

STOLL

THE RIGHT WAY TO KNIT

STOLL pattern software M1

Basic and Fully Fashion Training



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M1 Training

Basic and thorough knowledge of the M1 Pattern Software

1 Basic course M1 Pattern Software

This course introduces you to working with M1.

With modules from the comprehensive module database generate your own pattern from the draft to the finished knitting program. In this case first of all simple and fundamental patterns and work techniques appear in the front .

Based on the possibilities displayed and selected here you would soon be in a position to acquire your own access to M1.

Requirements: Knowledge of the operating system of Windows or Windows applications (MS Office) are of advantage.

1.1 Getting started with the M1

I. Start the M1 program:

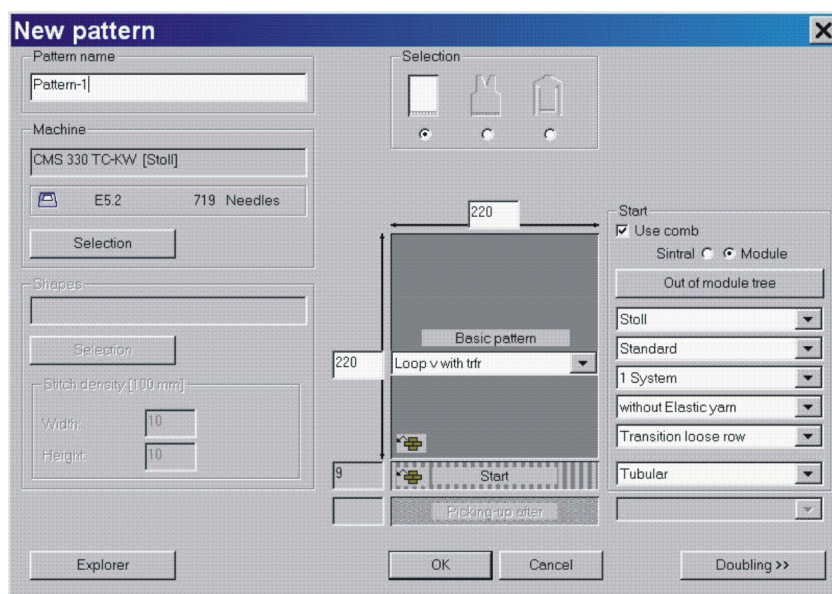


II. Generate a new pattern:

1. Select "File" / "New".

- or -

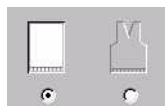
→ Click  icon.



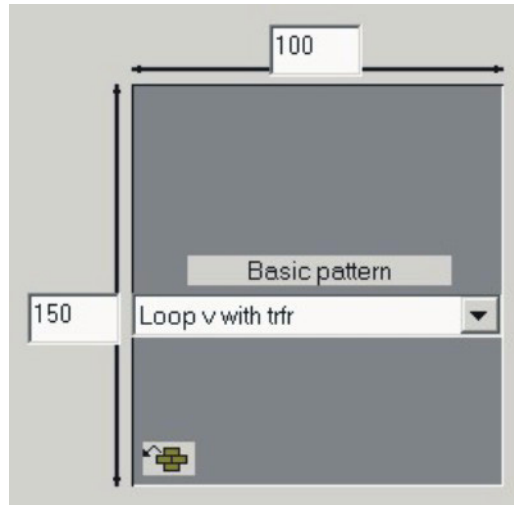
2. Enter a pattern name.

3. Select machine.

4. Knitting without shape selection.



5. Define the pattern size and the basic knitting mode.

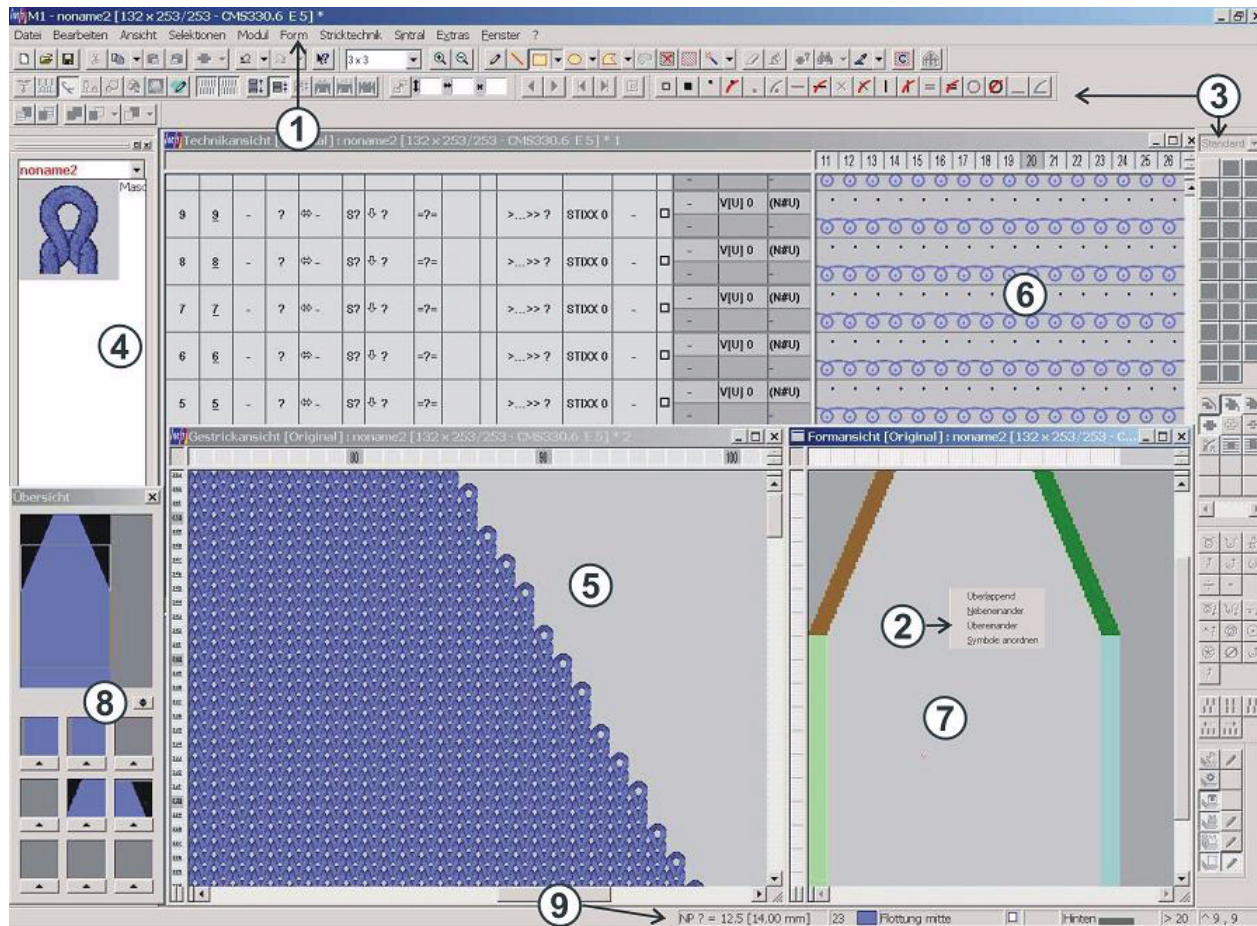


Selection options:

- Stitch with transfer
- Stitch ^ with transfer
- Stitch-Stitch
- Not

6. Drag a module from the module bar to the selection list.
7. Confirm the settings with "OK"

III. The graphical user interface:



No.	Designation	Function
1	Menu bar	A list of menus, that are displayed at the upper edge of the window.
2	Context menu	The menu shown when you click on an object with the right mouse button.
3	Symbol Toolbar	Buttons that can be clicked to execute tasks
4	Module Bar	Selection of modules Selection can be done from various module groups
5	Fabric View	Graphic 3D presentation of the pattern.
6	Technical view	Graphic presentation of the knitting actions in the pattern
7	Shape view / Shape editor	Graphic display of a shape for editing
8	Overview window	Overview of the pattern with position memory of pattern elements
9	Status line	Display line at the lower edge of the screen with information on a function, an ongoing process or a position

IV. Change settings of the user interface, save and load them:

You can arrange the displayed windows as desired.
You can switch on/off icon bars via the "View" / "Toolbar" menu.
Changed adjustments can be saved and re-loaded.

a) Save settings:

→ Save the arrangement of toolbars via the "View" / "Toolbar" / "Save Arrangement" menu.

- or -

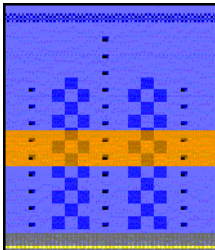
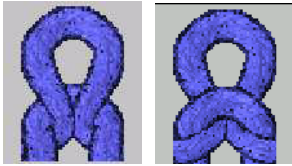
→ Select "Save adjustments" via the context menu the technical view or fabric view.

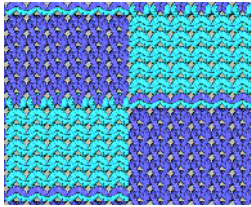
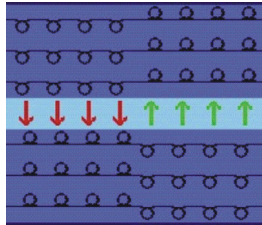
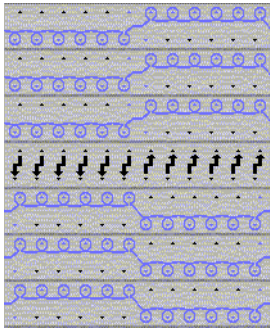
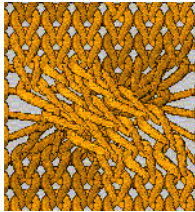
Window positions, control bars, zoom steps and cursor setting are saved.

b) Load settings:

→ Save the arrangement of toolbars via the "View" / "Toolbar" / "Save Arrangement" menu.

1.2 Structure pattern


Pattern data	Pattern picture
File: Structure.mdv Pattern width: 100 Pattern rows: 100	
Machine type	CMS 530
Gauge	8
Start	1X1 rib
Basic pattern	Front stitch with transfer
Knitting technique:	Structured single jersey, cable and horizontal colored stripe
Elements in use	
Basic pattern: Front stitch with transfer Back stitch with transfer	

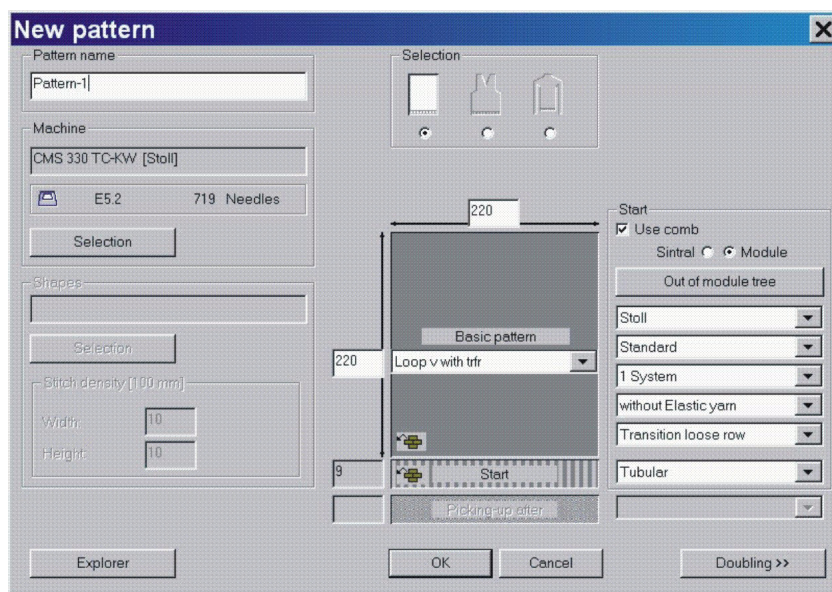
Pattern data	Pattern picture
<p>Knitting technique: Structured single jersey</p>	 <p>Fabric view of the structured single jersey</p>  <p>Icon view structure right-left</p>  <p>Technical view structure right-left</p>
<p>cable</p>	 <p>Cable 3x3</p>

I. Generate new pattern:

1. Select the "File / New" menu.

- or -

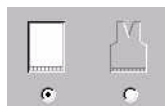
→ Click on the  symbol.



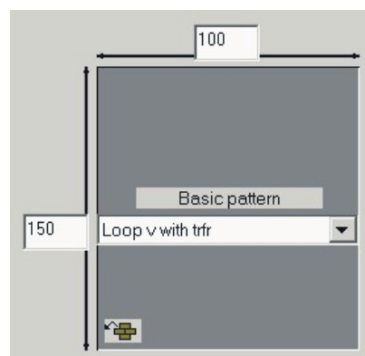
2. Enter a pattern name.

3. Select machine.

4. Knitting without shape selection.



5. Define the pattern size and the basic knitting mode.






6. Select a start.



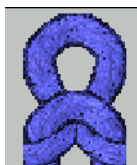
7. Confirm the settings with "OK"


II. Generate the motif:

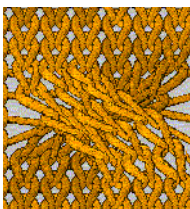
1. You can use different drawing tools for motif generation:


-  pencil
-  Line
-  Rectangle/square.

You can choose between "Rectangle/square" and "filled/not filled" in the "Drawing tool properties" selection window.



2. Select the  module from the module bar and insert it in the motif.



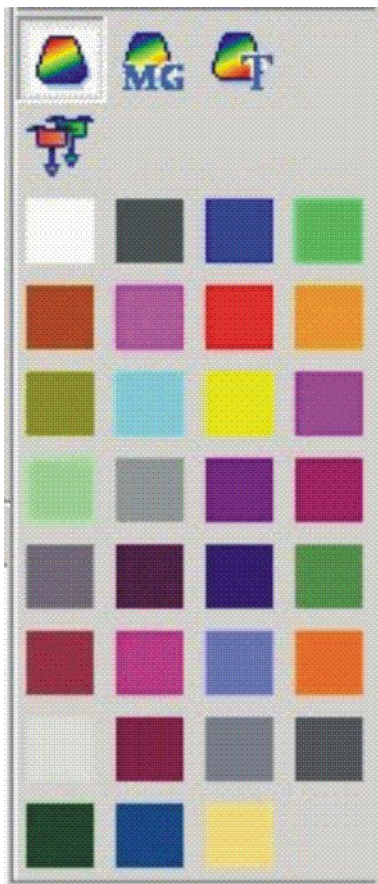
3. Select the  module from the module bar and insert it in the motif.



You can create the motif in the technical or in the icon/fabric view.

III. Insert colored stripe:

1. Select the desired color in the Yarn Colors toolbar.



2. Enter the color for the color stripe via the control bar (Technical or pattern row) the icon view or fabric view or the technical view.



Change only an even number of rows in the color.

IV. Complete the pattern:

1. Select the "Automatic technical editing" or "Step wise technical editing" via the "Knitting Technique" menu.
2. The "Generate Sintral?" prompt appears after the technical editing. Confirm with "OK".
3. Call up the Sintral Check program via the "Sintral" / "Sintral-Check" menu.
4. Save pattern on USB memory stick.



- or -

- Save pattern on floppy via the "Sintral" / "Save Data to Floppy Disk" menu.



5. Knit pattern on the machine.

1.3 Storage Media

M1 working technique:

Save patterns to Knit memory card or on a floppy disk:

I. Save data to floppy disk:



1. Call up the "Save data on floppy disk" dialog box.
Via the "Sintral" / "Save Data to Floppy Disk..." menu.
2. Specify file types, (Sintral, Jacquard, Setup etc.)
3. Select "Disk Drive" (A:\) in the "Target" section.
4. Select the "Save Data in img File..." checkbox.



The MC Software Version ST168.22.02.021.000 onwards and higher, you do not need to save data in a .img-file any more.

5. Enter path and file name of the pattern.
Under column "File selection" / "Browse" button.
6. Save pattern with "OK".



Proceed exactly in the same manner for saving data on KMC.

II. Save data in img file:














1. Via menu bar "Sintral"/"Save data in img. - Save file..."
2. Specify file types, (Sintral, Jacquard, Setup etc.)
3. Enter path and file name of the pattern.
Under column "File selection (source)" / "Browse" button.
4. Enter path and file name of the .img file.
Under column "File selection (target)" / "Browse" button.
5. Save pattern with "OK".

III. The handling of floppy disk and Knit memory card:

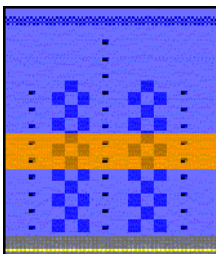
→ Call up via menu "File" / "Knit memory card..."



