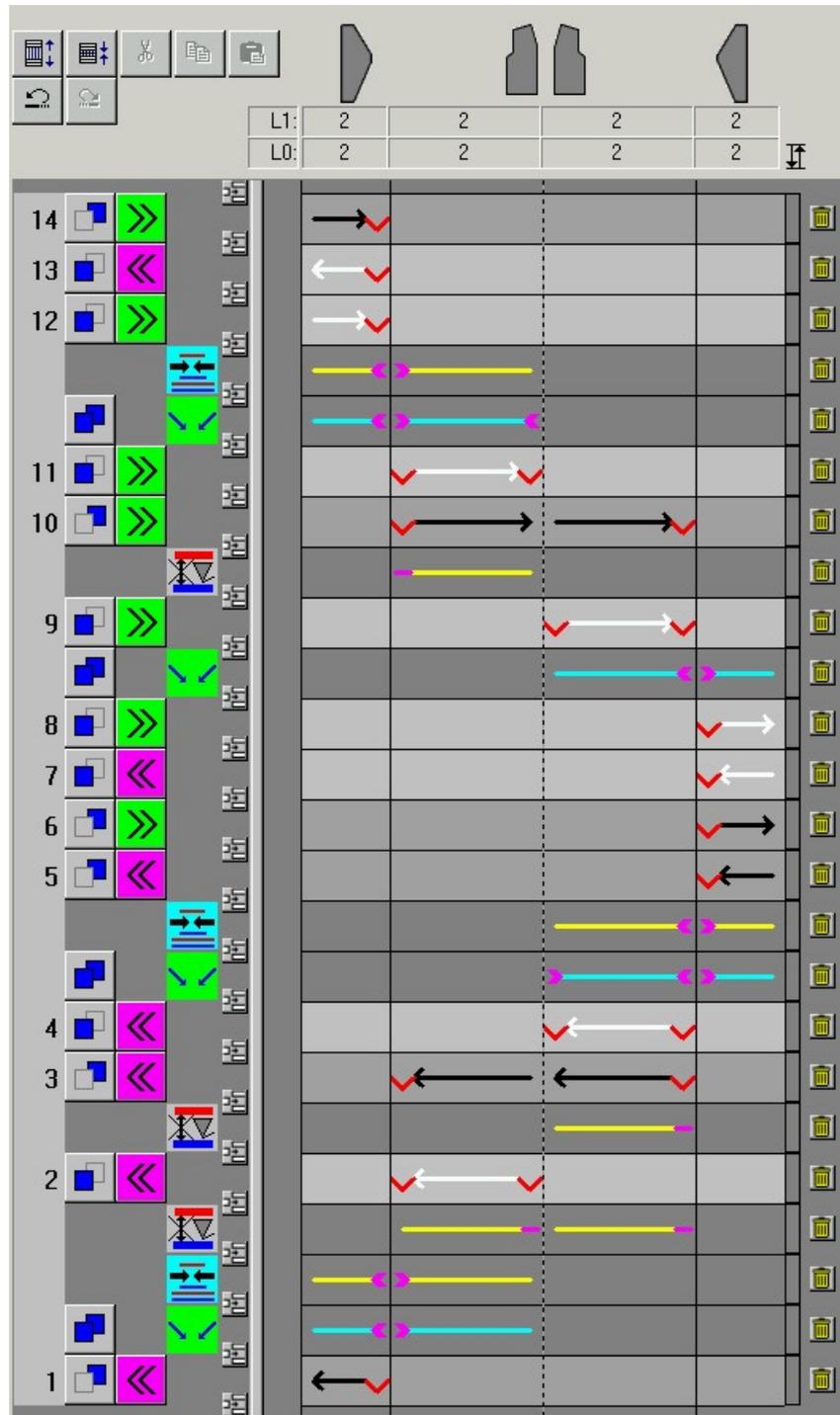


Knitting cycle without neck gore



The yarn carriers will continue to knit above the connection of body and sleeve.

9. **Generating a knitting cycle with gore of your own.**
If a gore is inserted in the front piece, then another knitting cycle must be generated and entered in the area with neck gore.



Knitting cycle with neck gore.

10. Collar

- "k&w knitting cycles" / "Stoll" / "1 Area" / "Collar" / "without opening" / "without gore" / "D11-Collar"

11. Insert **bind off collar** in the last knitting row.

- "k&w knitting cycles" / "Stoll" / "1 Area" / "bind off collar" / "without opening" / "D9-neckline closed bind off"

12. Save the shape via the "k&w shape" / "Save Shape As... (shk)" menu.



If you do not save the shape view with the knitting cycles, it is not possible to remove the shape from the pattern.

Afterwards you have to insert the knitting cycles into the shape view again.

13. Close the Shape View.

22.2.3 Complete the pattern: Raglan with different-colored sleeves

I. Apply the shape:

1. Make settings in the "Configuration" dialog box:
2. Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu
- or -
➔ Edit the shape in one step via the "k&w Shape" / "Use Shape (Cut, Fade Out, Narrow)..." menu.
3. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
4. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
5. Use narrowing and widening.
6. The "Insert/replace k&w start" dialog box appears.
7. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
8. Insert the binding-off module via "k&w shape" / "Insert Binding-Off" menu into the pattern.
- or -
➔ Call up the "Automatic Technical Editing" and let it insert the binding-off modules automatically.



Insert the binding-off modules before the automatical technical editing for a better overview.



You can undo the editing steps via the "k&w" / "Load Pattern Before Cutting Out".

9. Make changes in the "Yarn field view".

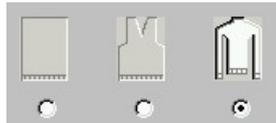
II. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.

22.3.1 Generate pattern and shape: Raglan with intarsia

I. Generate a new pattern:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 280
Height: 360
5. Knitting mode: Jersey
6. Confirm specifications with "OK".

II. Generate the shapes for the elements front, back, sleeve and collar in the shape editor:



In order to have the intarsia motif at the right position of the fabric, generate and lay on the shape first. Draw in the intarsia motif with the shape layed on into the basic pattern.

1. Open an existing shape for raglan from the shape file and change it according to the k&w rules.
"D:/Stoll/M1/Shapesizer/k&w/pullover/raglan_with_neck_gore".

- or -

➔ Generate a new shape in the Shape Editor.

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	

Front and back piece

22.3 Shape wizard: Raglan with intarsia

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	

Neck gore

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	

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	-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

Collar

You have to make one or more opening elements for the intarsia motif in the front. First generate the motif in order to have the distance to the base line and to the center axis specified.

III. Load shape elements in the Shape wizard:

Combine the shapes front, back, sleeve and collar in the "Shape wizard" into a **Raglan with intarsia.kaw** shape.

1. Run the "Shape wizard" program via the menu "k&w Shape"/"Shape wizard (Put Together k&w Shape...)".
2. Load a shape for the "Body front" element with the  button.
3. Select shape.
The shape will be loaded and the name will be displayed und "Body front".
4. Load the shape elements for "Body back", "Sleeve" and "Collar" using the same procedure.
5. Specify the knitting mode of the collar via the selection menu.



Watch out by the element for the collar:

- 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.

6. Specify the Sleeve-Body connection.



The selection of the sleeve-body connection depends on the motif.

Motif	Connection	Module
no intarsia motif at height of sleeve-body connection	Sleeve-body connection without opening	B1 Type 1 (no connection L0-L1)
Intarsia motif at height of the Sleeve-Body connection	Sleeve-Body connection with opening and binding	I17 Type 1 no connection L0-L1 + IL0 Body



Das Intarsia- Motiv darf **nicht** innerhalb der Arm-Leib Verbindung (Modulhöhe: 6 Reihen) enden.