Icon bar in the program STOLL Knit memory card - Cardimag

	Function	Destination
	Create new container	Generate a new container. Dialog "Save under" is opened
	Opening a container	Open container on floppy disk. Content is displayed
	Open a KMC (Flash Card)	Open KMC (Flash Card) Content is displayed
	Close KMC	Opened KMC or container is closed
	Copying files	Save marked files of KMC or container in the paste buffer
	Add files	Writes the file that has been stored in a paste buffer on KMC or container
	Save files from KMC under...	Read the marked files from the card and save as text files
	Open files from KMC	Read and display the marked files
	Save files on KMC	Write pattern files of data carrier - e.g. from a local drive - on KMC (Flash Card)
	Rename	Rename marked file
	Delete	Deletes the marked files from the KMC or from the container. Redo is possible upto 4 times. Final deleting and releasing of the memory space by reorganizing
	Print KMC Directory	Print file list of the active KMC or of the active container
	M1 Help	M1 help for program "STOLL Knit Memory Card" and to M1

1.4 Structure pattern with changed pattern settings

Pattern data	Pattern picture
File: Structure.mdv Pattern width: 100 Pattern rows: 100	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Knitting technique	Structure

Pattern description:

Change adjustments in the structure pattern with right, left, cable and horizontally running colored stripe.

I. Change different default settings:

1. Open existing pattern.
2. Save the pattern as original under a new name if required.



The stitch length settings are already shown before technical editing. You can do any changes before technical editing already. Changes for fabric take-down and speed are carried out following technical editing for practical reasons.

3. Examples of changes of default settings which can be carried out:
 - [Stitch length](#) [s. p. 21]
 - [Fabric take-down](#) [s. p. 24]
 - [Carriage speed](#) [s. p. 27]
 - Racking correction
4. Save the knitting program after making the changes.

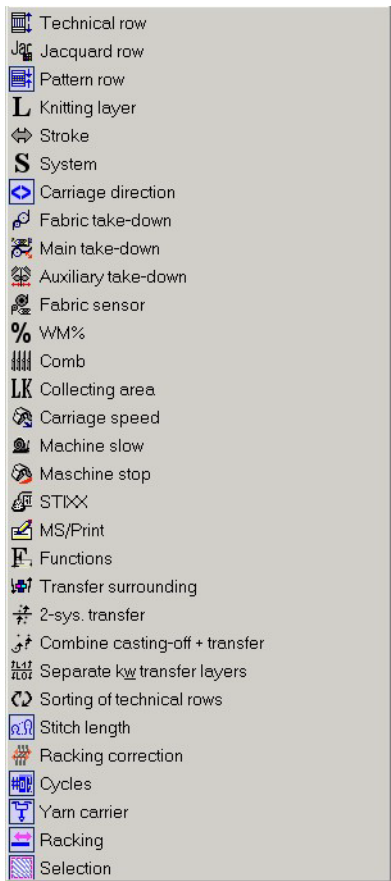
II. Finish pattern:

1. Carry out automatic technical editing.
With "Knitting Technique"/"Automatic Technical Editing" menu.
2. The "Generate Sintral?" prompt appears after the technical editing.
Activate the checkbox and confirm with "OK".
3. Conduct Sintral Check.
Via [Sintral / Sintral-Check...](#) *[s. p. 197]*

1.4.1 Display control columns

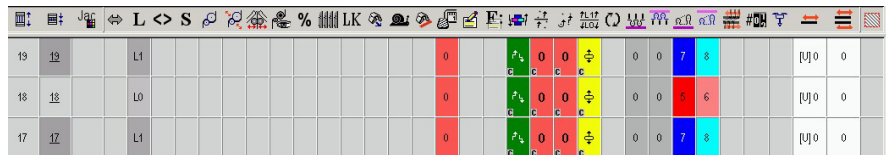
The display of the control column can be set in different views.



1. Press the right mouse button in the header of the control column.



















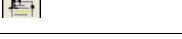








Selection of the control columns

The control columns in the overview



	Designation	Function
	Technical row	The consecutive numbering of the technical rows is displayed in the technical row presentation.
	Pattern row	In the pattern row presentation, the pattern rows are consecutively numbered. If a pattern row consists of several technical rows, the pattern row number is shown several times for all technical rows in the Technical Row Presentation. To distinguish between the technical rows, the pattern row numbers are underlined.

	Designation	Function
	Jacquard	After Sintral/Jacquard/Setup is generated, the jacquard line number is shown in the control column.
	Stroke	Allocate settings for stroke
	Knitting layer	Specify settings for k&w knitting layers.
	Carriage direction	Allocate settings for carriage directions.
	System	Settings on specification of the knitting systems
	Fabric take-down	Settings on fabric take-down, main take-down, auxiliary take-down, fabric sensor and WM%
	Main take-down	
	Auxiliary take-down	
	Fabric sensor	
	WM%	
	Comb	Settings for the comb position and comb monitoring
	Collecting-area monitoring	
	Carriage speed	Settings for the carriage speed.
	Machine slow	
	Machine stop	
	STIXX	Allocate settings for the STIXX mode
	MS/PRINT	Specifications for Machine stop and Print command
	Functions	Settings for function calls and additional commands
	Areas	Specifications for area-related settings for transfer and k&w layers.
	Knock-over	Allocate settings for the control of the front or back holding-down jacks. (Only TC4, TCR)
	Stitch length	Allocate settings for the front or back stitch length
	Racking correction	Settings for the racking corrections
	Cycles	Specifications for cycles for length control
	Racking rear	Allocate settings for the racking steps and the racking type
	Racking additional beds	Assign settings via the racking stages of the additional beds

1.4.2 Change the default settings of stitch length

You can change the stitch lengths in use.

1. In the technical view, place the cursor on the column for front or rear stitch length.



Front/rear stitch length

2. Press the right mouse button in the stitch length column.
-> The selection window for the stitch lengths used in the motif appears.

	NP	PTS	Value E 8 (8)	Description [English]
	1	=	9.0	Net
	2	=	10.0	Tubular Net
	3	=	9.5	1x1-Cycle
	4	=	11.5	Transition
	5	=	12.5	Struc Singel jersey front
	6	=	12.5	Struc Single jersey back
	7	=	10.0	Castoff/After pressing_v
	8	=	10.0	Castoff/After pressing_^
	9	=	12.0	Jac Stripe front
	10	=	12.0	Jac Net back
	11	=	12.5	saftey rows
	12	=	11.5	Default front
	13	=	11.5	Default back
	20	=	9.0	Start1
	21	=	10.0	Start2
	22	=	11.0	Start3
	24	=	12.0	Start5
	25	=	17.0	Comb Thread
✗ Unbestimmt				
Additional values...				

- The entries selected as favorites in the "Stitch length table" are displayed.
 - The allocated stitch length can be set to "Undefined".
3. Select the desired stitch length from the display and enter it in the control column.
- or -
➔ Fill a selection.
 4. Repeat the procedure for the opposite needle bed if necessary.



Stitch lengths present in the columns can be added with the "F6" function key.



Additional variants for stitch lengths are available in the chapter [Different options with stitch lengths](#) [s. p. 21].

1.4.3 Different options with stitch lengths

The stitch lengths used in a knitting program can be changed.

I. Open stitch length table:

1. Call up the "Stitch Length..." menu via the "Knitting technique" menu bar.

- or -

- In the technical view, place the cursor on the column for front/rear stitch length.



2. Press the right mouse button.
The selection window for the stitch lengths used in the motif appears.
3. Move the cursor on the entry to be changed.
4. Press the right mouse button.
5. Click "Edit entry".
The values can be edited.

- or -

- Click "Additional Values..." menu.
The "Stitch length table" appears.

No	NP	PTS	NPE8 (8)	Description [English]	Grp	F	U	M	S	G
1	1	=	9.0	Setup Row	-	<input type="checkbox"/>	X			X
2	2	=	10.0	Setup Tub	-	<input type="checkbox"/>				X
3	3	=	9.5	1x1-Cycle	-	<input type="checkbox"/>	X			X
4	3	=	10.5	2x1/2x2-Cycle	-	<input type="checkbox"/>				X
5	?	=	10.0	1x1-Cycle-2	-	<input type="checkbox"/>				X
6	?	=	10.5	2x1/2x2-Cycle-2	-	<input type="checkbox"/>				X
7	2	=	11.5	Tubular Cycle front	-	<input type="checkbox"/>				X
8	3	=	11.5	Tubular Cycle back	-	<input type="checkbox"/>				X
9	4	=	11.5	Loose Row	-	<input type="checkbox"/>	X			X
10	4	=	9.5	Transition-RR	-	<input type="checkbox"/>				X
11	?	=	11.5	Transition-2	-	<input type="checkbox"/>				X
12	1	=	9.5	Setup-MG	-	<input type="checkbox"/>				X
13	2	=	10.5	Setup-Tub-MG	-	<input type="checkbox"/>				X
14	3	=	10.0	1x1-MG	-	<input type="checkbox"/>				X
15	3	=	11.5	2x1/2x2-MG	-	<input type="checkbox"/>				X
16	?	=	10.0	1x1-MG-2	-	<input type="checkbox"/>				X
17	?	=	11.5	2x1/2x2-MG-2	-	<input type="checkbox"/>				X
18	2	=	12.5	Tub-front-MG	-	<input type="checkbox"/>				X
19	3	=	12.5	Tub-rear-MG	-	<input type="checkbox"/>				X
20	4	=	13.0	Transition-loose-MG	-	<input type="checkbox"/>				X
21	4	=	10.0	Transition-RR-MG	-	<input type="checkbox"/>				X
22	?	=	13.0	Transition-loose-MG-2	-	<input type="checkbox"/>				X
23	20	=	9.0	Start1	-	<input type="checkbox"/>				X
24	21	=	10.0	Start2	-	<input type="checkbox"/>	X			X
25	22	=	11.0	Start3	-	<input type="checkbox"/>	X			X

Designations in the stitch length table

Column	Display
No	Consecutive numbering of the entries
Color	Color of entry
NP	Display of the index for the indirect stitch length allocation
PTS	Specification of whether the tension range of this entry may be changed.
Value	NP value used
Description	Name for the entry
Group (Grp)	Entries that are combined to form a group
Status columns	Display the status of the entry

The status columns

Column	Designation	Use
F	Favorites	Marked entries are shown in the selection dialog box of the control column.
U	Used	An X appears here if the entry is used in the pattern.
M	Modified	An X appears in this column when a change has been made. A newly added entry or an entry set to Favorites is assigned the modification status. This can be reset with the "Reset" "modified status" function in the context menu of the table. Then the X is removed from the column again.
S	Sintral	An X appears here when the value has been copied from the Sintral function
G	Global	An X appears here when the value has been applied from the global stitch length table.

II. Specify favorites:

To expand the selection options, favorites can be defined.

1. Call up the stitch length table.
2. Click the desired entry in the status column "F".
In the process, the entry is automatically set to "Modified".
The "Modified" mode can be deactivated with the context menu.

The entry set to "Favorites" is shown in the stitch length display and can be inserted in the pattern.

III. Add new entry:

New entries can be added to the existing entries for stitch lengths.

1. Call up the stitch length table.
2. Pressing the right mouse button opens the context menu of the stitch length table.
3. Activate the selection "Insert new entry".

A new entry appears at the end of the table.
This entry can be given a name under Description.
Additional information can be entered under "Value", "PTS", "NP" etc.

IV. Apply entry from stitch length table in pattern:

1. Open the stitch length table for the front or back needle bed.
2. Select an entry in the table.
To do this, click on the number or colored mark.
3. Click in the corresponding control column.
The stitch length is entered in the column.

1.4.4 Change the default settings for the fabric take-down



The fabric take-down settings are shown after the technical editing only. Therefore, make any changes after the technical editing.

1. Carry out technical editing.
2. In the symbol, fabric or technical view, place the cursor on the column for the fabric take-down or set the columns , , .
3. Press the right mouse button.
A selection window with the fabric take-down values used in the motif appears.
The entries selected as favorites in the "Fabric take-down table" are displayed.

	WM(N)	WMF	WM	Description [English]
	WM	2	0.0	Relieve
	WM	3	2.0	Turn-back
	WM	5	2.0	Default Transfer
	WM	D	30.0	Cast-off 30
	WM	D	2.0	Cast-off 2
	WMN	1	0.0	Forward
	WMN	4	4.0	Default Knit
	W0	W0	Warenabzug W0	Impuls: <input type="text" value="0"/>
			WMF / W0 unspecified	
	WM%		Fabric take-down value +/- n	%: <input type="text" value="0"/>
			Fabric take-down value unspecified	
	=W=	=C=	Open and close main take-down	
	=C=		Close main take-down	
	=W=		Open main take-down	
			Main take-down unspecified	
	WS1		Fabric sensors on	
	WS0		Fabric sensors off	
			Fabric sensors unspecified	
	W+1		Close auxiliary take-down	
	W+0		Open auxiliary take-down	
			Auxiliary take-down unspecified	
Weitere Werte...				

4. Desired value for fabric take-down is selected and entered in technical row column.
 - Marks for the main take-down can be set.
 - Marks for the fabric sensors can be set.

- Marks for the auxiliary take-down can be set.
5. Click on "Addit. Values..." to open the "Fabric take-down table".

No	WM(N)	WMF	WM	WMin	WMax	N min	N max	WMI	WM^	WMC	WM+C	WM+C	W+	WHP	W+C	Description [English]	Grp	F	U	M	S	G
1	WMN	1	0.0	2.0	6.3	1	100	3	0	10	20	20	10	0	10	Forward	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	WM	2	0.0	0.0	0.0	0	0	0	0	10	10	10	10	0	10	Relieve	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	WM	3	2.0	0.0	0.0	0	0	0	20	10	10	10	10	0	10	Turn-back	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	WM	D	2.0	0.0	0.0	0	0	7	0	0	0	0	10	4	0	Picking-up	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	WMN	4	4.0	2.0	6.3	1	100	6	0	10	20	20	10	0	10	Default Knit	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	WM	?	0.0	0.0	0.0	0	0	0	0	0	0	0	1	2	10	Link-off	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	WM	5	2.0	0.0	0.0	0	0	3	0	10	10	10	10	0	10	Default Transfer	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	WM	D	30.0	0.0	0.0	0	0	3	0	0	10	10	1	0	10	Cast-off 30	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	WM	D	2.0	0.0	0.0	0	0	0	20	0	10	10	1	0	10	Cast-off 2	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	WM	5	2.0	0.0	0.0	0	0	3	0	10	10	10	10	2	10	Remaining Narrowing k&w	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	WM	?	4.0	0.0	0.0	0	0	3	0	10	20	20	15	0	20	K&W Narrowing v	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	WM	?	2.0	0.0	0.0	0	0	3	15	10	20	20	15	0	20	K&W Narrowing ^	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	WM	?	0.0	0.0	0.0	0	0	0	0	0	0	0	6	0	10	K&W Link-off	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	WM	?	0.0	0.0	0.0	0	0	0	0	0	0	0	1	0	10	K&W Link-off 1	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	WM	4	0.0	0.0	0.0	0	0	0	30	10	10	10	1	2	10	Combine Sleeves k&w	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	WM	6	4.0	0.0	0.0	0	0	3	0	10	10	50	10	2	10	Setup Row 2x2 k&w	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17	WM	?	2.0	0.0	0.0	0	0	3	0	10	10	10	10	0	10	Default 50	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Column	Display
No	Consecutive numbering of the entries
Color	Color of entry
WMN(N)	Display of the index for the indirect allocation of the fabric take-down value
WMF	Specification of whether the tension range of this entry may be changed.
WM	Fabric take-down value when this is not changed in accordance with the number of needles.
WM min	Fabric take-down value for minimum fabric width
WM max	Fabric take-down value for maximum fabric width
N min	Number of needles for minimum fabric width
N max	Number of needles for maximum fabric width
WMI	Fabric take-down impulse value

Column	Display
WM^	Specification of a number of degrees for turning back the take-down
WMC	Value for the sensitivity of the stop motion control of the main take-down
WM+C	Specification of the system number for the take-down control
WMK+C	Specification of the system number for comb monitoring
W+	Speed of auxiliary take-down
W+P	Value for the contact pressure of the auxiliary take-down
W+C	Specification of the system number for the auxiliary take-down control
Description	Name for the entry
Group (Grp)	Entries that are combined to form a group
Status columns (F, U, M, S, G)	Display the status of the entry

I. Apply fabric take-down value in pattern:

1. Open the fabric take-down table.
2. Select the entry for the fabric take-down.
3. Enter it in the control column of the technical view.

II. Add a new entry for the fabric take-down




New entries can be added to the existing entries for fabric take-down in the fabric take-down table.















1. Open the fabric take-down selection in the control column and open the fabric take-down table with "Additional Values ...".
2. Pressing the right mouse button opens the context menu of the fabric take-down table.
3. Activate the selection "Insert new entry". A new entry appears at the end of the table.
Additional allocations to this entry can be made.