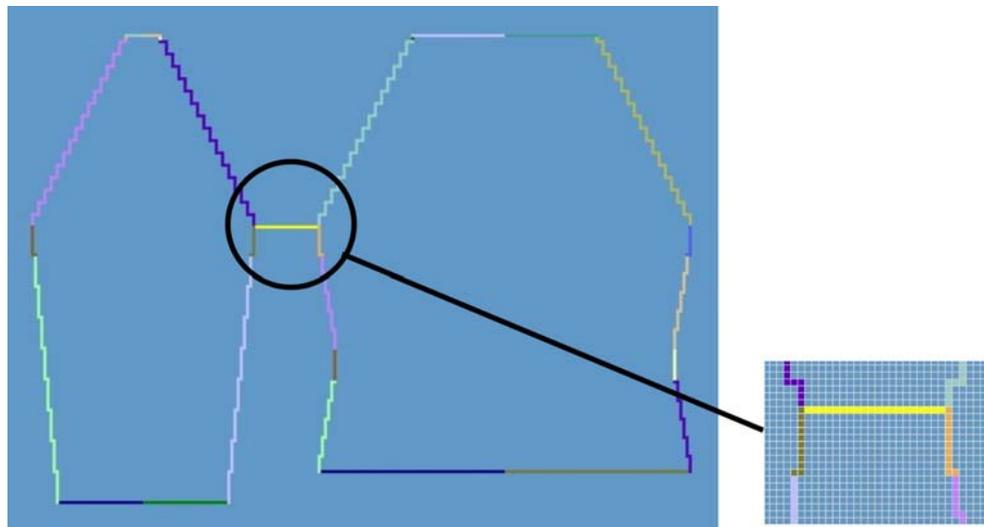
22.3.2 Shape wizard: Docking points for raglan with intarsia

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

- ➔ Open the "Docking points" dialog box with the  icon in the toolbar of the "Shape wizard".

II. Specify the docking points for raglan:

- ➔ Docking point "sleeve - body".



Docking point sleeve - body

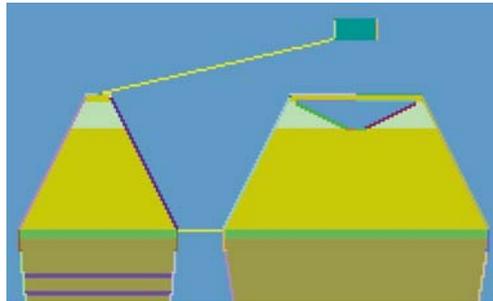
- ➔ Docking point "Collar".



Docking point for the collar

III. Generate a k&w shape for raglan with intarsia:

1. Define the docking points for "Sleeve-Body" and for "Collar" in the "Docking points" dialog box.
2. Press the "Determine knitting cycles" button.



Determined knitting cycles

3. Save the shape as kaw file via the "File" / "Save" or "Save as" menu or .
4. Close the "Shape wizard" dialog box.



The total height of the motif must be even numbered.

A change of the motif outline is possible after every second knitting row of the front layer solely.

With a widening of the motif the yarn carrier will be fed in accordance to the settings in the "Configuration".

II. Create the openings for the intarsia motif:

You have to make one or more opening elements over the height of the intarsia motif.

This openings determine later the left intarsia color edge.

1. Open the Shape Editor and insert opening in the element for the front.
2. Allocate the following specification to the elements:

Allocation of the intarsia openings		
Specify the height of the openings.	Specify the distance to the base line	Distance to the center axis
Enter the height under Line No. 1 .	Enter the distance under Y-distance to the base line .	Enter the distance under X-distance to the center line . However only if the motif is not placed in the center.

3. Save the front with the generated elements for the openings in the Shape Editor.
4. Run the "Shape wizard" program via the menu "k&w Shape"/"Shape wizard (Put Together k&w Shape...)".
5. Load the elements for "Front of body", "Back of body", "Sleeve" and "Collar".
6. Set-up the knitting modes for the collar and the connection as before.
7. Let the knitting cycles be determined by the "Shape wizard".
8. Exchange the determined knitting cycles with intarsia knitting cycles. "...opening (L0)" -> "... I L0 Body"
Double click the knitting cycle and select the desired knitting cycle in the "Exchange knitting cycles" dialog box.

22.3.4 Correct the shape automatically: Raglan with intarsia

I. Move opening automatically:

The opening of the inserted knitting cycles goes through the center of the intarsia motif and must be moved to the intarsia color edge.

Moving the opening achieves a delimitation of the intarsia motif on the left motif edge.

The right edge is automatically edited by the technical editing function.

- The shape is placed.
- The knitting cycles are inserted.
- Use Shape (Cut, Fade Out, Narrow) is not yet carried out.

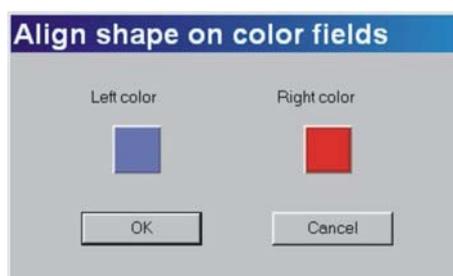
1. Switch over the fabric view to k&w Presentation  or k&w Presentation with Narrowing .

2. Switch on the front layer .



Display only columns of knitting layers.

3. Activate "Set Shape Data to Front" in the context menu of the fabric view.
4. Call up the "k&w shape" / "Align Shape On Color Fields" menu.



5. Enter the basic color under "Left color" and the motif color under "Right color".

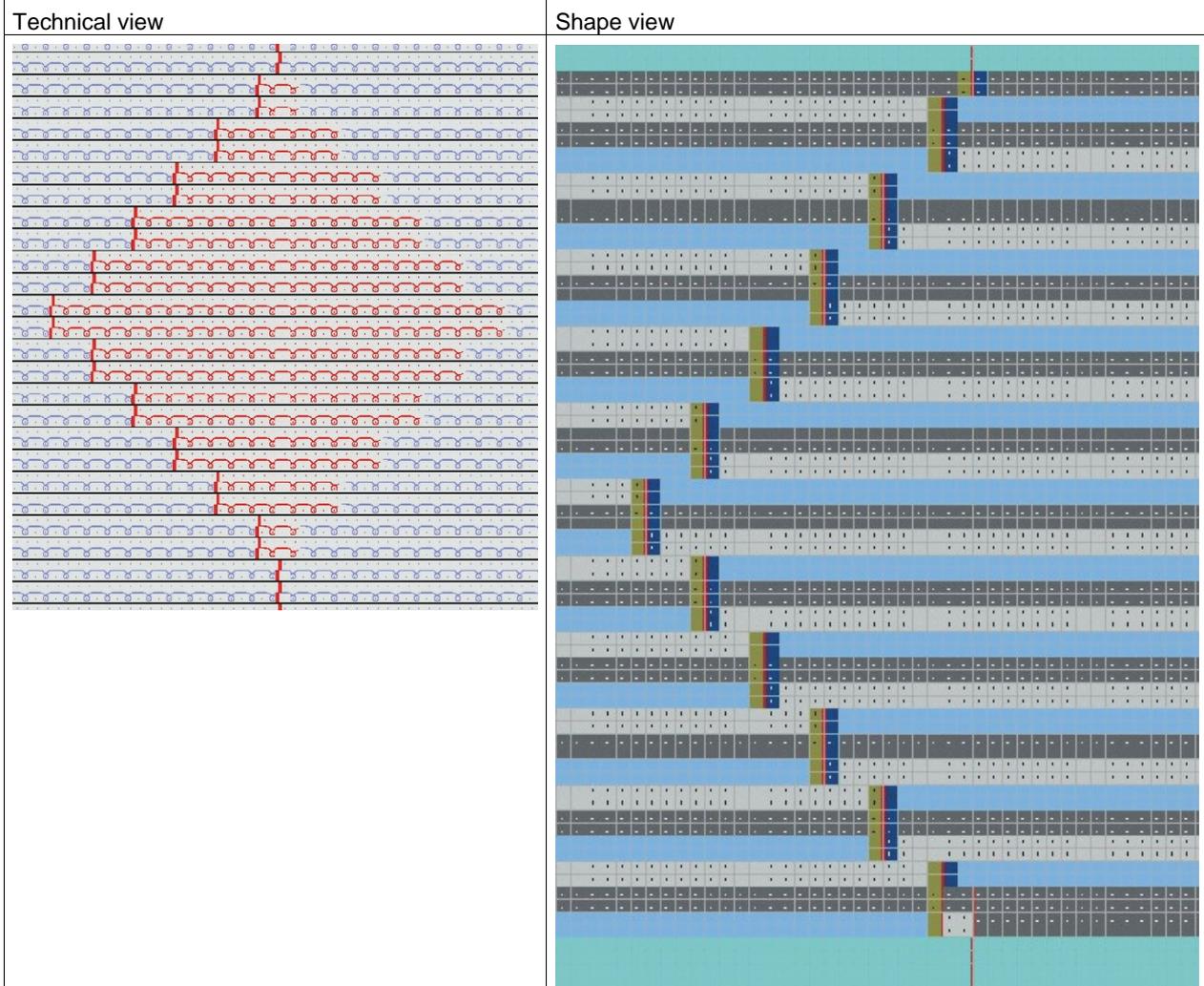


If you have several motif colors you have to carry out this procedure for every motif color separately.