1.4.5 Change the default settings of the carriage speed



The specifications for carriage speed and machine stop are shown after technical editing. Therefore, make any changes after the technical editing.

1. The column for the carriage speed in the symbol, fabric or technical view must be switched on.
2. Set the cursor on the column for carriage speed  or the column , .
3. Pressing the right mouse button opens a selection window for the speed information used in the motif. In addition, the entries selected as favorites in the "Carriage speed table" are displayed.

	MSEC	m/s	Description [English]
	D	= 0.40	-
	0	= 0.70	Knitting3
	D	= 0.70	-
	3	= 0.80	Knitting4
	1	= 1.00	Knitting6
	2	= 1.00	Default-Knitting
	4	= 1.00	Default-Transfer
	D	= 1.00	-
	5	= 1.20	Default-S0
	MSEC unbestimmt		
	ML	Maschine langsam	
	ML unbestimmt		
	MS	Maschine Stop [sec]	<input type="text" value="0.0"/>
	MS unbestimmt		
Weitere Werte...			

4. Select the desired value for carriage speed and enter in technical row column.
 - Markings for "Machine slow" can be set.
 - Markings for "Machine Stop" can be set.
5. Click on "Addit. Values..." to open the "Carriage speed table".

File Edit Tools ?										
No	MSEC	=	m/s	Description [English]	Grp	F	U	M	S	G
1	?	=	0.50	Knitting 1	-	<input type="checkbox"/>				X
2	?	=	0.60	Knitting 2	-	<input type="checkbox"/>				X
3	0	=	0.70	Knitting3	-	<input type="checkbox"/>	X	X		X
4	3	=	0.80	Knitting4	-	<input type="checkbox"/>	X	X		X
5	?	=	0.90	Knitting 5	-	<input type="checkbox"/>				X
6	1	=	1.00	Knitting6	-	<input type="checkbox"/>	X	X		X
7	?	=	1.10	Knitting 7	-	<input type="checkbox"/>				X
8	?	=	1.20	Knitting 8	-	<input type="checkbox"/>				X
9	3	=	1.00	Link-off	-	<input type="checkbox"/>				X
10	2	=	1.00	Default-Knitting	-	<input type="checkbox"/>	X	X		X
11	5	=	1.20	Default-S0	-	<input type="checkbox"/>	X	X		X
12	4	=	1.00	Default-Transfer	-	<input type="checkbox"/>	X	X		X
13	D	=	0.70	-	-	<input type="checkbox"/>	X	X		
14	D	=	1.00	-	-	<input type="checkbox"/>	X	X		

Column	Display
No	Consecutive numbering of the entries
Color	Color of entry
MSEC	Display of the index for the indirect allocation of the carriage speed
m/s	Value used for the carriage speed
Description	Name for the entry
Group (Grp)	Entries that are combined to form a group
Status columns (F, U, M, S, G)	Display the status of the entry

I. Apply machine speed in pattern:

1. Open the machine speed table.
2. Select the entry for the machine speed.
3. Enter it in the control column of the technical view.

II. Add a new entry for the carriage speed


New entries can be added to the existing entries for machine speed in "Carriage speed table".

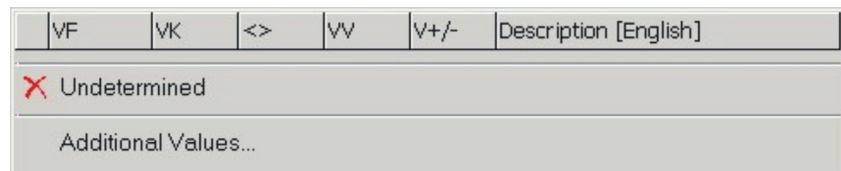
1. Call up the "Carriage speed table".
2. Call up the context menu with the right mouse button.
3. Activate the selection "Insert new entry".
A new entry appears at the end of the table.

1.4.6 Racking corrections

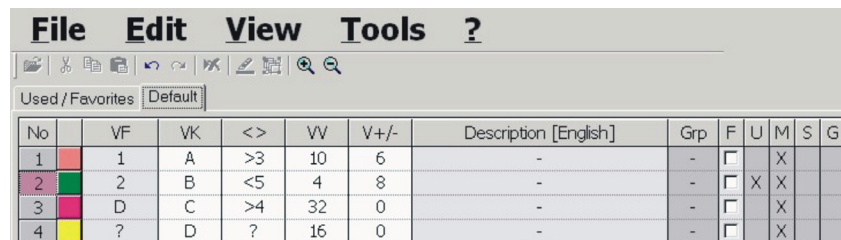
By the racking correction the position of the needle beds can be corrected so that during transfer the transferring needle is positioned optimally to the accepting needle.

I. Generate racking corrections and enter in the pattern:

1. Switch on the column for the racking correction  in the symbol, fabric or technical view.
2. Open the table with the right mouse key.



3. Open the "Racking correction table" via menu "Addit. Values...".
4. Insert desired entries in the table.



	Function	Specification	Setting area
VF	Racking function	Direct	D
		Reference	1-99
		Reference undefined	?
VK	Racking correction		A-Z
<>	Direction of correction	< - Correction towards left	1-10
		> - Correction towards right	1-10
VV	Racking speed		32-1
V+/-	OVERRACKING		1-24



Other racking commands are displayed corresponding to the machine type being used.

5. Select the entry for the racking corrections.
6. Enter it in the control column of the technical view.

1.5 Global pattern parameters and parameters specified by you

The pattern data given by Stoll are the global pattern parameters. These can be edited.

I. Menu for "Global pattern parameter".

No pattern may be open.

→ Call up the "File" / "Global pattern parameter" menu.

Global Parameters

Configuration	"Standard"	Sintral
		Knitting zones
		Transfer
		Intarsia
		Additional settings
	"k&w"	
Pattern parameter	"Stitch length table"	
	"Take-down table"	
	"Carriage speed table"	
	"Racking Correction Table"	
	"Sintral functions"	


II. Make changes in "Configuration":

1. Make the desired adjustments under configuration "Standard" in the tabs.
2. The adjustments are saved as default by "Apply" or "OK".


III. Make changes in "Pattern Parameters":

Under "Pattern Parameters" appear the directories:

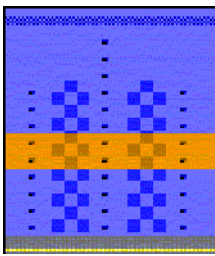
- Stitch length table
- Take-down table
- Carriage speed table
- Racking Correction Table
- Sintral functions

3. Open the desired directory and make changes.
4. Close directory with  .
The changes get saved.

IV. Add a new entry in "Pattern Parameters":

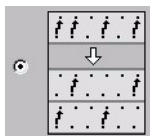
1. Open the desired directory.
2. Insert new entry.
Insert via context menu the table "New entry".
3. Close directory with  .

1.6 Structure pattern with changed transfer settings

Pattern data	Pattern picture
File: Structure.mdv Pattern width: 100 Pattern rows: 100	
Machine type:	CMS330TC
Gauge:	8
Start:	1x1 rib
Basic pattern:	Front stitch with transfer
Knitting technique	Structure
Pattern description:	Change adjustments in the structure pattern with right, left, cable and horizontally running colored stripe. - in the entire pattern - in selected pattern rows

I. Change the transfer in two systems within the entire pattern (pattern global):

1. Save the pattern under a new name to keep the original pattern file.
2. Load pattern before technique.
Menu "Knitting Technique" / "Load pattern before technique".
3. Call up the "Configuration" dialog box via "Knitting Technique" / "Configuration".
4. Activate the checkbox in the "Transfer" / "2-sys. Transfer" tab.



5. Specify the maximum distance in the selection list.
Maximal distance between two transfer actions in order to split them on two rows (systems).
6. Confirm setting with "Apply" or "OK".
The setting is taken into account during technical editing.

II. Change the transfer surrounding within the entire pattern (pattern global):

1. Call up the "Configuration" dialog box via "Knitting Technique" / "Configuration".
2. Activate the checkbox in the "Transfer" / "Transfer Surrounding" tab.
Transfer surrounding to the front or to the back:



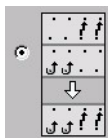
3. Specify "From racking" in the selection list.



The transfer of the surrounding will be done from the specified racking path on.

III. Group transfer and cast-off in the whole pattern (pattern globally):

1. Call up the "Configuration" dialog box via "Knitting Technique" / "Configuration".
2. Activate the checkbox in the "Transfer" / "Group cast-offs/transfers" tab.



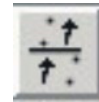
You can deactivate all settings via the "Off 0" checkbox.
The settings of the "Configuration" dialog box apply always to the whole pattern.

IV. Change settings of individual pattern rows:

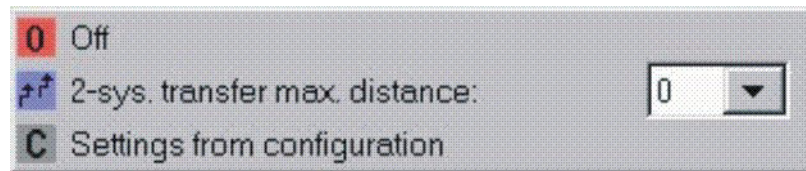
You can make these settings in individual pattern rows or areas as well.

Example: Transfer with two systems

3. Load pattern before technique via the "Knitting Technique" / "Load pattern before technical" menu.



4. The column for "2-sys. Transfer" of the control column in the technical view must be switched on.
5. Activate "2-sys. Transfer" with the right mouse button in the control column.




6. Select the 2-system transfer function and insert it at the desired position into the control column.




You can reset an entry via **0**.

If you want to have transfer in two systems at several positions then you can select areas via the control columns and fill them with the 2 sys. Transfer function.

V. Make further specifications in the same way:

→ Transfer surrounding 

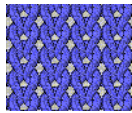
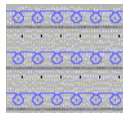
→ Group casting-off and transfer 

VI. Finish pattern:

1. Start the automatic technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".

The specifications are carried during technical editing.
The result is visible in the icon or fabric view and in the technical view.


1.7 Single and multi-system knitting

Pattern data	Pattern picture	
File: one+twosystem.mdv Pattern width: 100 Pattern rows: 100		
Machine type	CMS 530	
Gauge	8	
Start:	2x1 - Rib	
Basic pattern:	Front stitch with transfer	
Knitting technique	 Structure	 Stitch line
Description of pattern:	Structure pattern with color rings	

I A. Use different yarn carriers in the icon view:

The yarn colors can be drawn-in in the icon view.


1. Generate new pattern in the "Symbol view".

2. Activate the "Yarn or yarn carrier colors" as background with the  button .

3. Select the desired color from the table and draw-in the color stripes in the pattern.




I B. Use different yarn carriers in the fabric view:

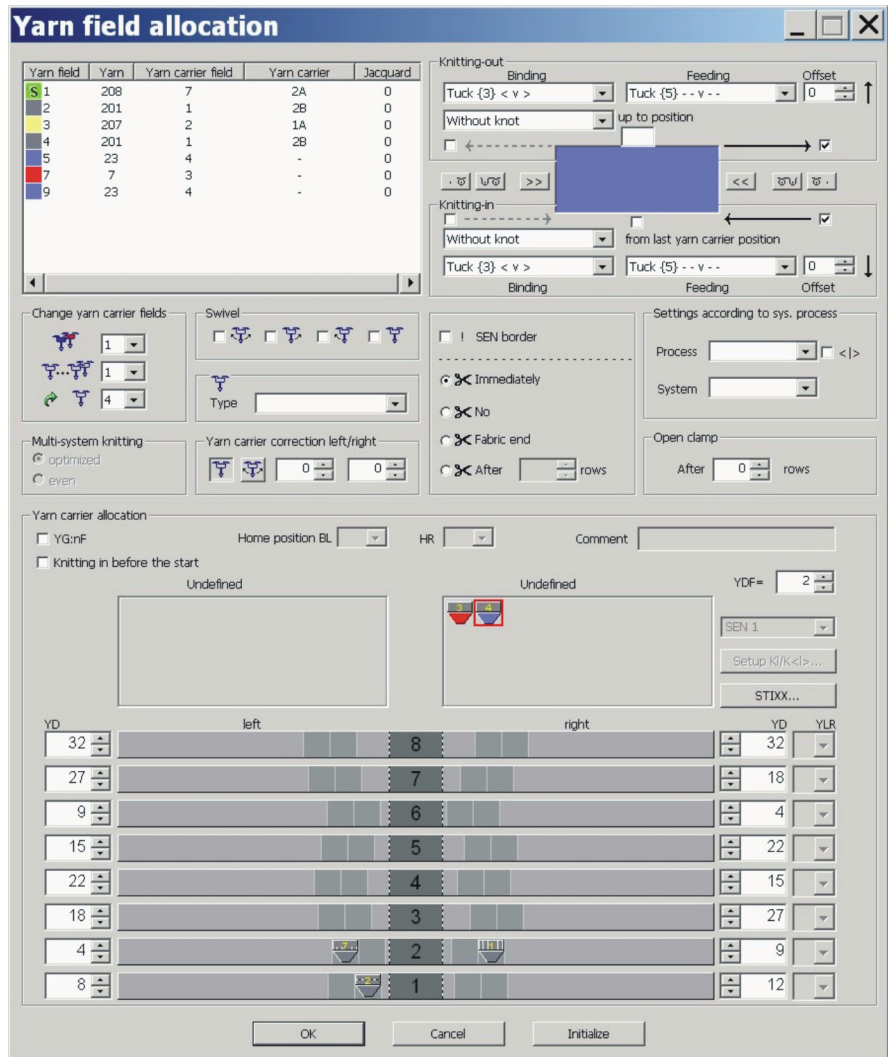
1. Generate a new pattern in the "Fabric view".
2. Select the desired yarn color from the table and draw-in a colored stripe with the drawing tools  

- or -

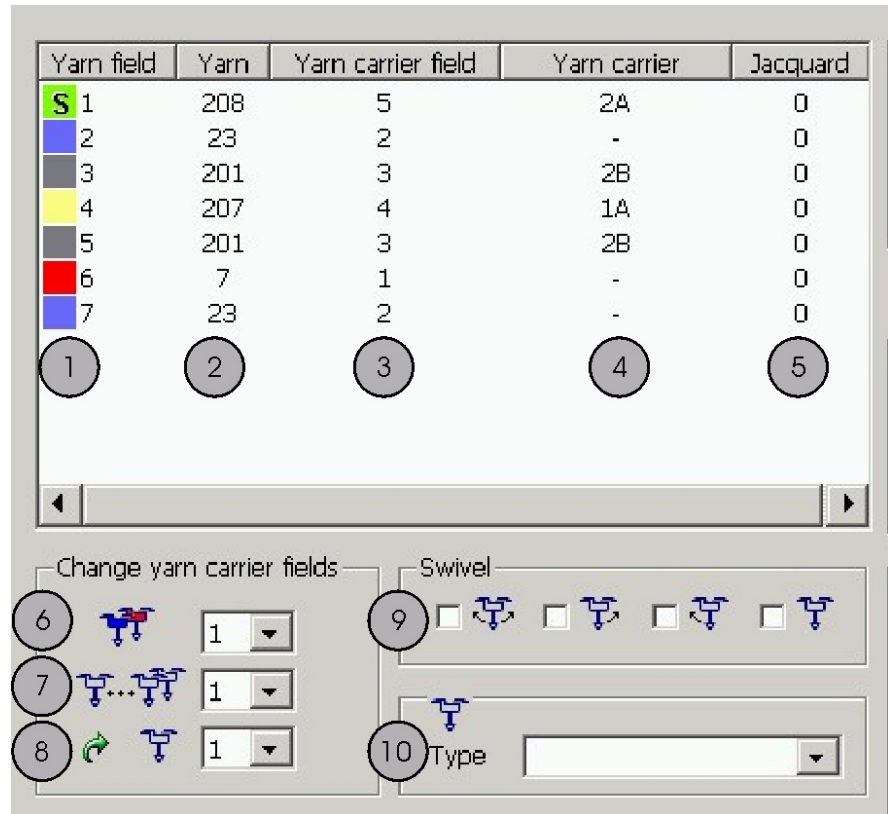
- Select yarn color and draw-in via the row bar for the pattern rows.

II. Call up the "Yarn field allocation" dialog box:

→ Call up the "Yarn field allocation" dialog box with the  button.




II. Functions in the "Yarn field allocation" dialog box:




Selection display in the Yarn Field Allocation


	Meaning
11	List of the yarn fields
2	List of the yarn color numbers
3	List of the yarn carrier field numbers
4	List of the yarn carrier names
5	List of the jacquards in use
6	Number of yarn carriers within a yarn field (e.g. plush)
7	Number of yarn carriers of a yarn field
8	Change yarn carriers (fields)
9	Swivel the intarsia yarn carrier
10	Specify yarn carrier type

III. Use of more than one yarn carrier per yarn field:

1. Change the number of yarn carriers per color field in the  selection list.
Example: In the selection list, adjust the number 2 in order to use two yarn carriers per yarn field.
2. Confirm setting with "OK".