The left color edge will be corrected automatically.

22.3 Shape wizard: Raglan with intarsia

Presentation after the automatical moving of the edges



6. Check the knitting cycle in the area of the sleeve-body connection and correct it in the shape view if necessary.
7. Close the Shape View.

22.3.5 Complete the pattern: Raglan with intarsia

I. Apply the shape:

1. Make settings in the "Configuration" dialog box:
2. Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu
- or -
➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.
3. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
4. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
5. Use narrowing and widening.
6. The "Insert/replace k&w start" dialog box appears.
7. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
8. Insert the binding-off module via "k&w shape" / "Insert Binding-Off" menu into the pattern.
- or -
➔ Call up the "Automatic Technical Editing" and let it insert the binding-off modules automatically.



Insert the binding-off modules before the automatic technical editing for a better overview.



You can undo the editing steps via the "k&w" / "Load Pattern Before Cutting Out".

9. Make changes in the "Yarn field view".

Normal yarn carriers are used by the M1 for k&w intarsia pattern.
You can switch to intarsia yarn carriers in the yarn field view.



If intarsia yarn carriers are used, you will risk that threads may be grasped by needles of the opposite needle bed.

10. Place the yarn carrier for the intarsia motif on a rail before the yarn carrier of layer 1.

II. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.

22.3.6 Shape view: Raglan with intarsia

Additional possibilities for raglan with intarsia:

Instead of an automatical processing a color reduction can also be carried out manually:

- ➔ Insert the knitting cycles manually in the shape view:
- ➔ Move the opening manually at the intarsia color edge.

22.3.6.1. Draw in the knitting cycles: Raglan with intarsia

V. Insert k&w knitting cycles in the Shape View:

You can draw in k&w knitting cycles manually in the shape view instead of determining the knitting cycles automatically by the ShapeWizard.

You have to draw in intarsia knitting cycles in the area of the intarsia motif. Use the normal knitting cycles otherwise.

1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.

- or -



→ open with the  buttons.

2. Select the knitting cycle for the sleeve-body connection in the Module Explorer via "k&w knitting cycles" / "Stoll" / "Connections" or "Intarsia" and draw them into the k&w shape.



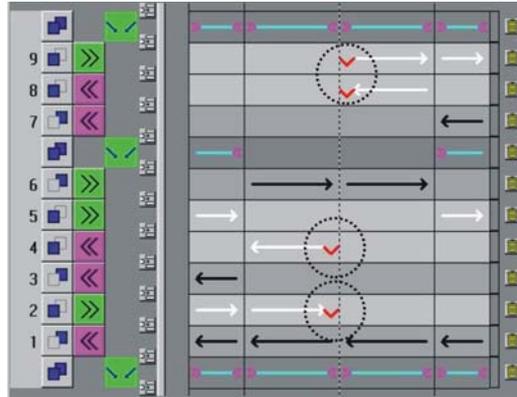
The selection of the sleeve-body connection depends on the motif.

Motif	Connection	Module
No intarsia motif at height of sleeve-body connection	Sleeve-body connection without opening	"k&w knitting cycles" / "Stoll" / "Connections" / "3 Tubulars" / "without opening" / "without gore" / "B1 Type 1 (no connection L0-L1)"
Intarsia motif at height of the Sleeve-Body connection	Sleeve-Body connection with opening and binding	"k&w knitting cycles" / "Stoll" / "Intarsia" / "Body" / "Connections" / "I17 Type 1 no connection L0-L1 + IL0 Body"

3. Move the **length compensation**.
Move the length compensation between body and sleeve with the knitting cycle module from the lower fabric edge (sleeve) to the center of the fabric.
 - "k&w knitting cycles" / "Stoll" / "X Standard"

II. Draw in the intarsia knitting cycle:

In the areas in which an intarsia motif is present, a knitting cycle with "Opening" and "Binding" must be inserted. The example shows a knitting cycle for 3 tubes.



Knitting cycle with opening and binding

1. Select the knitting cycle for the sleeve-body connection in the Module Explorer via "k&w knitting cycles" / "Intarsia" / "Body" and draw them into the k&w shape.



To simplify the drawing in of the knitting cycles in the area of the intarsia motif, you can make the following settings:

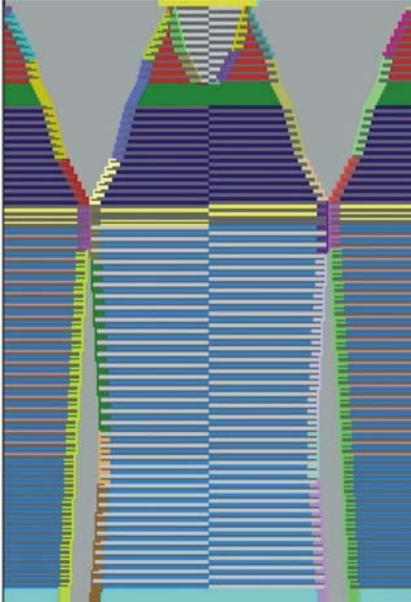
View	Presentation
Shape view	Front layer 
Fabric View	"Color Presentation" and front layer 

2. Draw in "I5-3 Tubulars I L0 Body" knitting cycle in the area below the sleeve-body connection.
If a length adjustment between the body and sleeve is necessary, then this knitting cycle must be inserted alternately with the **2 tubes cycle**.
3. Draw in "3 Areas 1:1:1 I L0 Body" knitting cycle in the intarsia area above the sleeve-body connection.
4. Draw in the necessary knitting cycles for gore and collar in the remaining non-intarsia areas.



When drawing in the knitting cycles in the shape view, the cursor position is shown in the fabric view.
This simplifies insertion.

22.3 Shape wizard: Raglan with intarsia



Shape view with inserted knitting cycles

22.3.6.2. Correct the shape manually: Raglan with intarsia

I. Move the opening manually:

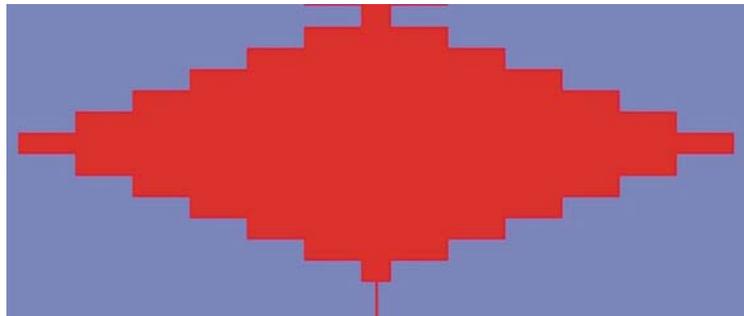
Wenn die automatische Korrektur kein zufrieden stellendes Ergebnis ergibt, können Sie die Öffnung der eingefügten Strickabläufe manuell an die Intarsia-Farbkante verschieben.

- The shape is placed.
- The knitting cycles are inserted.
- Form anwenden (ausschneiden, ausblenden, mindern) ist noch nicht durchgeführt.



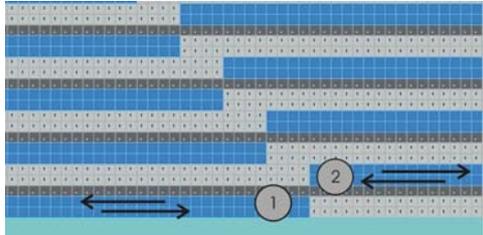
To simplify moving the opening, you can make the following settings:

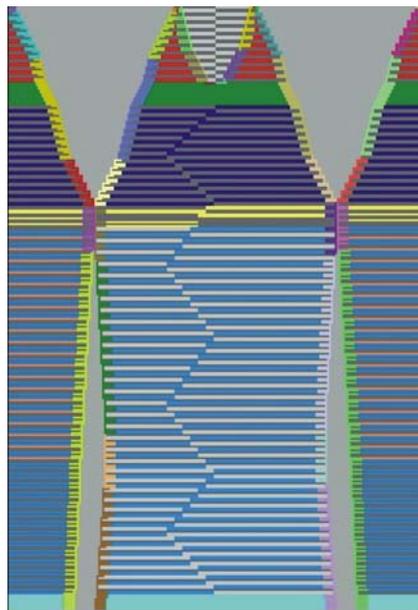
- ➔ Switch over fabric view to k&w display .
- ➔ Display only columns of knitting layers.