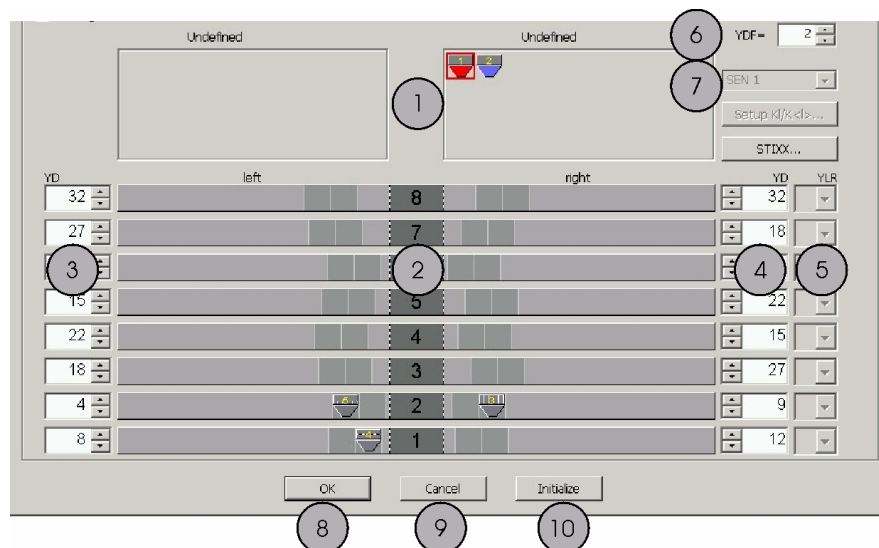
IV. Allocate an other or additional use to yarn carriers:

1. Allocate a yarn carrier of the motif to an other or to a new yarn carrier field via the  selection list.
Example: Use a yarn carrier of the waist also in the motif.

Selection list	Function
	
n any desired number	Corresponds to the yarn carrier field numbering
New	A new yarn carrier field will be created
n (rib thread)	Yarn carrier field of the waist yarn carrier

2. Select the yarn carrier.
3. Select the desired waist yarn carrier (1 or 2) in the selection list.
4. Confirm setting with "OK".

V. arrangement and allocation of yarn carriers:



	Meaning
1	Yarn carriers in use without allocation to a rail
2	Rail allocation of yarn carriers of the left and right fabric edge
3	Distance of the yarn carrier from the left fabric edge
4	Distance of the yarn carrier from the right fabric edge
5	Interchange of the yarn carriers of the left and right carriage (tandem)
6	Additional yarn carrier distance for fully fashion knitting
7	Home position of yarn carrier in the SEN area
8	Confirm settings and close the window
9	Cancel settings
10	Restore default setting

1. Let the technical editing allocate automatically the yarn carriers to the yarn carrier rails.

- or -

➔ Allocate manually the yarn carriers to the yarn carrier rails.

2. Make further settings.
e.g.: YD, YDF, SEN.

3. Confirm setting with "OK".

VI. Complete the pattern:

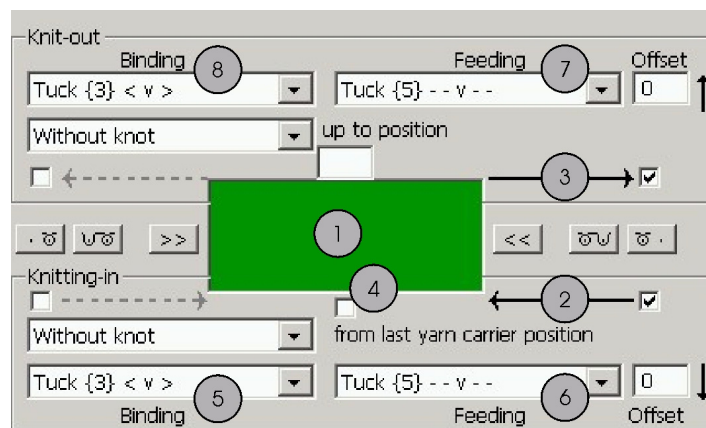
1. Start technical editing.
Select the "Automatic technical editing" or "Step wise technical editing" via the "Knitting Technique" menu.
2. The "Generate Sintral?" prompt appears after the technical editing.
Confirm with "OK".
3. Conduct Sintral Check with "Sintral"/"Sintral Check" menu.

1.8 Possibilities in the Yarn field allocation dialog box

Yarn fields and yarn carrier fields are automatically calculated when opening the "Yarn field allocation" dialog box. Existing settings can be influenced via the "Yarn field allocation" dialog box.

I. Knitting-in/Knitting-out of yarn carriers:

1. Open the "Yarn field allocation" dialog box with the  button.



Knit-in/knit-out

		Function
1		Color of the selected yarn field
2		Direction of knitting-in
3		Direction of the knitting-out
4		Knitting-in of the yarn carrier from its last position
5 / 6		<ol style="list-style-type: none"> 1 Binding when knitting-in 2 Feeding: Knitting mode for knitting-in row. You can allocate further modules by drag & drop directly.
7 / 8		<ol style="list-style-type: none"> 1 Binding when knitting-out 2 Feeding: Knitting mode for knitting-out row You can allocate further modules by drag & drop directly.


You can make corrections of the knitting in/out direction of yarn carriers if necessary.

2. Select the yarn field in the yarn field view.
 - You can identify a selected yarn field by a circulatory frame and the hatch lines.
 - All yarn fields marked by diagonal hatch lines form a common yarn carrier field.
3. Specify the direction of knitting-in (2) and -out (3) in the "Yarn field allocation" dialog box.

- or -
→ Activate the "from last yarn carrier position" checkbox.

II. Specify number of yarn carriers:

As default, only one yarn carrier is allocated to a yarn field. In the yarn field allocation, several yarn carriers can be allocated to a yarn field.

1. Select a yarn field for which the number of yarn carriers is to be changed in the Yarn Field View.
2. Specify the number of yarn carriers via the selection list under "Change yarn carrier fields"  in the "Yarn field allocation" dialog box. This procedure can be carried out for additional yarn fields.

III. Allocating the same yarn carriers to several yarn fields:

Several yarn fields can be used with the same yarn carrier or a number of yarn carriers.

1. In the yarn field view, select a color field which has a modified number of yarn carriers.
2. Call up the context menu in the yarn field view and select "Apply yarn carrier".
A pipette is displayed at the cursor.
3. Click the selected field with the cursor and add the yarn carrier allocation.
A yarn carrier is displayed at the cursor.
4. Click the new color field, in which the allocation is to be applied, with the cursor.

IV. Generate new yarn field:

If a different number of yarn carriers is to be used in a yarn field, a new yarn field is to be generated within this yarn field.

1. Select the yarn field to be divided.
2. In the selected yarn field, specify the rows which are to form a new yarn field via the control column.
3. Call up the context menu in the yarn field view and select "New Yarn Field".
4. Apply changes in the new yarn field:

- Example: Change number of yarn carriers via 

V. Apply yarn field:

Contiguous yarn fields with the same properties can be grouped together via "Apply yarn field".

1. Generate a new yarn field in the yarn field view.
2. Select the yarn field from which the properties are to be applied.
3. Call up the context menu in the yarn field view and select "Apply yarn field".
A pipette is displayed at the cursor.
4. Click the selected field with the cursor and add the properties.
A yarn bobbin is displayed at the cursor.
5. Click a new yarn field with the cursor. The settings are applied.

VI. Insert a new yarn carrier:

Different yarn fields allocated to the same yarn carrier field are to be worked with different yarn carriers.

1. Select the yarn field for which a new yarn carrier is to be used.
2. Call up "New Yarn Carrier" in the context menu of the yarn field view.
-> A new yarn carrier field with the accompanying yarn carrier is generated.

VII. Multiple selection:

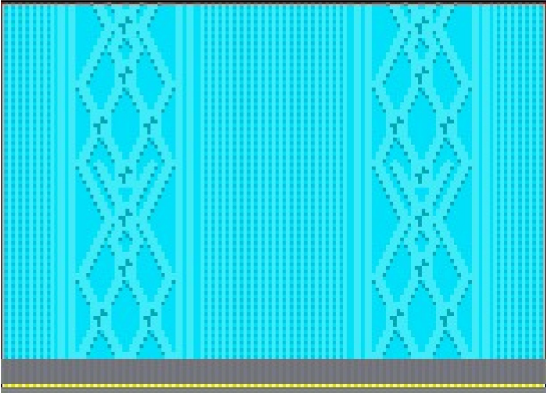
Several yarn fields can be selected in the yarn field view and in the yarn field list of the yarn field allocation. In this way, the same allocation can be made to several yarn fields.

1. Select a yarn field in the yarn field view or yarn field list.
2. Select additional yarn fields, which are to receive the same allocation, with the "Ctrl" key pressed.
3. Allocate the desired setting to the selected yarn fields in the "Yarn field allocation" dialog box.
For example: Activating / deactivating intarsia binding, etc.


VIII. Key functions:

Keys	Function
"Undo"	Undo changes
"ESC"	Cancel function
"Initialize"	Display yarn fields in their original state
"Cancel"	Cancel procedure and close dialog box
"OK"	Apply changes and close dialog box

1.9 Different stitch lengths - NPJ


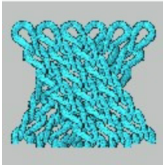
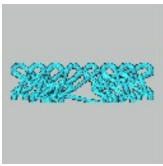
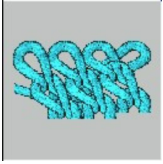
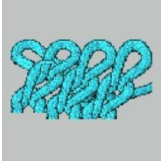
Pattern data	Pattern picture
File: Rapporte.mdv Pattern width: 150 Pattern rows: 100	
Machine type	CMS 530
Gauge	8
Start	1X1
Basic pattern	Front stitch
Knitting technique	Structure with aran and 1X1-half cardigan
Pattern description:	Structure pattern with 1X1-half cardigan. Different structures with different stitch lengths within the stitch rows.

I. Generate pattern:

1. Generate new pattern.
2. Draw the motif with different drawing tools.

3. Select the knitting cycle modules from the module bar or the module explorer.
4. Generate motif with structure.

II. Use modules from the module bar:

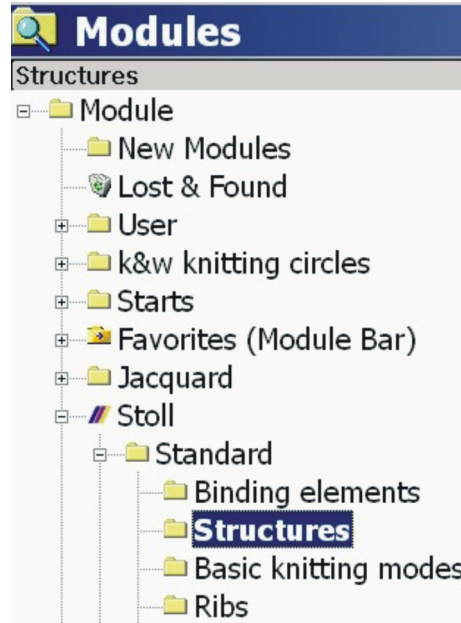
In the module bar one can switch to different module groups via the selection list

Module group	Module	Designation
"Binding elements"		Loop rear
"Aran"		Aran 3x1X<
		Aran 3x1><L
		Aran 3x1<L
		Aran 3x1>L

III. Use the modules from the module explorer.

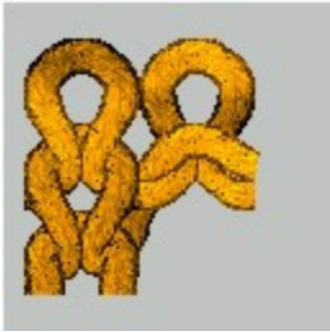
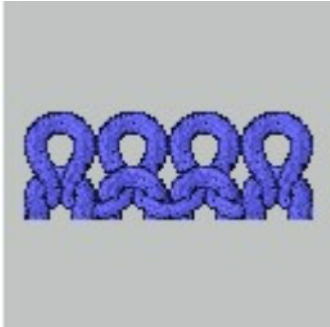
More modules are saved in the module explorer.

- Open module explorer.
Via module "Modul" / "Module explorer".



Module Explorer

Used module in the motif.

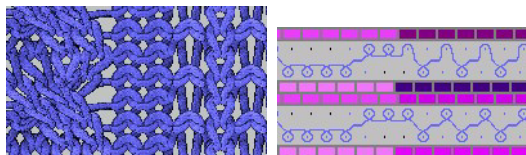
Module group	Module	Designation
"Structures"		1X1 half cardigan
"Ribs"		2x2 RL rib

IV. Change stitch length:

In case of different knitting types in a pattern row, different sttich lengths are required.

The Stoll Standard modules in the module explorer are allocated to different stitch lengths.

Thus during usage of this module no separate stitch length can be entered.



Different knitting types, different stitch lengths.

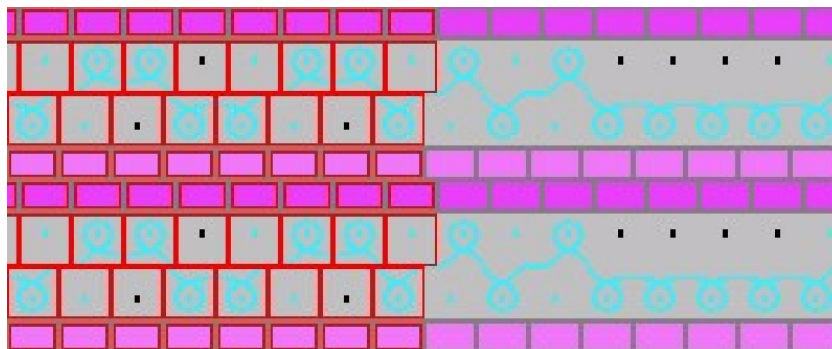
V. Use different stitch lengths within stitch rows (PTS):


1. Select pattern area for using different stitch lengths within a pattern row with the same knitting mode.







With   or  .

- or -

- Select via the column selection. (Pay attention to the start).

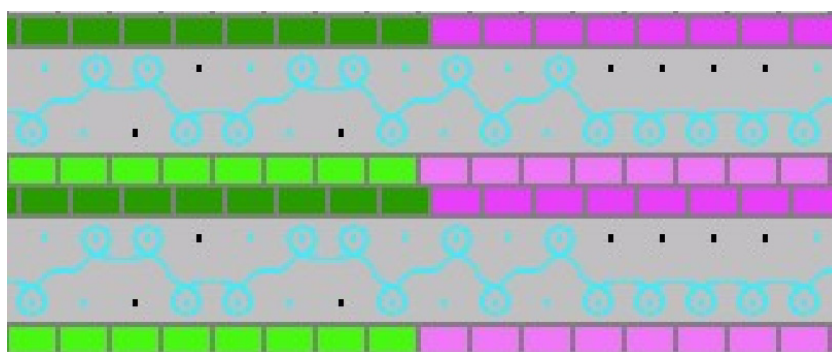
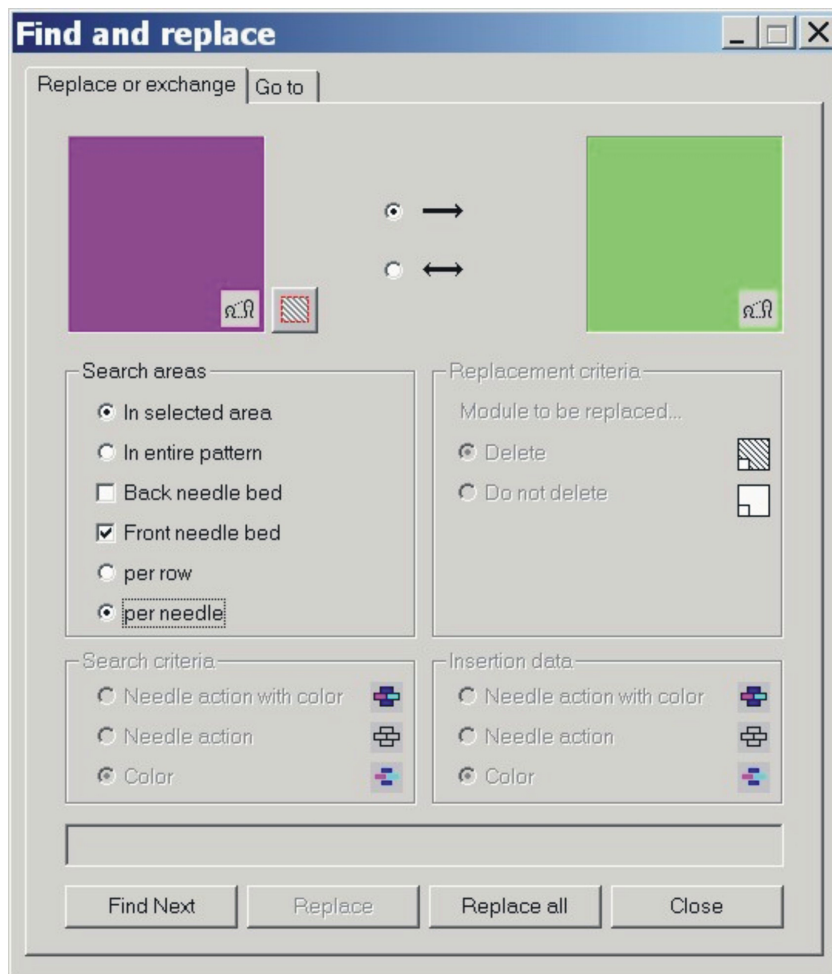



2. Allocate another (or a new) stitch length from the stitch length table.
Possibilities:
 - Enter a new value in the stitch length table and define the tension.
 - In the stitch length table change an existing entry not being used and take it over in the pattern.
3. Activate stitch length  in the symbol bar.
4. Call up the "Stitch Length..." menu via the "Knitting technique" menu bar.