Color presentation with the setting "Display only columns of knitting layer"

1. "Within shape" is used as the tool for moving the opening. .
2. With the "Within shape" tool activated, select the opening and move it to the left to the motif edge.

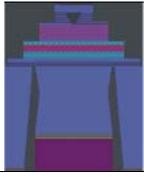
Technical view	Shape view	
Shape view	Description	
	1	Knitting cycle of the basic color up to the left intarsia edge
	2	Knitting cycle of the motif color up to the left intarsia edge



Shape view with corrected opening

3. Close the Shape View.

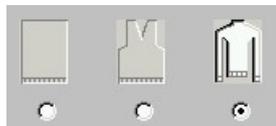
22.4 ShapeSizer: Raglan with Fair Isle and float jacquard

Pattern data	Pattern picture
Raglan with Fair Isle narrowing and neck gore Pattern width: 350 Pattern rows: 350	
Machine type	CMS 822
Gauge	6.2
Start	1X1 - Rib
Basic pattern	Jersey
Knitting technique	knit and wear
Description of pattern:	k&w Shape "Raglan mit Fair Isle Mindertechnik, Halsspickel" und Flottjacquard

22.4.1 Generate shape in ShapeSizer: Raglan with Fair Isle and float jacquard

I. Generate a new pattern:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. specify pattern size.
Width: 350
Height: 350
5. Knitting mode: Jersey
6. Confirm specifications with "OK".

II. Open shape in ShapeSizer:

1. Open the program "ShapeSizer" with the menu "k&w Shape" / "ShapeSizer...".
2. In the overview window, open the desired shape "Raglan with Fair Isle narrowing technique and neck gore" with a double-click. The next dialog window of the ShapeSizer gets open.
3. Enter the stitch ratio.
- or -
➔ Select a machine gauge and apply Stoll values.

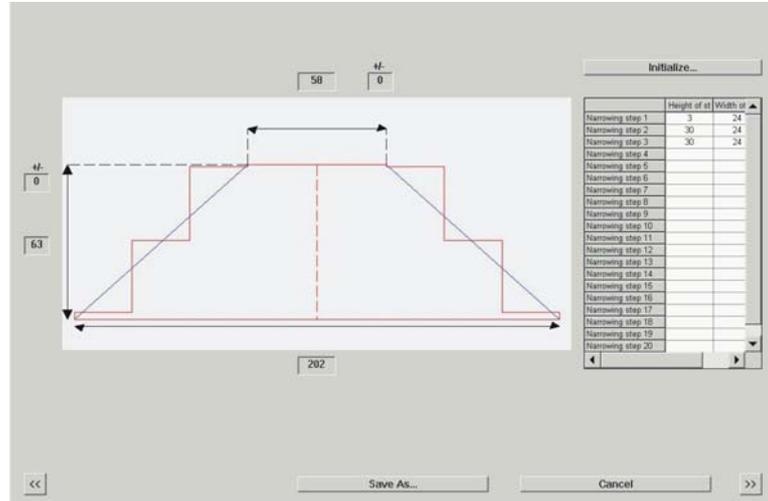


4. Open the next dialog window with
5. Generate basic size in the column < * 6 >.



6. Open the next dialog window with
7. Enter size specifications.

8. Open the next dialog window with .



	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. Displayed value (3) is doubled (1x1 knitting technique) and added to/subtracted from the Wert (2).
3	Display of the width changes (stitches). 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. Change is shown graphically. Positive value: more rows Negative value: fewer rows
5	Actual number of rows in the height.
6	Number of needles (width) at beginning of 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.

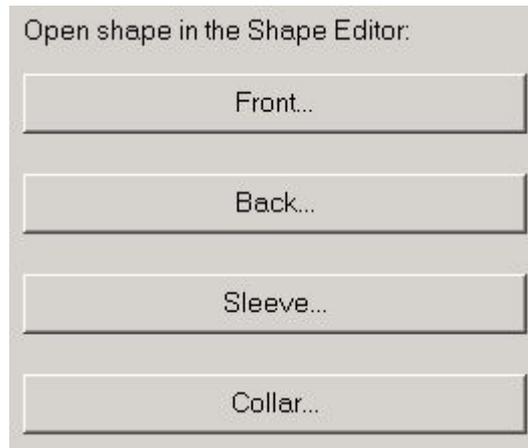


Make corrections with regard to the step height and step width in the table for narrowing steps if necessary.

9. Open the next dialog window with .



Open the Shape Editor and make changes to the shape elements if necessary.



10. Open the next dialog window with  in order to determine the knitting cycles.

Knitting cycles will be determined and saved as kaw file in the directory.

Im Bereich des Fair-Isle wird automatisch ein Modul für "mehrstufiges Mindern".

11. Press the   icon with the checkbox (3) activated.

The kaw file will be laid on the open pattern.

- or -

The "New module" dialog box appears and the ShapeSizer will be closed then.

- or -

- Press the   icon with the checkbox (3) deactivated.

The kaw file will be laid on the open pattern.

- or -

The "New module" dialog box appears.

The ShapeSizer remains open and the next size can be edited.

- or -

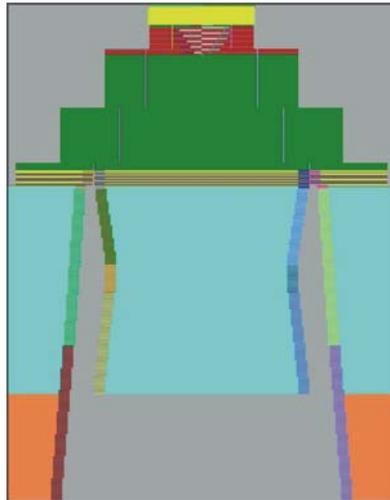
- Press the  key.

The kaw file will be opened in the Shape Wizard.

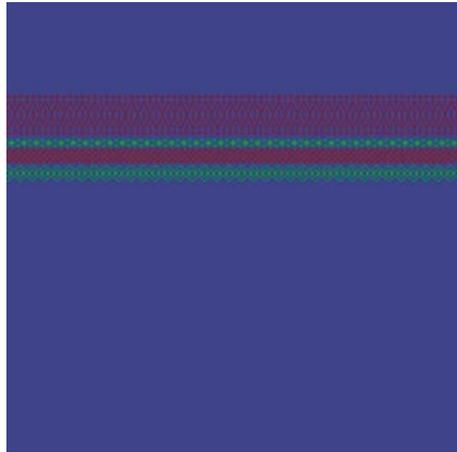
The ShapeSizer remains open and the next size can be edited.



Wenn geänderte Schnittelemente im ShapeSizer nicht bearbeitet werden können, müssen Sie diese im Programm "ShapeWizard" bearbeiten.
Set docking points and determine knitting cycles.



Size view with automatically generated knitting cycles



The jacquard motif can be drawn in in the fabric or technical view.

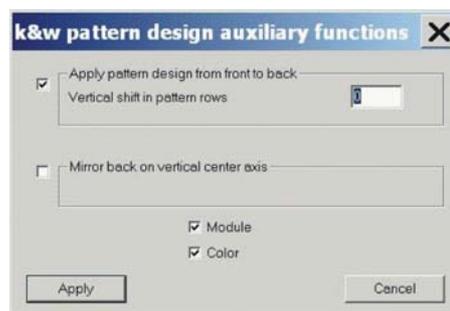
Possible setting to draw:

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

3. Select desired pattern presentations  or .

4. Apply pattern design to the back.

Therefore select the pattern design and open "Module / k&w pattern design auxiliary functions...".



5. Press the "Apply" button.



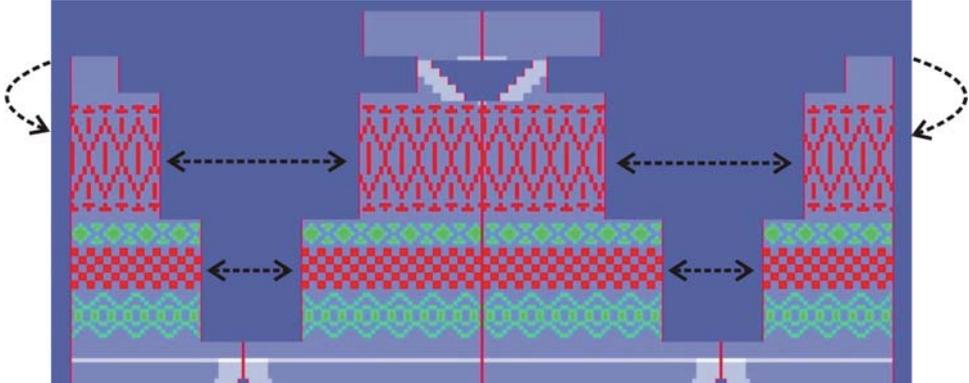
Ensure a continuous motif:

- from body to sleeves

For this purpose, select the "Cut folded out" setting in the "Configuration k&w" / "Knitting zones" / "Cut" dialog box.

- from front layer to back layer

22.4 ShapeSizer: Raglan with Fair Isle and float jacquard



22.4.3 Apply shape and complete pattern: Raglan with Fair Isle and float jacquard

I. Apply the shape:

1. Make settings in the "Configuration" dialog box:
2. Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu
- or -
➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.
3. Cut shape.
➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
4. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
5. Use narrowing and widening.
6. The "Insert/replace k&w start" dialog box appears.
7. Select a start and confirm the dialog box with "OK".
The start will be inserted in the k&w pattern.
8. Insert the binding-off module via "k&w shape" / "Insert Binding-Off" menu into the pattern.
- or -
➔ Call up the "Automatic Technical Editing" and let it insert the binding-off modules automatically.



Insert the binding-off modules before the automatical technical editing for a better overview.

II. Insert Jacquard generator:

1. Select the motif of both layers.
2. Open Jacquard dialog box via "Edit" / "Jacquards..."
3. Specify the front knitting layer for the generator to be inserted.
4. Select jacquard generator.
"Jacquard / Stoll / k&w / Float / Float L0".
5. Insert the generator with the "Apply" button.
6. Repeat the procedure with the "Back Layer" and "Jacquard / Stoll / k&w / Float / Float L1" setting.
7. Proceed in the same way with additional pattern blocks.

III. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.

22.4.4 Edit markings: Raglan with Fair Isle narrowing technique and float jacquard

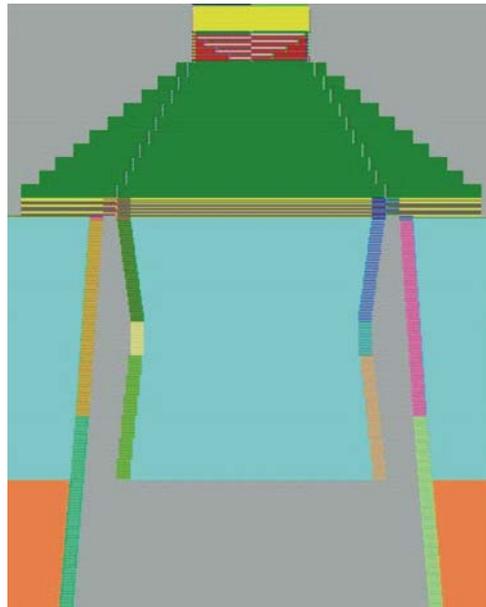
I. Edit Fair Isle markings:

The Fair Isle markings (multi-step narrowing) can be edited in the shape view before "Use Shape".

1. Load the pattern before cutting out via the "k&w Shape" / "Load pattern before cutting out" menu.

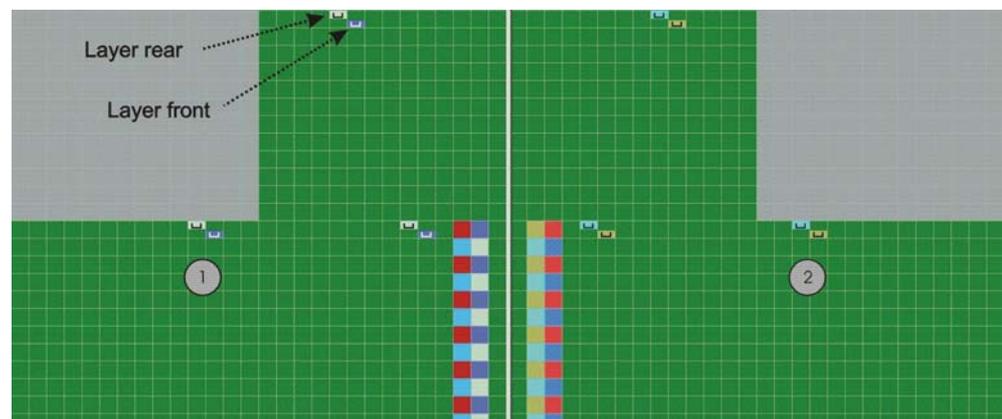


2. Call up the shape view with the button.



Fair Isle with knitting cycles

3. Modify multi-step narrowing (markings).



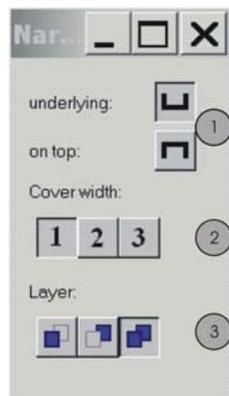
22.4 ShapeSizer: Raglan with Fair Isle and float jacquard

	Meaning
1	Left shape edge with markings for multi-step narrowing. Different colors for front and back layer.
2	Right shape edge with markings for multi-step narrowing. Different colors for front and back layer.

→ Delete markings with

	Function
	Delete in both layers
	Delete in front layer
	Delete in back layer

→ Click on in order to insert narrowings.



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

4. Position markings.
Call up "Initialize Markings for Multi-Step Narrowing" via the context menu of the Shape View to position the markings.
5. Move the marking with the left mouse button pressed.

II. Complete the pattern:

1. Automatical or stepwise technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.

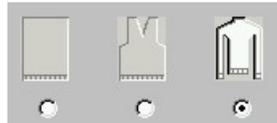
22.5 Shape view: 2 or 4 caps side-by-side

Pattern data	Pattern picture
File: Cap Pattern width: 120 Pattern rows: 120	
Machine type:	CMS 822
Gauge:	6.2
Start:	1x1 rib
Basic pattern:	Jersey
Knitting technique:	knit and wear
Description of pattern:	k&w cap multi-piece knitting

22.5.1 Generate motif and shape: Cap

I. Generate pattern and motif with extension cycles:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 250
Height: 200
Knitting mode: "Jersey"
5. Confirm specifications with "OK".
6. Draw in an area with 1x1 rib in the pattern field.
7. Draw in extension cycles.

Pattern field	Shape view
1	Area in basic pattern with manually drawn-in 1x1 rib.
2	Cycle for extension of the 1x1 rib.
3	Cycle for extension of the back layer structure.