Used / Favorites		Default	k&w								
No		NP	PTS	NP E8 (8)	Description [English]	Grp	F	U	M	S	G
1		1	=	9.0	Net	-	<input type="checkbox"/>	X			X
2		2	=	10.0	Tubular Net	-	<input type="checkbox"/>	X			X
4		3	=	10.5	2x1/2x2-Cycle	-	<input type="checkbox"/>	X			X
9		4	=	11.5	Transition	-	<input type="checkbox"/>	X			X
48		5	=	12.5	Intarsia Col. 1 front	-	<input type="checkbox"/>	X	X		X
49		6	=	12.5	Intarsia Col. 1 back	-	<input type="checkbox"/>	X	X		X
33		7	=	12.5	Color 2 front	-	<input type="checkbox"/>	X	X		X
38		8	=	12.5	Color 2 back	-	<input type="checkbox"/>	X	X		X
43		9	=	13.0	Intarsia NPJ Col. 2 front	-	<input type="checkbox"/>	X	X		X
44		10	=	13.0	Intarsia NPJ Col. 2 back	-	<input type="checkbox"/>	X	X		X
70		11	=	12.5	safety rows	-	<input type="checkbox"/>	X	X		X
68		12	=	11.5	Default front	-	<input type="checkbox"/>	X	X		X
23		20	=	9.0	Start1	-	<input type="checkbox"/>	X			X
24		21	=	10.0	Start2	-	<input type="checkbox"/>	X			X
25		22	=	11.0	Start3	-	<input type="checkbox"/>	X			X
27		24	=	12.0	Start5	-	<input type="checkbox"/>	X			X
29		25	=	17.0	Comb Thread	-	<input type="checkbox"/>	X	X		X

5. Exchange the stitch length with the drawing tool"Find and Replace"





6. Delete the selection with .
7. Open configuration
Via menu "Knitting Technique" / "Configuration".
8. Activate the "Different stitch lengths per technical row" checkbox in the "Additional settingsMore settings" tab under "Variable stitch lengths".
9. Confirm setting with "Apply" or "OK".
10. Start the technical editing and generate Sintral.
11. Conduct Sintral Check.

VI. Set behavior of flexible stitch (PTS):

1. Open stitch length table
Call up the "Stitch Length..." menu via the "Knitting technique" menu bar.

- or -

→ Via the control columns in the technical view.

2. In the column PTS call up the selection list by clicking.



3. Make setting.

Setting	Presentation	Meaning
"="		Change of tension in both areas (A / Y)
"!" on the area Y		Change of tension in area A
"!" on the area A		Change of tension in area Y

Value table for modifying the stitch tensions

Default machine speed in area of stitch tension change: MSEC=1.0

With the Sintral command MSECNPJ, the machine speed can be specified as desired in the area of the stitch tension change.

→ Enter the Sintral command MSECNPJ with the desired value via Sintral functions.

MSECNPJ	1.0		0.9		0.8		0.7		0.6		0.5	
	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X
E 3	1,3	1,2	1,2	1,1	1	1	0,9	0,8	0,8	0,7	0,7	0,6
E 3,5	1,6	1,3	1,4	1,2	1,3	1	1,1	0,9	1	0,8	0,8	0,7
E 5 (2,5.2)	1,5	1,7	1,4	1,5	1,2	1,4	1	1,2	0,9	1	0,8	0,9
E 7 (3,5.2)	2,1	2,1	1,9	1,9	1,7	1,7	1,5	1,5	1,3	1,3	1,1	1,1
E 8	2,4	2,3	2,2	2,1	1,9	1,8	1,7	1,6	1,4	1,4	1,2	1,2
E 10 (5.2)	3	2,8	2,7	2,5	2,4	2,2	2,1	2	1,8	1,7	1,5	1,4
E 12 (6.2)	3,6	3,3	3,2	3	2,9	2,6	2,5	2,3	2,2	2	1,8	1,7
E 14 (7.2)	4,2	3,7	3,8	3,3	3,4	3	2,9	2,6	2,5	2,2	2,1	1,9
E 16 (8.2)	4,8	4,2	4,3	3,8	3,8	3,4	3,4	2,9	2,9	2,5	2,4	2,1
E 18 (9.2)	5,4	4,6	4,9	4,1	4,3	3,7	3,8	3,2	3,2	2,8	2,7	2,3

Y = Number of needles for changing the stitch length by one value

X = Number of needles for the idle time between the stitch tension change



Change of stitch length must be carried out by the machine.

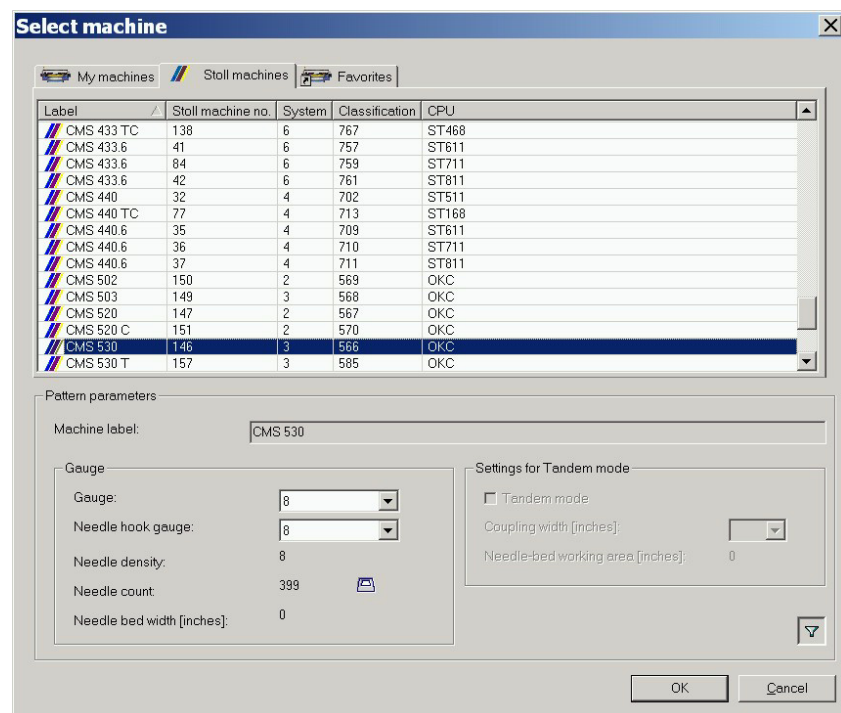
Take note of the motif distances and idle periods.

1.10 Change machine type - replace start

Pattern data	
File: any pattern file Machine type: CMS330TC Start: 2x1	
Technique	Change machine type. Replace existing start.

I. Change the machine type of an existing pattern:

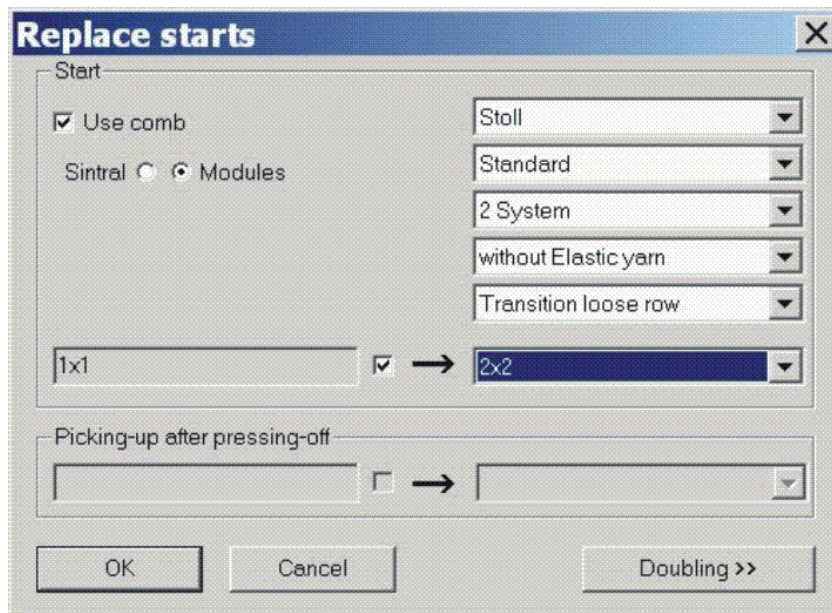
1. Open an existing pattern.
2. Change machine type.
Via the "Knitting technique" / "Change machine/gauge" menu.



3. Select the desired machine type.
4. Confirm with "OK".

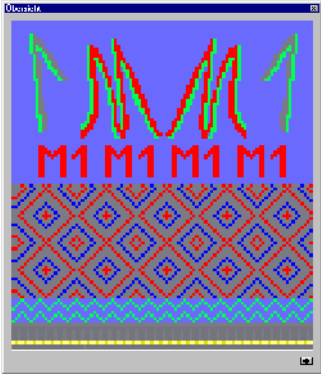
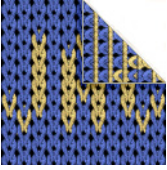
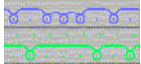
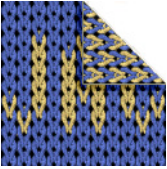
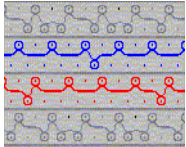
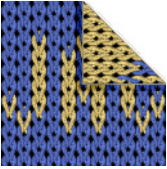
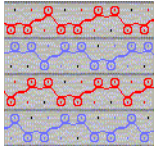
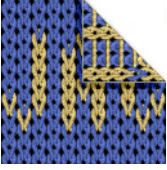
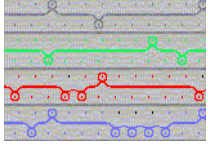
II. Remove an existing start and replace it with another one:

- 5. Replace start
Via the " Edit" / "Replace starts" menu



- 6. Select the desired start.
- 7. Confirm with "OK".
- 8. Carry out technical editing.
- 9. Generate a Sintral.
- 10. Sintral-Check.

1.11 Float jacquard with different backs

Pattern data	Pattern picture	
<p>File: FarbjacVerschRück.mdv Pattern width: 100 Pattern rows: 100</p>		
Machine type	CMS 530	
Gauge	8	
Start	Tube	
Basic pattern:	Back stitch with transfer	
<p>Knitting technique: Jacquard with different backs</p>	 <p>2 color FlottJac.</p>	 <p>Stitch line Flottjac.</p>
	 <p>Twill back</p>	 <p>Stitch line on the twill back</p>
	 <p>Net back</p>	 <p>Stitch line on the net back</p>
	 <p>Net back 1x2</p>	 <p>Stitch line on the net back 1X2</p>

Pattern data	Pattern picture	
Description of pattern:	Colored Jacquard, bordering with 2, 3 and 4 colors and different Jacquard bindings	Float Jacquard Net back Cross Tube Twill back

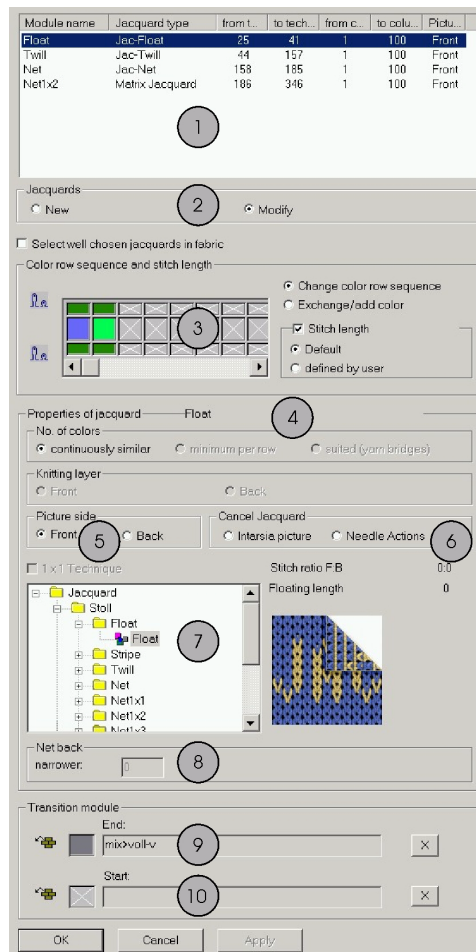
I. Generate pattern:

1. Generate a new pattern.
2. Draw different multi-color patterns.



Drawing tools toolbar

3. Select the first part of the motif.
4. Dialog "Jacquard" aufrufen.
Via the "Edit" / "Jacquards" menu.



	Meaning	
1	List of the inserted Jacquard generators	
2	New	Generate a new Jacquard
	Changing	Change an existing Jacquard
3	Change of the color sequence and stitch length	
4	continuously similar	All colors of the selection are knitted regularly according to the color sequence.
	minimum per row	Only the colors of the respective row are processed.
	suited (yarn bridges)	Insert of yarn bridges with Intarsia
5	Insert the Jacquard picture side in front or at the back.	
6	Remove a Jacquard Generator	
7	Selection of the Jacquard Generators	
8	Settings for the net back with Intarsia (yarn bridges)	
9	End module Jacquard transition	

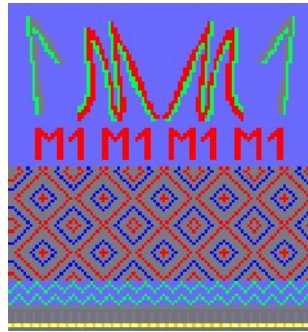
	Meaning
10	Start module Jacquard transition

5. Select a Jacquard Generator and insert it via "Apply".
6. Make a selection of further parts of the pattern and insert Jacquard Generators.

II. Complete the pattern:

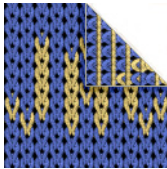
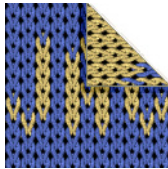
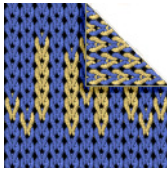
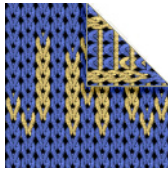
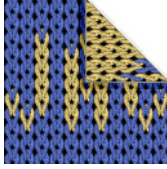
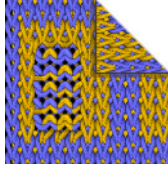
1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
-> The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
Via "Sintral" / "Sintral-Check..."

1.12 Changes in float jacquard

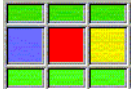

Pattern data	Pattern picture
File: FarbjacVerschRück.mdv Use existing pattern	

I. Change the back of a colored Jacquard pattern:

1. Change the rear side.

Upto now	Change
 <p>2 color FlottJac.</p>	 <p>Net back (cross tube)</p>
 <p>Twill back</p>	 <p>Net back 1X3</p>
 <p>Net back</p>	 <p>Jac. Net Relief</p>

2. Exchange color.
3. Exchange color sequence.


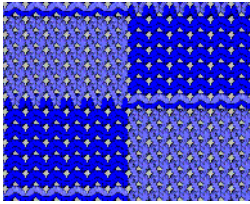
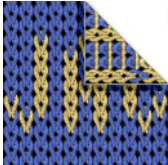

Upto now	Change
	

4. Change number of colors.
5. Exchange front/back picture side.
6. Use different stitch lengths.

II. Generate pattern:

1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
Via "Sintral" / "Sintral-Check..."