II. I. Generate the shape elements for front and back in the Shape Editor:

1. Generate a new shape for two caps side-by-side.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-136	0	-41	0	-41	1	0	0	0	Basis
2		33	0	10	0	10	0	1	0	0	0	
3	✓	233	133	70	40	0	0	0	0	0	0	Narrowing
4		20	0	6	0	6	0	1	0	0	0	
5		0	3	0	1	0	1	1	0	0	0	

Lines Editor Line 3 left

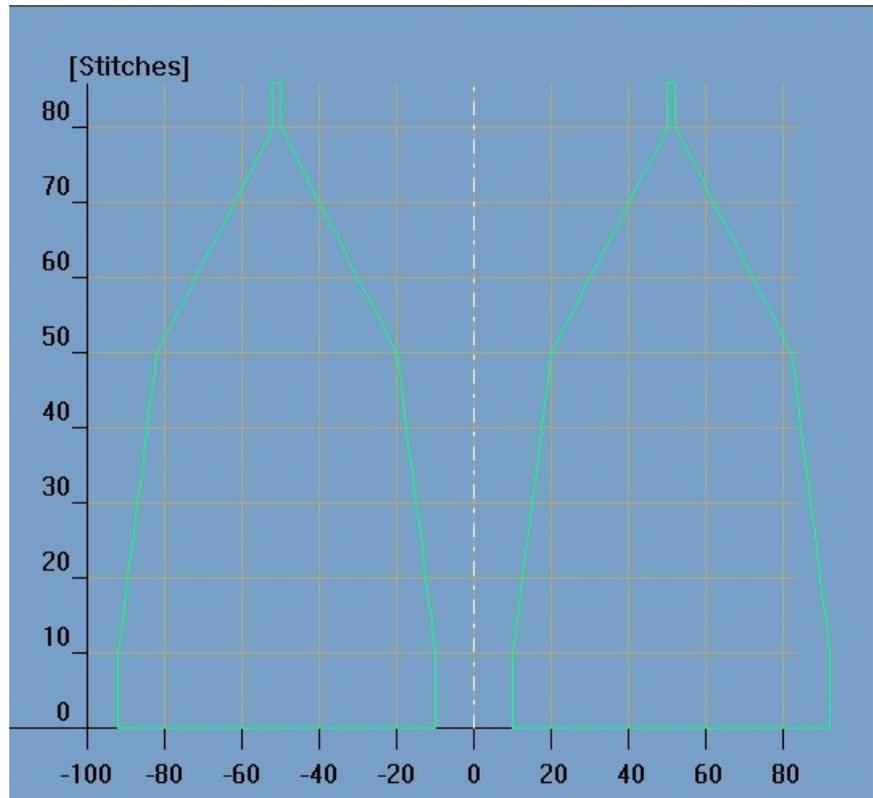
	Factor Grouped	Group	Height Steps	Width Steps	Factor
			70	40	
	1	0	4	1	10
	1	0	2	2	14
	1	0	1	1	2

Lines Editor Line 7 left

	Factor Grouped	Group	Height Steps	Width Steps	Factor	Width ---	Width xxx
			-70	40			
	1	0	-1	1	2	4	6
	1	0	-2	2	14	4	6
	1	0	-4	1	10	4	6

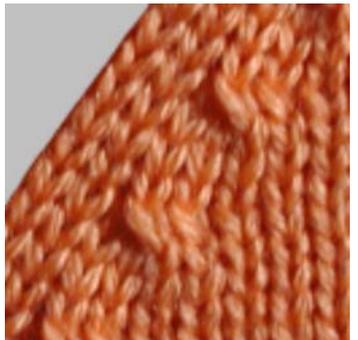
Front and back piece

2. Define the distance between the caps in the Elements section under "X-distance to the center line".(e.g. 10)



Front and back piece

3. Allocate the attribute **Narrowing** under "Function".

Adjustments			
Narrowing	Fade-out width	0	
	Type of narrowing	Body above / underneath Layers apart	
	Narrowing width	4 Is adjusted in the shape view.	

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

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
2. Load the shape elements for the front and back with the  button.
3. Place the form elements into the basic fabric with the "OK" button.
4. Position the elements body and sleeve on the pattern with the icon  and the left mouse button pressed.



Ensure the matching of the drawn-in 1x1 rib and the 1x1 rib of the start.

22.5.2 Insert the knitting cycles and change the narrowing width: Cap

I. Insert the k&w knitting cycles in the shape view:

1. Open the "Shape View" via the "k&w Shape" \ "Shape view" menu.
- or -



→ open with the buttons.

2. Select the knitting cycles.

- from the module bar

- or -

- in the Module Explorer

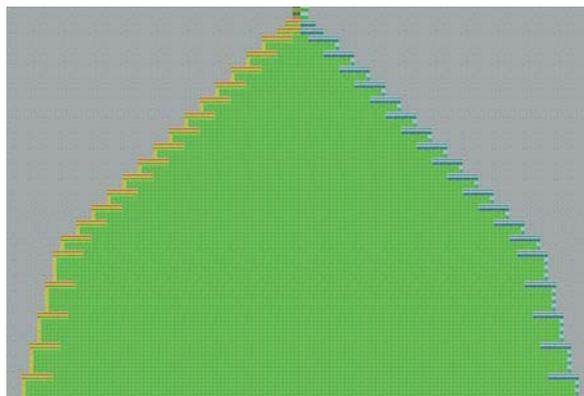
3. Insert the selected knitting cycle into the k&w shape.

- "k&w knitting cycles" / "Stoll" / "1 Tubular" / "without opening" / "without gore" / "A9-1 Tubular with opening (L0) and opening (L1)-2Y".

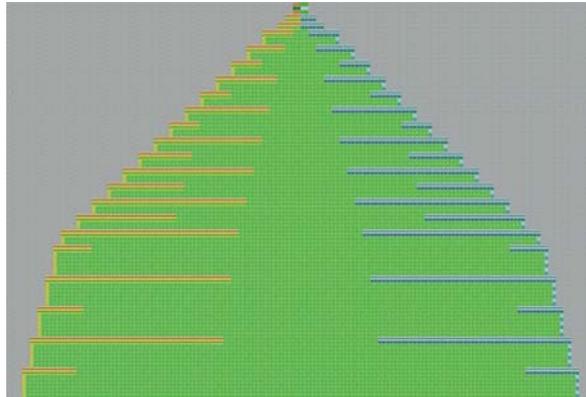
Knitting cycle modules	Name	Function
	A9-1 Tubular with opening (L0) and opening (L1)-2Y.	Two caps are knit separately tue to the opening in L0 and L1.

II. Change narrowing width manually:

1. Change the narrowing widths manually with the drawing tools and



Shape view with default narrowing widths



Shape view with manually changed narrowing widths

2. Save changed shape as **.shk** file.
3. Close the shape view and apply the changes.

22.5.3 Apply the shape: Cap

1. Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu

- or -

- ➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.

2. Cut shape.

- ➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
3. Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
 4. Use narrowing and widening.
 5. The "Insert/replace k&w start" dialog box appears.
 6. Select the k&w start "k&w_1x1" and confirm with the "OK" button.
The start will be inserted in the k&w pattern.

22.5.4 Generate an end module and complete the pattern: Cap

I. Generate end module:

1. Generate your own k&w module with the "Module" / "New Module..." menu.
2. Select **k&w** and enter the height and width.
3. Draw module.

End module	Knitting sequence																																																																																																																																												
	<table border="1"> <tr><td>20</td><td>Z</td><td>L0</td><td>>></td><td>0</td><td>R0</td><td></td></tr> <tr><td>19</td><td>Z</td><td>L0</td><td><<</td><td>0</td><td>R0</td><td></td></tr> <tr><td>18</td><td>Z</td><td>L0</td><td>>></td><td>0</td><td>R0</td><td></td></tr> <tr><td>17</td><td>Z</td><td>L0</td><td><<</td><td>0</td><td>R0</td><td></td></tr> <tr><td>16</td><td>Z</td><td>L0</td><td>>></td><td>0</td><td>R0</td><td></td></tr> <tr><td>15</td><td>Z</td><td>L0</td><td><<</td><td>0</td><td>R0</td><td></td></tr> <tr><td>14</td><td>Z</td><td>L0</td><td>>></td><td>0</td><td>R0</td><td></td></tr> <tr><td>13</td><td>Z</td><td>L0</td><td><<</td><td>0</td><td>R0</td><td></td></tr> <tr><td>12</td><td>Z</td><td>L0</td><td>>></td><td>1</td><td>R0</td><td></td></tr> <tr><td>11</td><td>Z</td><td>L0</td><td>>></td><td>1</td><td>R0</td><td></td></tr> <tr><td>10</td><td>Z</td><td>L0</td><td>>></td><td>1</td><td>R0</td><td></td></tr> <tr><td>9</td><td>Z</td><td>L0</td><td>>></td><td>1</td><td>R0</td><td></td></tr> <tr><td>8</td><td>E</td><td>L0</td><td><<</td><td>1</td><td>R0</td><td></td></tr> <tr><td>7</td><td>E</td><td>L0</td><td><<</td><td>2</td><td>R0R2</td><td></td></tr> <tr><td>6</td><td>E</td><td>L0</td><td>>></td><td>1</td><td>R0</td><td></td></tr> <tr><td>5</td><td>E</td><td>L0</td><td>>></td><td>1</td><td>R0</td><td></td></tr> <tr><td>4</td><td>E</td><td>L0</td><td><<</td><td>1</td><td>R0</td><td></td></tr> <tr><td>3</td><td>Z</td><td>L1</td><td><<</td><td>1</td><td>R0R1</td><td></td></tr> <tr><td>2</td><td>Z</td><td>L0</td><td>>></td><td>1</td><td>R0</td><td></td></tr> <tr><td>1</td><td>1</td><td>L1</td><td><<</td><td>1</td><td>R0</td><td></td></tr> </table>	20	Z	L0	>>	0	R0		19	Z	L0	<<	0	R0		18	Z	L0	>>	0	R0		17	Z	L0	<<	0	R0		16	Z	L0	>>	0	R0		15	Z	L0	<<	0	R0		14	Z	L0	>>	0	R0		13	Z	L0	<<	0	R0		12	Z	L0	>>	1	R0		11	Z	L0	>>	1	R0		10	Z	L0	>>	1	R0		9	Z	L0	>>	1	R0		8	E	L0	<<	1	R0		7	E	L0	<<	2	R0R2		6	E	L0	>>	1	R0		5	E	L0	>>	1	R0		4	E	L0	<<	1	R0		3	Z	L1	<<	1	R0R1		2	Z	L0	>>	1	R0		1	1	L1	<<	1	R0	
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Watch the knitting layers when drawing the module.

4. Define fabric take-down values in module.

	WM(N)	WMF	WM	Description [English]
	WMN	1	0.0	Forward
	WM	D	30.0	Cast-off 30
	WMN	2	0.0	Turn-back k&w

Fabric take-down table

5. Insert carriage directions.
6. Save module.

II. Insert module at end of cap:

- ➔ Insert the end module on to existing pattern rows after using the shape.

III. Complete the pattern:

1. Automatical or stepwise technical editing.



You have to start the technical editing for 2 pieces in order to knit four caps side-by-side

2. Call up the "Knitting technique" / "Technical Editing of 2 Parts" menu.
3. With the CMS 822 set the coupling with to 42" or 44".
4. Generate a Sintral.
5. Conduct Sintral Check.

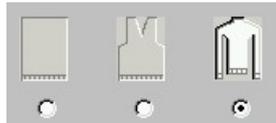
22.6 Shape wizard: Trousers

Pattern data	Pattern picture
File: Trousers Pattern width: 200 Pattern rows: 200	
Machine type:	CMS 822
Gauge:	6.2
Start:	1x1 rib
Basic pattern:	Jersey
Knitting technique:	knit and wear
Description of pattern:	k&w pants

22.6.1 Generate pattern and shape: Trousers

I. Generate basic pattern:

1. Generate new pattern.
2. Select machine.
3. Select **knit and wear** .



4. Pattern size:
Width: 200
Height: 200
Knitting mode: "Jersey"
5. Confirm specifications with "OK".

II. Create shape:

k&w sweater or cardigans require the shape elements front and back piece, sleeves and collar.

With a pair of pants, you use the sleeve element for the pant leg. The collar element is used as the body attachment for the waistband.

1. Generate new shape elements for a pair of pants.



The contours for the front and back piece are the same.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-20	0	-6	0	-6	1	0	0	0	Basis
2		20	0	6	0	6	0	1	0	0	0	
3		133	0	40	0	40	0	1	0	0	0	
4		33	0	10	0	10	0	1	0	0	0	
5		0	20	0	6	0	6	1	0	0	0	

Front and back piece

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		333	-66	100	-20	5	-1	20	0	0	0	Widening
3		33	0	10	0	10	0	1	0	0	0	
4		133	66	40	20	4	2	10	0	0	0	Narrowing
5		33	0	10	0	10	0	1	0	0	0	
6		0	100	0	30	0	30	1	0	0	0	

Sleeve (pant leg)

2. Allocate the shape attributes under "Function".

Sleeve element	Function		
Edge No.4	Widening	Standard	
		Fade-out width	0

Sleeve element	Function		
Narrowing	Narrowing type	Sleeve above layer-separated	
		Narrowing width	2

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	Bind-off

Collar (waistband - body end)

3. Allocate the shape attributes under "Function".

Collar element	Function		
End line	Bind-off	Type of binding-off	Neckline closed

III. Combine shape elements in the Shape wizard:

Combine the shapes front, back, sleeve (leg) and collar (body waistband) in the "Shape wizard" to a shape **Pants.kaw**.

1. Run the program "Shape wizard" via the menu "k&w Shape"/"Put Together k&w Shape...".

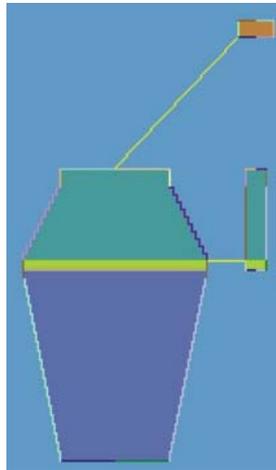
2. Load the shape elements for the pants with the  button.

3. Set docking points.



4. Activate the "Short sleeve/Short body" checkbox.

5. Determine knitting cycles.
Determine the knitting cycles with the "Determine knitting cycles" button.



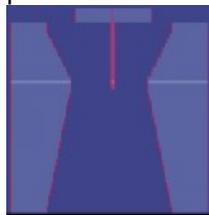
6. Save shape as k&w shape.
With "File"/"Save As" or 

The elements of the k&w shape must be located in the same directory, like the file ... **.kaw**.

22.6.2 Position and apply shape: Trousers

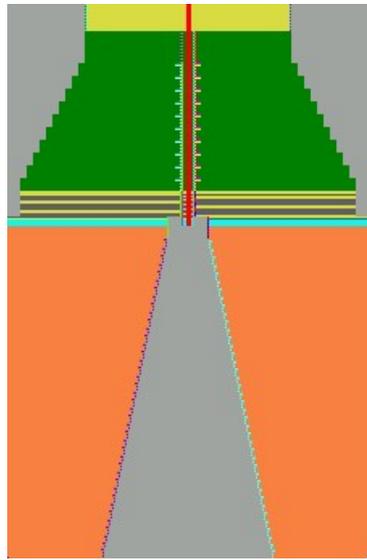
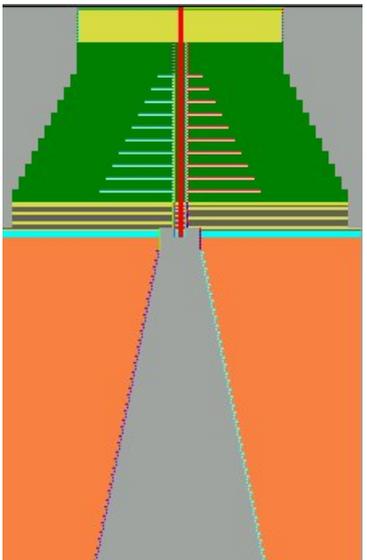
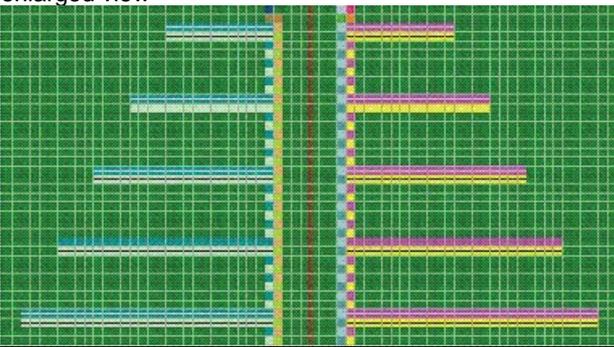
I. Position k&w shape:

1. Call up the "k&w Shape"/"k&w Open Shape and Position" menu.
2. Load the k&w shape.
3. The k&w shape is positioned in the basic motif with the "OK" button.
4. Position the k&w shape with the  symbol and the left mouse button pressed.



II. Correct the narrowing width and apply the shape:

1. The narrowing markings are inserted running straight upward. Change narrowing markings so that they run parallel to the outer edge. This achieves a better appearance. Open shape view.