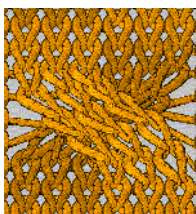
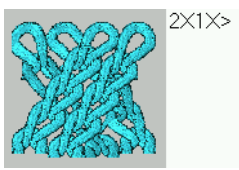
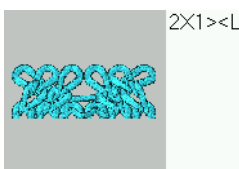
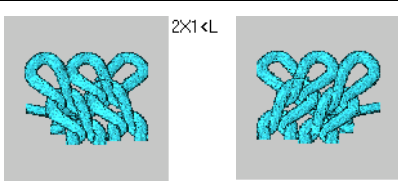
1.13 Structure with color jacquard

Pattern data	Pattern picture
File: Structure Jac.mdv Pattern width: 100 Pattern rows: 180	
Machine type	530
Gauge	8
Start	1X1
Basic pattern:	Front stitch with transfer
Knitting technique	 <p>Structured single jersey</p>
	 <p>Colored bordering with Jacquard Net 1X2</p>  <p>Stitch line Jacquard Net 1X2</p>
Description of pattern:	Structure pattern with cable, aran and with colored jacquard bordering

I. Generate structure pattern:

1. Select module from "Module bar" or "Module explorer" and generate motif.


Pattern elements Structure

Stitch ^ with transfer	
Cable 3x3	
Pattern elements aran	
Aran cross-over 2X1X>	
Aran completion 2X1><L	
Aran 2X1<L and aran 2X1>L	



The structure pattern elements can also be inserted from the module explorer.

The structure pattern elements are saved under:


 Stoll /"Pattern elements"/"MT Standard"/"MT -Aran"

The application of the tool Multi-Copy  can be helpful.

II. Generate bordering float jacquard:

2. Farbjacquard-Bordüre einzeichnen.
3. Generate Selections and insert Jacquard generator via "Editing" / "Jacquards".
4. Insert the desired transition module for "Net pick-up/Net end".



5. Change the net pick-up to the required color if needed.
6. Allocate the yarn carriers in the "Yarn field allocation" dialog box. Call it up with .
7. Change direction of knitting in if necessary.
8. Further Possibility:
 The "Over-racking", "Racking correction" and "Racking speed" can be influenced via [Technical row data \[s. p. 67\]](#), "Racking", "Adjustments >>".
 "Transfer surrounding", "2 sys. Transfer" and "Casting-off + Transfer" can be influenced via "Technical row data", "Areas", "Adjustments >>".

III. Complete the pattern:

1. Carry out technical editing.
 Via "Knitting Technique" / "Automatic Technical Editing...".
 -> The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
 Via "Sintral" / "Sintral-Check..."

1.14 Technical row data

Settings in the tabs of the "Technical Row Data" dialog box.

Tab	Setting	Command	Function
Yarn carrier	Parking Position/correction	HL	Stop position of the yarn carrier left
		HR	Stop position of the yarn carrier right
		Correction	Left / Right
	Action/path	Action	Activation of the yarn carrier actions
		Lay-in	Insert thread in the knitting area
		Swivel	Swivel intarsia yarn carrier
		Clamp/Cut	Clamp thread Clamp threads with x rows delay
		Open clamp	Open clamp Open clamp after x rows delay
		Path	Change of the yarn carrier traversing path (PAI)
		SEN border	The yarn carrier is stopped outside the SEN area.
Add	Spacer	Spacer for the yarn carrier setting	
Racking	Speed	VV VVV	Racking speed rear Racking speed at the front (TC 4)
	Overracking	V+/- VV+ VZL VZR	Over-racking at the rear Over-racking at the front (TC 4) Over-racking additional bed left (TC-R) Over-racking additional bed right (TC-R)
	Correction	VK VVK VZLK VZRK	Racking correction rear Racking correction at the front (TC 4) Racking correction additional bed left (TC-R) Racking correction additional bed right (TC-R)
MS / Print	PrintP	Apply only the changed knitting sequences	Only the modified knitting sequences will be transferred into the columns.
		Apply all knitting sequences	All the modified knitting sequences will be transferred into the columns. The technical editing edits the information.
Knitting sequence	Rules for applying the knitting sequences	Apply only the changed knitting sequences	Only the modified knitting sequences will be transferred into the columns.
		Apply all knitting sequences	All the modified knitting sequences will be transferred into the columns. The technical editing edits the information.
Function calls	Function	Addl. commands	Calling up of a Sintral function
		Function	Name of function
		Repetitions	Number of repetitions for the function

Make or change settings:

1. Make settings.
2. Apply the settings with "Apply" or "OK".
3. Start the automatic technical editing.
4. Start the Sintral-Check.

The specifications are carried during technical editing.
The result is displayed in the technical view.



Define the other parameters in the [control columns](#) *[s. p. 17]*.

- [Display control columns](#) *[s. S. 17]*

1.15 Pattern parts, module and Co.



Modules build the basis of M1. A great number of modules is available in the module database. You can modify modules or generate modules in an easy way.

The different possibilities to generate pattern parts/modules:

- Generate pattern element
Copy a knitting sequence from the technical, icon or the fabric view and use it again.
- Generate modules from Selection
Copy a knitting sequence from the technical, icon or the fabric view and save it as a module.
You can save modules locally or into the module database.
A locally saved module is available only for the actual pattern.
A module of the module database is available for further pattern.
- Generating module in module editor
Generate a knitting cycle with other modules or needle actions in the module editor.
Save the module to the module database.
A module of the module database is available for further pattern.

I. Generating a temporary pattern element:

A temporary pattern element is generated out of a selection which is copied or cut.

1. Select Drawing tools.
2. Select a part of the pattern in the technical, symbol or in the fabric view.
3. Selection copy with  or cut with .

The temporary pattern element is on the cursor and can be drawn.



A temporary pattern element is not displayed in the module bar and is not saved in the module data bank.


II. Generate a pattern element:



A pattern element is generated from a selected pattern area.

Pattern elements have the symbol  in the lower right-hand corner.

1. Select pattern area.
2. Via the "Module" / "Generate pattern element from selection" menu.

The pattern element is stored as "Local pattern element " with the indicationL and  in the module bar.

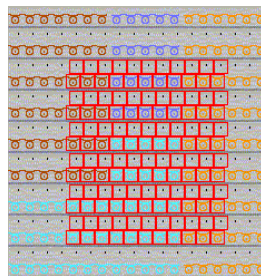
III. Save pattern element in data bank:

1. Select the local pattern element in the Module bar.
2. Select "Save to database" via the context menu (right mouse button).

The pattern element is stored in the module group "User/<user name>/ Pattern element" in the module explorer. The L symbol is no longer present.

IV. Generate a new module from Selection:

1. Select a part of the pattern in the technical, symbol or in the fabric view.



2. Call up menu "Module" / "Generate Module from Selection".

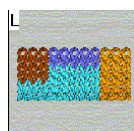
- or -

- Click on symbol  in the default bar.

The "Module editor" is opened with the module.

3. Close the module editor with .

The picture of the module appears in the "Module bar" under the entry "Pattern name" with the symbolL.



V. Save module in the data bank:

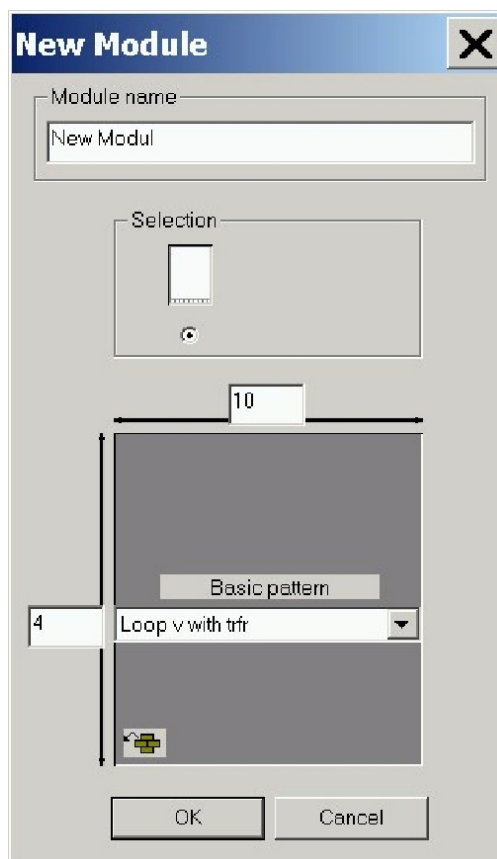
1. Select the local module in the Module bar.
2. Select "Save to database" via the context menu (right mouse button).

The module is saved to the "New Modules" module group of the module explorer.

The L symbol is no longer present. The module is available for further pattern.

VI. Generate a new module in the module editor:

1. Call up the "New module" dialog box.
Via "Module" / "New Module".



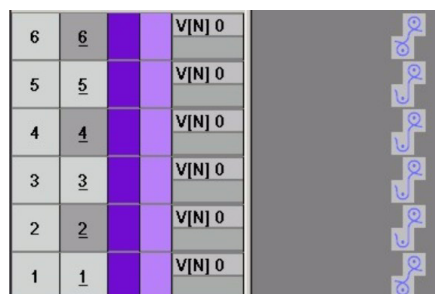
2. Enter a name for the module under "Module Name".

- or -

- ➔ Enter the module name later in the "Module Properties" dialog box.
3. Specify the size of the module, the width and the height.

4. Specify the basic pattern under knitting mode:
 - "Stitch ^ with transfer"
 - "Stitch with transfer"
 - "Stitch-Stitch"
 - "Not"
5. Confirm the entry with "OK".
The "Properties of:" will be opened.

6. Default settings are already given in the "Description", "Cycles", "Gauge" and "Technique" tabs.
Confirm them with "OK".
7. Draw the knitting cycle of the module.



8. Use existing modules or binding elements to draw the knitting cycle.



Binding elements

9. Specify the module parameters.



Specify the stitch lengths for the module if you have drawn with binding elements only.

If you have used modules for drawing, then the stitch lengths of the used module are applied automatically.

10. Specify the stitch length.

11. **Group pattern rows** [s. p. 75] if necessary.

12. Close the module editor with **✕**.

The module is saved to the "New Modules" module group of the module explorer.

VII. Delete the module and the module links:

1. Select a module in the module bar and call up the context menu.

2. Call up the "Delete module" function

- or -

➔ Select the module in the Module Explorer and call up "Delete module" in the context menu.

The module is deleted from the module group following a safety prompt.



The module that has only one link to the database will finally be deleted from the database and the module bar.
For modules with many links within the database, only the selected link will be deleted.

VIII. Overview Module and pattern element variants

	Local pattern element	Module from selection	Generate new module
Generation	Selection copy from the menu: "Module" / "Generate Pattern Element from Selection"	Selection copy	Generate a new module in the module editor
Marking	L symbol and	L symbol	
Save	Module Bar	Module Bar	Database / New module
Transfer in the database	"Save in Database"	"Save in Database"	Automatically
Preferred application	As drawing aid in the present pattern As saved pattern element: For addition to the database Is available for all patterns	As drawing aid in the present pattern As saved module: For addition to the database Is available for all patterns	As saved module: For addition to the database Is available for all patterns
Design	The modular structure of the selection remains intact	All individual elements of the selection are deleted and are compiled in one module.	A new module is created from the needle actions and module "Binding element"
Behavior during application of a shape	The truncated pattern elements remain intact	Truncated modules are deleted	Truncated modules are deleted
Specifications during the module generation	Selection possibility for take-over of any empty rows	Selection possibility for take-over of any empty rows	Generally no empty rows are present
Specifications during insertion	Empty rows are deleted during insertion or the technical editing	Empty rows are taken care of during insertion and are deleted during the technical editing	Empty rows are taken care of during insertion and are deleted during the technical editing

1.16 Pattern rows in the module

When multiple technical rows build a pattern row, then these have to be grouped.


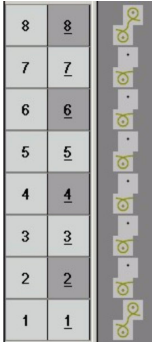

This means:

Knitting and transfer rows are grouped to one pattern row or multiple knitting rows build a pattern row and are grouped.

I. Group pattern rows:

1. Select the pattern rows that have to be grouped in the module editor.
2. Call up the "Edit" / "Group selection block to a pattern row" menu.

The selected pattern rows are compiled in a pattern row.

Examples for grouped pattern rows	Module	Grouping / Effect
	Cable 2x2<	Knitting and transfer rows are grouped Effect: At the insert the transferring rows are inserted additionally.
	Wave	Ungrouped knitting rows Effect: 8 existing pattern rows are overwritten by the insert.
	Wave	Knitting rows grouped Effect: 1 existing pattern rows is overwritten and 7 additional rows are inserted by the insert.

II. Delete grouped pattern rows.

1. Select rows in the module editor.
2. Call up the "Edit" / "Delete pattern rows" menu.

The grouping of pattern rows is deleted.

1.17 Insert pattern elements or modules in the motif



I. Insert a pattern element:

1. Select a pattern element in the "Module bar" from the module group "Pattern Name" or "Pattern Element".

- or -

- Select a pattern element in the module explorer in the module group "User/<user name>/Pattern Element".
2. Activate the icon from the "drawing tools" toolbar.
3. Insert the pattern element in the technical/ fabric or symbol view.



With the function "Insert"  or "Insert Mirrored"  the selected pattern element is inserted.


II. Position a module on a certain technical row in the pattern.

The technical row presentation  must be activated.

1. Select a drawing tool.
2. Select a module in the module bar or in the module explorer.
3. Position the module on the desired technical row.

III. Insert module directly:

A module should be set on the grouped technical rows of the pattern.

1. Switch over to the "Insert Modules without Adjustment" mode in the Pattern presentations toolbar with .
The fabric view opens automatically in the technical presentation.
2. Select module.
3. Go to the position in the fabric view at which you want to place the module.


If the echo color of the module glows yellow then the module can be placed.

The module is inserted without the row adjustment. Thereby the cursor position corresponds to the start position of the module.



If the echo color of the module glows red, shows presence of a conflict. In case of a conflict the module can be set only when the key "^" or "Backspace" is pressed simultaneously. The module echo then appears yellow.



Reasons for conflicts	Behavior
When during insertion of a module a knitting row is set on a transfer row.	If the module is inserted anyway, transfer actions in this row are removed from the pattern.
When during insertion of a module a transfer is set on a knitting row.	If the module is inserted anyway, knitting in this row is removed from the pattern.
When during insertion the module contains another racking rather than the pattern.	If the module is inserted anyway, the racking of the module is applied in the pattern.

Should a switch over be made from the symbol bar in the fabric view then the mode  should be switched off.

IV. Insert module without stitch length:

With this function a module will be placed in the fabric or the technical view in the pattern.

The stitch length of the pattern is to be applied to the inserted module and not the stitch length specified in the module.


1. Deactivate the mode "Insert Modules without Stitch Length" in the "Module data" symbol view with the symbol .
2. Activate row presentation in the technical view with .
3. Select a drawing tool.
4. Select a module or pattern element.
5. Look for position in the pattern and insert the module or pattern element.

The first stitch row of the module is placed independent of the color on a particular technical row in the pattern.

The stitch length of the used module is not inserted in the pattern.

V. Apply data during insertion of modules or pattern elements:

If a module or pattern elements is inserted in the motif it can be ascertained which data should be taken over.


1. Activate in the symbol view "Module data" with the symbol  the "Data transfer in the control column".
2. Switch on data that have to be transferred in the selection list "Transfer of".
 - Knock-over
 - Carriage speed
 - Fabric take-down
 - System
 - Carriage direction
 - Comb action
 - Row cycles
 - Column cycles
 - Presser foot
 - Reclaiming

Click on the "OK" button.










VI. Replace existing modules in the pattern:



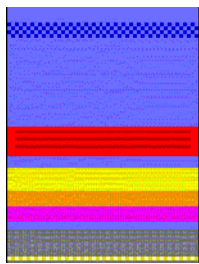
Modules can be replaced in a selected area or in the entire pattern.

1. Open "Edit"/"Find and Replace" menu.
- or -
➔ Click on the "Find and Replace" icon  in the drawing tool bar.
-> The "Find and replace" dialog box appears
2. Insert the module to be replaced and the replacing module in the fields of the dialog box by clicking on them.
3. Click on the "OK" button.
-> The modules in the left column are replaced by modules in the right column.

VII. Settings in the "Find and Replace" dialog box :

Section	Element	Meaning
Replace or exchange		Left display field
	→	Option field
	↔	Option field
		Right display field
		Button
Search area		In the selected area
		In Entire Pattern
		Needle bed rear
		Needle bed front
		per row
		per needle
Replacement criteria		Delete replaceable module
		Do not delete the module to be replaced
Search criteria		Needle action with color
		Needle action
		Color
Insertion data		Needle action with color
		Needle action
		Color
Go to		The selected position (pattern, technical row and/or column) will be selected.