Shape view with inserted knitting cycles	
Default narrowing widths	changed narrowing widths
	
enlarged view	
	
Correction tools	
	Use on both sides
	Narrow/Widen

Save changed shape as ... **.shk** file.

Edit the shape in the single steps **cutting out**, **fading out**, **narrowing** and **widening** via the "k&w Shape" menu

- or -

➔ Edit the shape in one step via the "k&w Shape" / " Use Shape (Cut, Fade Out, Narrow)..." menu.

Cut shape.

➔ The "Do you want a correction of edge widths to be carried out?" prompt appears.

Confirm the prompt with "Yes" in order to correct the uneven narrowing widths.



This prompt appears with uneven narrowing widths only.

- ➔ The "Do you want a correction of widening steps to be carried out?" prompt appears.
Confirm the prompt with "Yes" in order to correct the widening.
Fade out shape.
The "Replace modules cut into" prompt appears for modules which are cut into by fading out.
Use narrowing and widening.
The "Insert/replace k&w start" dialog box appears.
- ➔ Select a "k&w_1x1" start for the pant legs (sleeves).
- ➔ Select any desired "Start 1X1 body basic" for the body.
Confirm with "OK".



No start is necessary for the middle (body).
With a start the residual yarn rows are automatically inserted which can be corrected later manually.

The start will be inserted in the k&w pattern.

23 TC-T: Narrowing, widening and binding-off types

When knitting knit and wear articles on a CMS 330 TC-T, all needles are used.

Special modules are required for this reason.

23.1 TC-T: Narrowing types

Different narrowing types are displayed with different narrowing markings.

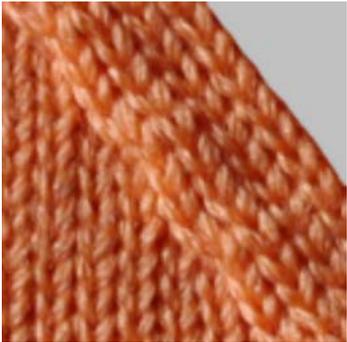
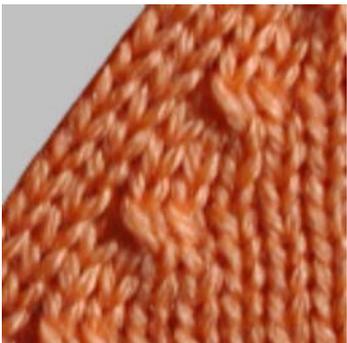
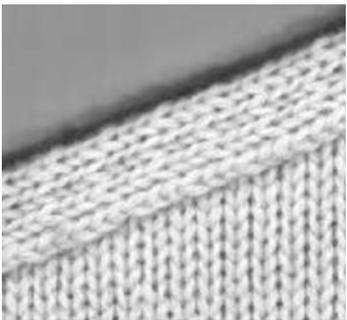
Use different narrowing types:

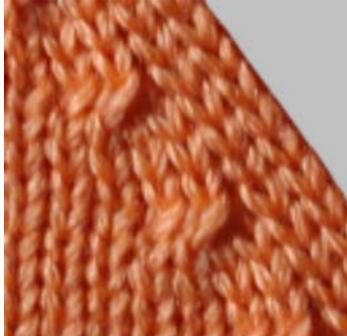
Open the Shape Editor.



With the shape elements, the "k&w All Needles" must be active.

Allocate the desired narrowing type and narrowing width to the **Narrowing edges** under "Function".

Designation	Use	Presentation	Function
Sleeve above 2 TC-T	Sleeve TC-T		Narrowing stitches lie on the basic stitches
Sleeve above 4 TC-T			Narrowing is carried out in 2 strokes
Remaining Narrowing TC-T			Narrowing stitches lie on the basic stitches
			Narrowing is carried out in 4 strokes
Body underneath 2 TC-T	Body		Special narrowing cycle for shapes with inserted sleeve, in various ratios of number of stitches to stitch rows
Body underneath 4 TC-T			Narrowing stitches lie under the basic stitches.
Body underneath without S0 TC-T			Narrowing is carried out in 2 strokes
			Narrowing stitches lie under the basic stitches
			Narrowing is carried out in 4 strokes
Shoulder TC-T	Shoulder		In the front and back the shoulder is narrowed in place of the usual gore

Designation	Use	Presentation	Function
V-neck underneath	V-neck TC-T		Narrowing stitches lie under the basic stitches



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

The narrowing modules contain **layer-separated narrowing**.

23.2 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.

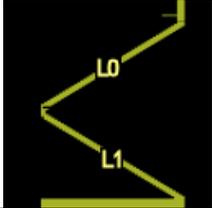
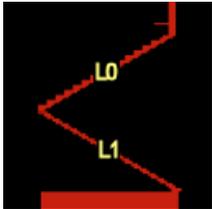
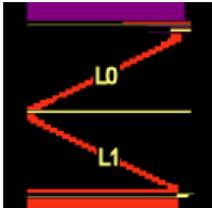
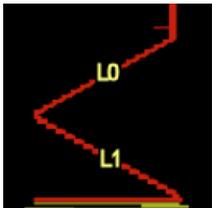
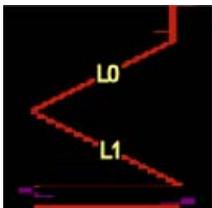
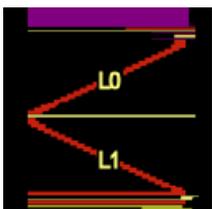
Open the Shape Editor.

Allocate the desired widening type and widening width to the **widening edges** under "Function".

Designation	Use	Function
No module	Widening Sleeve-Body	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 Selvedge open		Alternating widening technique. Widening of layer 0 and layer 1, but separated layers.

23.3 TC-T: Binding-off types

Different types of binding-off:

Setting	Schematical sequence	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>

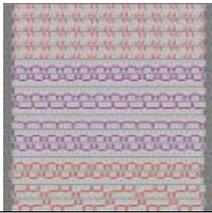
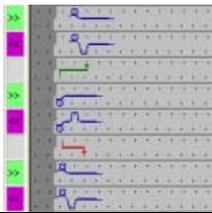
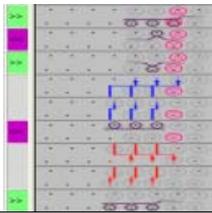
23.3 TC-T: Binding-off types

Setting	Schematical sequence	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.

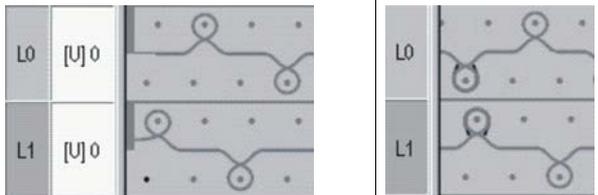
Setting	Schematical sequence	Use
TC-T Neckline open L1 2x1 ZB		Cut out with opening (e.g. V-neck) at the back layer knit with all needles as 2x1 rib. Binding-off with the additional beds.
TC-T Neckline open L0+L1 2x1 ZB		Cut out with opening (e.g. V-neck) at the front and back layer knit with all needles 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 the back layer 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.
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.

23.3 TC-T: Binding-off types

Setting	Schematical sequence	Use
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		Cut out with opening at the right and left side and collar 1x1_fine with cycle repetition. Binding-off with the additional beds.
TC-T V-neck start L0 L1 fine ZB		Cut out 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
TC-T V-neck open L0 L1 fine ZB		Cut out starting with more than two needles and 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

Setting	Schematical sequence	Use
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.
TC-T Shoulder Type2 NB		Binding-off the shoulder with the additional beds (wide shoulder seam)
TC-T Shoulder Type1 NB		Binding-off the shoulder with the needle beds (narrow shoulder seam)
TC-T Neck ZB	 	Binding-off at the neck of the back with the additional beds.

23.3 TC-T: Binding-off types

Terms / Abbreviation	Meaning
NB	Binding-off with draw thread on the needle beds.
ZB	Binding-off without draw thread with the additional beds
fine	All needle knit - no ribs
1x1_fine	The 1x1 rib will not be knitted by 1x1 technique
	1x1 rib by 1x1 technique
	1x1_fine
	
Open neckline	Neckline in the specified layer is open  Example: Neckline open _ ..._ 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 repeat of cycle.
Protection rows	End module with protection rows and without binding-off. Collar will be linked.