1.18 Cycles for length control

Pattern data	Pattern picture
File: Rapporte.mdv Pattern width: 50 Pattern rows: 50	
Machine type	CMS 530
Gauge	8
Start	1X1
Basic pattern:	Front stitch with transfer
Knitting technique	Structure
Description of pattern:	Structure pattern with colored stripes and cycles for length control.

I. Generate cycles.

1. Select the rows that have to build a cycle.

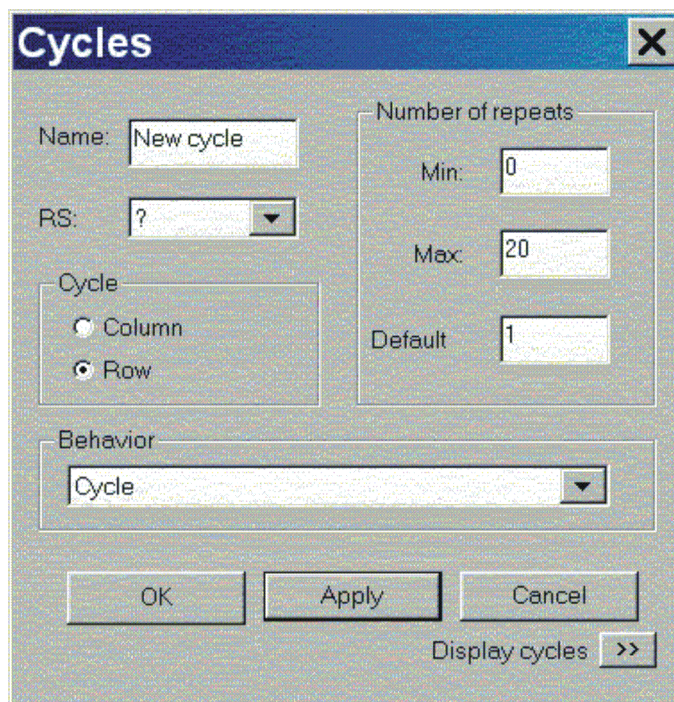


The height of a cycle has to contain a repeatable rhythm of knitting.

2. Call up the "Cycles" dialog box with the "Strg+R" key combination.

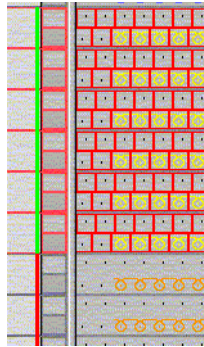
- or -


- Call up the "Knitting Technique" / "Cycle..." menu of the technical view.



Section	Element	Function	Default setting
	Name	Input possibilities for designation	New cycle
	RS	Used cycle switch	?
Cycle	Column:	Width cycle	
	Row:	Length cycle	active row
Number of repeats	Min:	Minimum repetition	0
	Max:	Maximum repetition	20
	Standard	Repetition factor	1
Behavior	Selection list	Type of Cycle	Cycle

3. Make settings in the "Cycles" dialog box.
4. The "Row" option is automatically preset under "Cycle". Keep this setting.
5. Under "Behavior" Cycle is the default setting. Select [Switchable cycle \[s. p. 84\]](#).
6. Enter settings for "Min", "Max" and "Default".
7. Select settings for "RS" (cycle switch).
8. Enter a name.
9. Enter the cycle mark in the technical and fabric view by clicking on "Apply".



10. Open the "Cycle table" by ">>".
All cycles of the pattern are listed.
11. Close the table with "Exit".
12. Cancel selections with .
13. Start the automatic technical editing and generate Sintral.
14. Call up Sintral Check.

II. Option: Nested cycles

A nested cycle contains further cycles.

→ Select further rows within a cycle and allocate them to a cycle.



1.19 Length adjustment with switchable cycles

A pattern can contain different types of cycles for adjusting the length.

- In the cycle "Dialog" Cycle is set under Behavior for the pattern repeat
- In the cycle "Dialog" Switchable cycle is set under Behavior for the length adjustment.

I. Example for cycles with pattern repetition and length control:

Following is valid in the example:

- RS2 = Cycle for pattern repetition.
- RS3 = specifies the position, where the pattern will end (length adjustment) are used.



Cycle counter	Setting	Function
RS2	n	RS2 will be knitted n times.
RS3	0	Length S, M, L, XL will be not knitted.
RS3	1	Length S will be knitted.
RS3	2	Length S and M will be knitted.
RS3	3	Length S, M, and L will be knitted.
RS3	4	Length S, M, L, and XL will be knitted.
RS3	5 or more	Length S, M, L, XL will be not knitted.

II. Split pattern rows for switchable cycles:



The height of a switchable cycle has to contain a repeatable rhythm of knitting.

1. Select the pattern rows.
2. Assign to all switchable cycles the same "RS". (Example: RS3).
3. Insert the Min.- and Max.- values.
4. The length of the fabric determined via RS3 by the settings RS3=0/
RS3=4.

RS	Name	Type	Min.	Max.	Standard	Behavior
RS2	Pattern cycle	Row	1	20	5	Motif repetition cycle
RS3	S (Length)	Row	1	4	-1	1. Length control- cycle
RS3	M (Length)	Row	2	4	-1	2. Length control- cycle
RS3	L (Length)	Row	3	4	-1	3. Length control- cycle
RS3	XL (Length)	Row	4	4	-1	4. Length control- cycle

1.20 Length adjustment with multiple switchable cycles

With a multiple switchable cycle a motif can be regulated vertically through a cycle switch. Within a selected area many multiple switchable cycles are built automatically.

I. Generate cycle for length control:

1. In the technical or fabric view select the pattern rows which are to be used as a cycle for adjusting the length, via the control column.



The height of a multiple switchable cycle has to contain a repeatable rhythm of knitting.

2. Call up the "Cycles" dialog box and carry out the corresponding settings.
3. Under "Name" name the cycle.
4. Under "RS" allocate a cycle switch or counter.
5. Under behavior set Multiple switchable cycle.
6. Specify the number of pattern rows that build the switchable cycle. Under "Number of repetitions" by "Min". No entry is necessary by "Max".

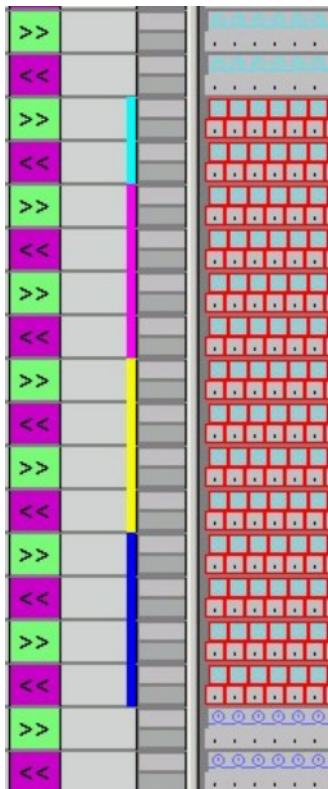
Example:

In the pattern 14 rows are selected.

If number 4 is entered under "Min", the pattern rows which have been selected before, are divided into areas with 4 rows. Thereby depending upon the selection the remaining part arises with less than 4 rows.



Select an even number of rows.




When using a compact machine, make sure that the function Yarn carrier in clamping position is not located within the cycle.

7. Confirm the settings with "Apply".
The inserted cycles are displayed in the control column of the technical view.
8. The display table is connected via display cycle ">>".
The inserted column cycles are listed.

		RS	Description
1		Gauge	Additional rows.E20
2		RS19	without Elastic yarn
3		RS19	with Elastic yarn
4		RS1	1x1 Cycle
5		RS2	Pattern cycle 1
6		RS3	Pattern cycle 2
7		RS4	multiple switchable cycle
8		RS4	multiple switchable cycle
9		RS4	multiple switchable cycle
10		RS4	multiple switchable cycle



The indications in the cycle table can be modified by clicking, if necessary. More functions can be called up in the context menu.

9. Close the dialog box "Cycles" with "OK".
10. Close the cycle table with  .
Changes are applied without prompt.

Via the setting of the cycle switch for length regulation the fabric length can be ascertained.

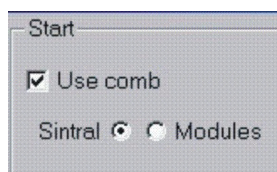
1.21 Regulation of the width with cycles

I. Define pattern cycles for different widths:

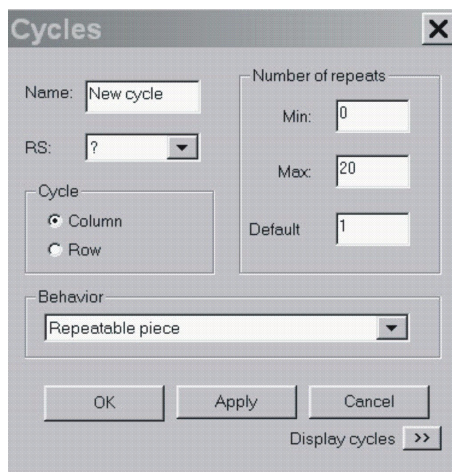
Different elements for the width control could be created to generate different sizes (S, M, L and XL).



If width cycles are used for machines with comb start, so choose with the setting "Use comb" the option "Sintral". Thereby the starting rows Casting-off and Comb thread will be inserted as a Sintral function.



1. Select column.
In the fabric and technical views the columns of the column bar which are used for the width regulation can be selected.
For doing this, set the cursor in the column bar and move it with the left mouse button pressed.
2. Open the "Cycles" dialog box with the "Knitting Technique"/"Cycles...".



3. Under "Name:" a name can be allocated to the column.
4. A cycle switch or a counter can be allocated under "RS".
5. The option Column is automatically preset under "Cycle".
6. Set the column type under behavior.
 - Repeatable piece
 - Middle piece
 - Connecting piece

7. Under "Number of repetitions", with "Min:." and "Max:." the use can be defined when the size has been specified.

8. Enter the factor for a repeatable piece at "Standard".

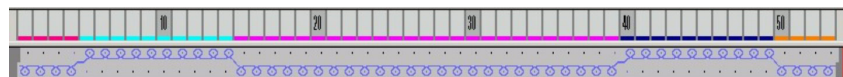
→ Settings in the "Cycles" dialog box:

Section:	Element:	Function:
	Name	Input possibilities for designation
	RS	Used cycle switch
Cycle		
	Column:	Width cycle
	Row:	Length cycle
Number of repeats		
	Min:	Use for the specified size
	Max:	Use for the specified size
	Standard	Repetition factor
Behavior		
Entry in the selection list	Repeatable piece	Pattern area with the possibility of repeats Multiple use with repetition factor
	Middle piece	Center of motif Will be used only once, e.g. for Fully Fashion V- neck.
	Connecting piece	Left / right fabric edge Each will be used only once, e.g. pattern edge or for Fully Fashion in the narrowing area of the sleeve.

9. Confirm the settings with "Apply".

The inserted cycles are displayed in the column bar of the technical and fabric view.

Call up the context menu in the column bar and activate "Cycles".



10. The display table is connected via display cycle ">>".

The inserted column cycles are listed.

11. The indications in the cycle table can be modified by clicking, if necessary.

A context menu can be called up in order to execute modifications in the cycle table.

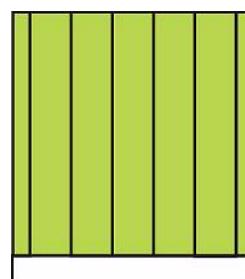


To make it easier to determine the cycle marks, the "Display" "Center of the needle bed" can be switched on in the column bar of the fabric or technical view.

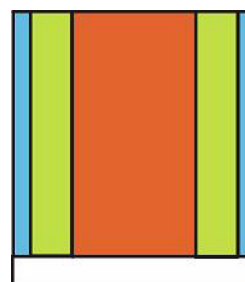
II. Different possibilities for width control:

Possible sequence of the parts

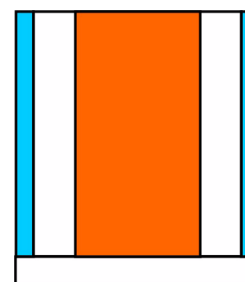
Only repeatable parts



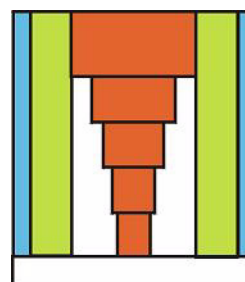
Connection piece / Repeating piece / Middle piece / Repeating piece / Connection piece






Connecting part / Central part / Connecting piece



Connection piece / Repeating piece / different Middle pieces / Repeating piece / Connection piece

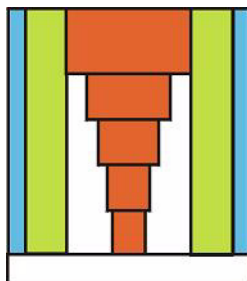



Possibilities	CMS with comb use (FF - Mode)	CMS without comb use (no FF - Mode)
Connection piece / Repeatable piece / Connection piece	Only possible in relation with a middle piece	Only possible in relation with a middle piece
Repeatable piece / Middle piece / Repeatable piece	possible	possible
Connection piece / Middle piece / Connection piece	possible	possible
Only middle pieces	possible	possible
Only connection pieces	Only possible in relation with a middle piece	Only possible in connection with central part
Connection piece / Repeatable piece / Middle piece / Connection piece	possible	possible
Connection piece / Repeatable piece / Middle piece / Repeatable piece	possible	possible

Color Presentation	Function	Possibilities for use
	Connecting piece	Without repetition factor
	Repeatable piece	With / without repetition factor
	Middle piece	With / without size correction switch


1. Define a connection part for the left and right edge.
Via the set up of the specification "Min:" / "Max:" it can be specified, for which size the connection pieces are used.
2. An repeatable piece, each for left and right side, will be defined for the width regulation.
Via the specification "Default" a repetition factor can be set.
3. A middle piece will be defined for the motif center, for which no repetition factor can be set.
Via the set up of the specification "Min:" / "Max:" it can be specified, for which size the middle piece is used.
Several middle pieces can be defined.

Example: Generating different knitting sizes




Generating connection piece:	Left Size 38-44	Right Size 38-44
Select the edge area		
Behavior:	 Connection piece	
Name:	Edge left	Edge right
RS:	16	16
Min:	38	38
Max:	44	44

Generate a repeatable piece for the left side:

Select the repeatable piece		
Behavior:	 Repeatable piece	
Name:	Width regulation left	
	Size 38 +40	Size 42 + 44
RS:	16	16
Min:	38	42
Max:	40	44
Default:	2 (place the repeatable piece 2 times)	3 (place the repeatable piece 3 times)

The right repeatable piece will be generated as the left one.

Generating middle piece:	Size 38	Size 40	Size 42	Size 44
Select the middle piece				
Behavior:	 Middle piece			
Name:	Middle piece			
RS:	16	16	16	16
Min:	38	40	42	44
Max:	38 (middle piece for size 38 will be generated)	40 (middle piece for size 40 will be generated)	42 (middle piece for size 42 will be generated)	44 (middle piece for size 44 will be generated)

Example for different center parts via cycle switch



RS	Name	Min:	Max:	Default:	Type:
RS16	Left edge	1 (size 38)	4 (size 44)	-2	Connecting piece
RS16	Size 38 / S	1 (size 38)	1 (size 38)	-1	Middle piece
RS16	Size 40 / M	2 (size 40)	2 (size 40)	-1	Middle piece
RS16	Size 42 / L	3 (size 42)	3 (size 42)	-1	Middle piece
RS16	Size 44 / XL	4 (size 44)	4 (size 44)	-1	Middle piece
RS16	Right edge	1 (size 38)	4 (size 44)	-2	Connecting piece



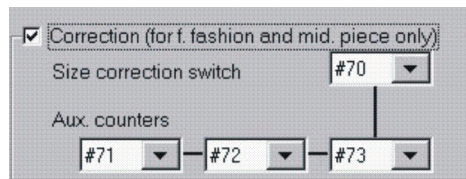
If there is no entry made in the field RS, so the setting from the dialog "Configuration" will be used.

III. Width regulation via size correction switch:

It is only possible to use a size correction cycle switch for regulating the width of a central panel if Fully-Fashion is knitted.

If the pattern should not be knitted as a Fully-Fashion pattern, a shape with a rectangular format, without narrowing or mask attributes, is to be used.

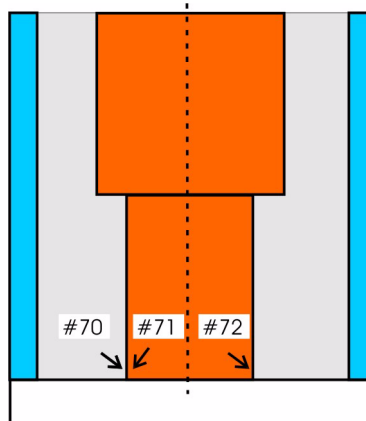
1. Generate width cycles with middle piece in the fabric or technical view.
2. A size correction switch can be specified and activated via "Knitting technique" / "Configuration" of the "Knitting Area" tab.



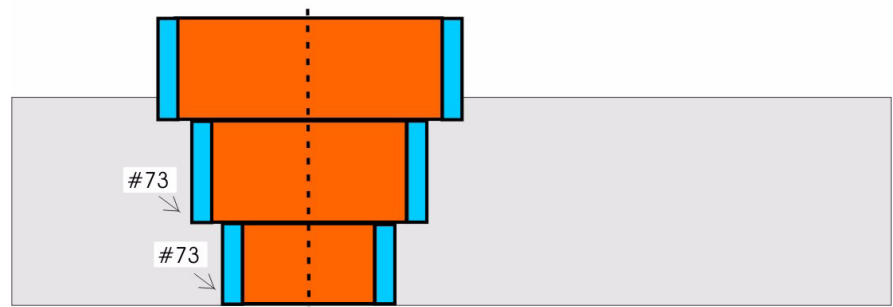
3. Activate the "Correction (for FF and center part only)" check box.
4. The size correction switch #70 and the three auxiliary counters #71, #72, #73 can be selected freely.
5. Confirm entry with "Apply" or "OK".
6. Complete the pattern:
7. Start the technical editing and generating Sintral.

The counters which are used for the size correction are inserted in the Sintral.

IV. Function and position of the counters:



Counter	Function and position
#70	Width adjustment of the middle piece
#71	Left selvedge of the middle piece
#72	Right selvedge of the middle piece
#73	Positioning of defined fields on the needle bed



The middle piece and the connecting pieces are joined together in Sintral, in PA and on the machine.



Note for width cycles that:

The divisibility of the width of the start:

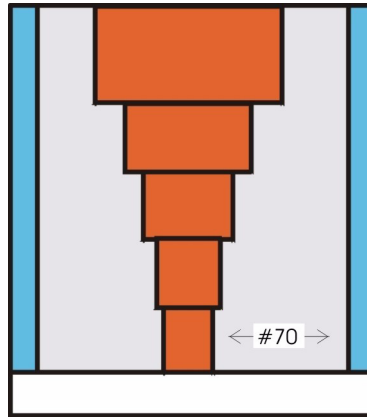
- 1x1 waistband is divisible by 2
- 2x1 waistband is divisible by 3
- 2x2 waistband is divisible by 4 etc.

Structure of the pattern (cable / Aran).

Existing neck openings in Fully-Fashion knitting.

V. Use on the machine:

By changing the value of the size correction switch on the machine, the width of the middle piece will be adjusted.



Changes of the middle piece via size correction switch



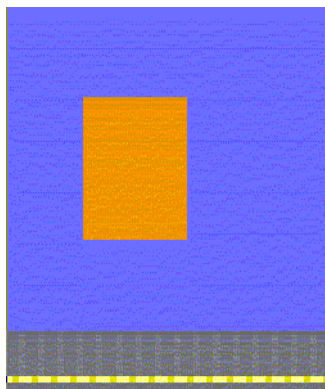
The area between the connecting piece and the middle piece will be used for the size regulation.

The used size correction switch is set to zero as a default, when loading a program into the machine.

The maximum value of the size correction switch can be such big as the area between the connecting piece and the middle piece.

Should the middle piece be smaller in the width, also negative values for the size correction switch can be inserted.

1.22 Intarsia pattern

Pattern data	Pattern picture
File: Intarsia.mdv Pattern width: 50 Pattern rows: 50	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Knitting technique	Intarsia single jersey
Description of pattern:	Intarsia pattern with a color field

I. Make global settings for Intarsia in the "Configuration" dialog box:

No pattern may be open.

1. Call up the "Global parameters" dialog box to change the settings globally (independent from the pattern).
Via "File" / "Global Pattern Parameters..." .
2. Click under "Configuration" on the "Default" button.
3. Make the desired settings in the "Intarsia" tab of the "Configuration [Global parameters]" dialog box.
4. Save settings as default.
With "Apply" or "OK".

II. Make settings referring to the pattern for Intarsia in the "Configuration" dialog box.

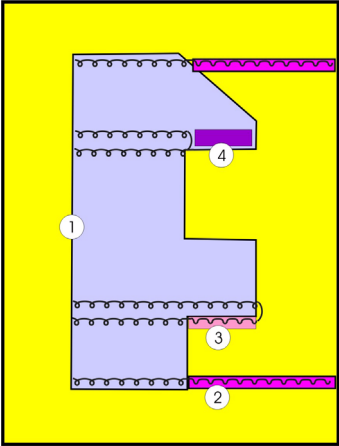
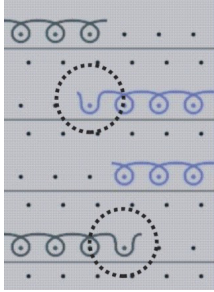
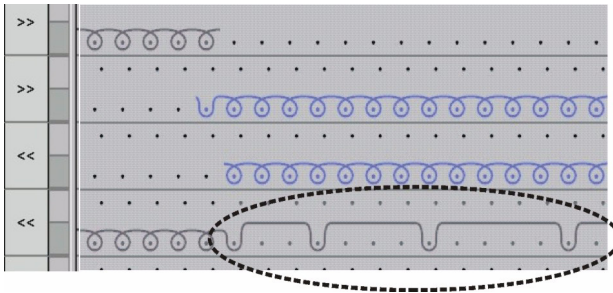
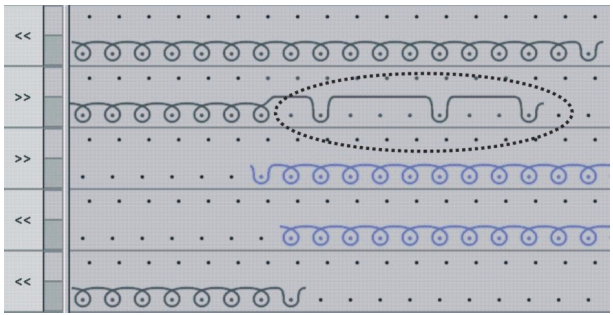
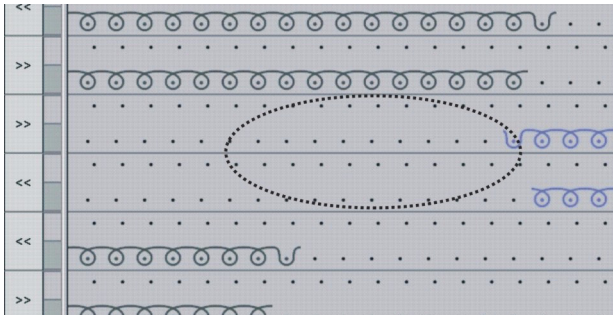


The settings in Configuration are referring to the pattern and are applied to all color fields of the actual pattern.


1. Generate a simple Intarsia motif.
The motif explains the intarsia settings in the dialog box "Configuration".
2. Call up the "Intarsia" dialog box to make the settings.
Via menu "Knitting Technique" / "Configuration".

Section	Setting	Function
Intarsia /gore binding section		The binding will be generated after knitting. Therefore, the binding appears on the left side in a stroke from the right to the left.
		The binding will be generated before knitting. In the stroke from right to left the binding therefore appears on the right-hand side.
	Selection menu	Selection possibility of the binding. A module from the "Technical/Intarsia border processing/Binding" module group is selected.
Selvedge editing	Feed	If the stepping on the edge of the color area from one row to the next is specified larger than for the "Allowed stepping" input field, then the thread is brought to the start of the following color row with the selected feeding module.
	Reduce	The stepping at the edge of the color area (from one row to the next) is, if necessary, reduced to the "Allowed Steps".
	Allowed steps	Number of needles by which the color area on the edge may be graded. Within this area no feeding and no reduction takes place. The value 1 is entered in the default setting.
Net pick-up	Suppress pick-up of only one needle	If the pattern requires a net pick-up of one needle only, then this is not carried out.
	Selection menu	Select module with which the net pick-up is to be carried out.
Knitting-in	with knots	A knot as binding is used.
	Binding	A module from the "Technical/Intarsia knitting-in/Binding" module group is selected.
	Feed-in	A module from the "Technical/Intarsia knitting-in/feeding" module group is selected.
	Use only normal yarn carriers	Activated
Deactivated		Intarsia yarn carriers are used

Application of the settings in Configuration:

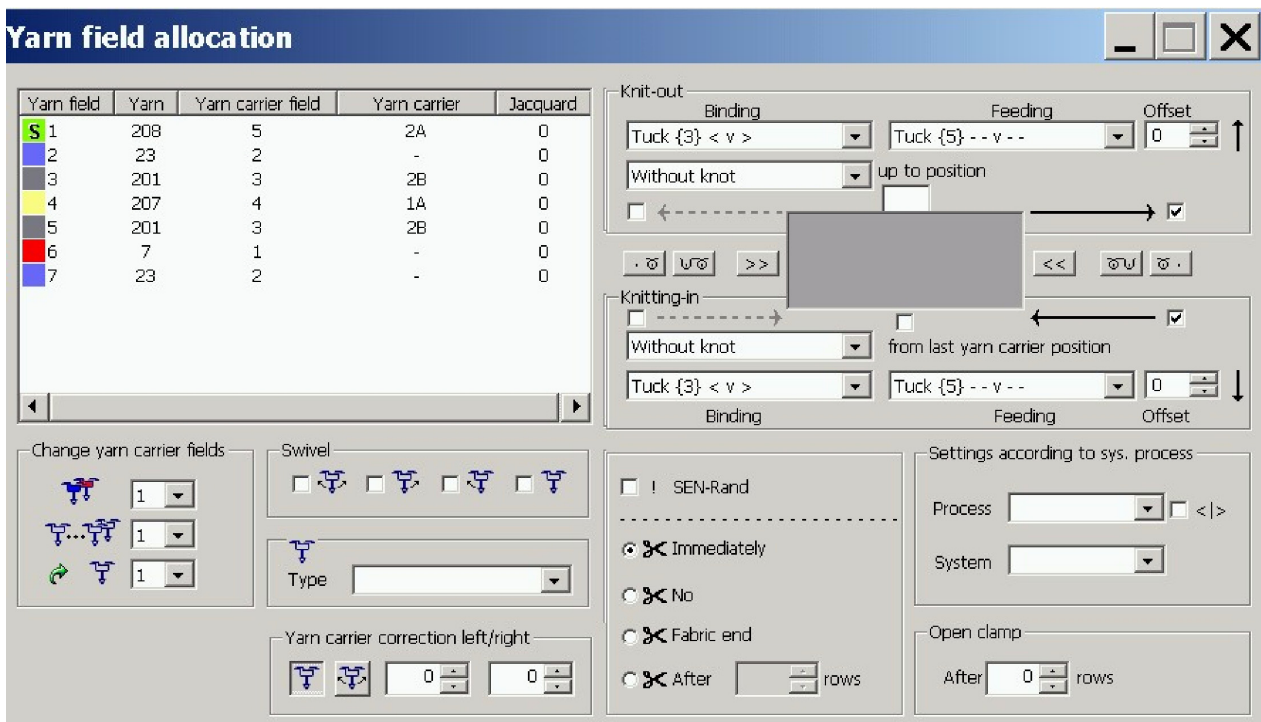
	No.	Section	Presentation
	1	Intarsia / gore binding section	
	2	Knitting-in	
	3	Selvedge editing "Feed"	
	4	Selvedge editing "Reduce"	

IV. Make further settings in the "Yarn field allocation" dialog box.












1. Open the "Yarn field allocation" dialog box with  to apply further settings for the intarsia pattern.






Settings in the yarn field allocation are applied to the selected color fields.



Yarn field allocation dialog box

Presentation		Function
		Between two yarn fields an intarsia binding is created automatically. If you do not want to, then you can switch it off in accordance to the knitting direction.
		If the intarsia binding is not created automatically between two yarn fields an, you can force the system to create an intarsia binding. This is, for example, necessary when the pattern rows are drawn pulled apart, so that no different yarn types adjoin next to each other.
		You can specify the starting direction of a yarn field.
		 Swiveling for both carriage directions
		 Swiveling for carriage direction from right to left.
		 Swiveling for carriage direction from left to right.
		 Do not swivel

Presentation	Function
	Correction values for swiveled and unswiveled yarn carriers can be entered for a yarn field.
Offset	A yarn carrier can be knit in or out with delay before the start or the end of a yarn field. Enter the number of pattern rows to specify the delay of knitting in/out before or after the yarn field.
	In the Cut section you can specify when the thread of a yarn field is to be clamped and cut. If the clamps are not used for the pattern, then these specifications are ignored.
Open clamp	You can specify for a yarn carrier a number of rows for the delay of opening the clamp.
Setting according to system process	A system procedure can be selected for jacquards over the entire pattern width.
 Type	The corresponding yarn carrier type will be automatically allocated to a yarn field. You can change the yarn carrier type.

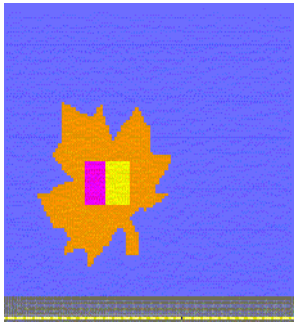
2. Confirm the settings in the "Yarn field allocation".

Key	Function	
"OK"	Save Settings	Close dialog box
"Cancel"	Cancel or close settings	Close dialog box
"Initialize"	Restore the original state	Dialog box remains open.

V. Complete the pattern:

1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
Via "Sintral" / "Sintral-Check..."

1.23 Intarsia with netback

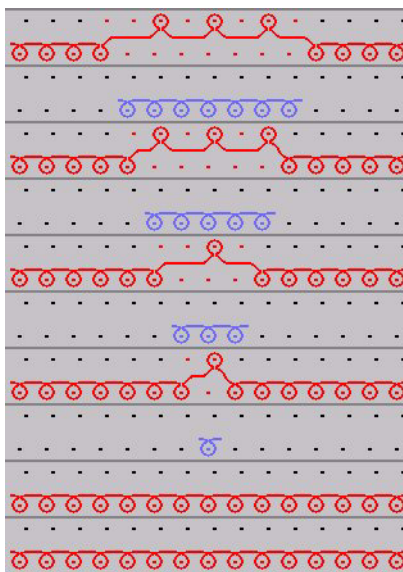
Pattern data	Pattern picture
File: Intarsia-Jac.mdv Pattern width: 100 Pattern rows: 100	
Machine type	CMS 530
Gauge	8
Start	2X1
Basic pattern:	Front stitch with transfer
Knitting technique	Intarsia with netback

Pattern description:

Intarsia pattern with net back and yarn bridges

I. Generate net back:


1. Select the motif or part of the motif in which yarn bridges shall be inserted.
2. Open the "Jacquards" dialog box.
Via the "Edit" / "Jacquards..." menu. .
3. Insert yarn bridges:
Select under section "Jacquard properties color number" / check box "adapted (yarn bridges)".
4. Select jacquard generator from the module tree in "Jacquard properties".



Presentation with netback 1x1

II. Make further settings:

If necessary you can make further changes in the Yarn Field Allocation dialog box.

1. Call up dialog box yarn field allocation with .
2. Allocate yarn carriers which works in the motif to the start.



3. Define the direction of knitting in for the yarn fields.



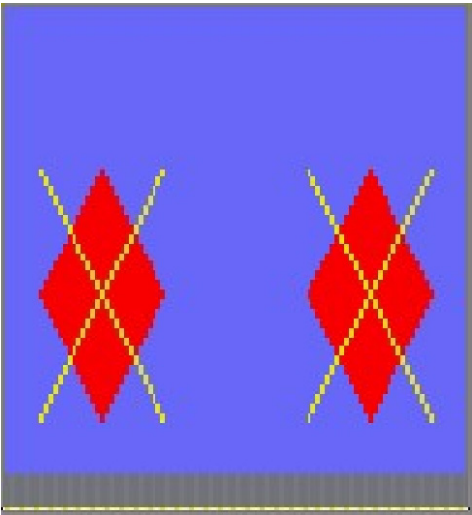
If necessary you can make further changes in the Configuration.

4. Make settings in the "Intarsia" dialog box.
Via menu "Knitting Technique" / "Configuration".
 - Selvedge editing
 - Net pick-up
 - Knitting-in

III. Finish pattern:

1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
Via "Sintral" / "Sintral-Check..."

1.24 Intarsia with yarn bridges

Pattern data	Pattern picture
File: IntarsiaGarnbrücken.mdv Pattern width: 100 Pattern rows: 100	
Machine type	CMS 530
Gauge	8
Start	2X1
Basic pattern:	Front stitch with transfer
Knitting technique	Intarsia with yarn bridges

I. Generate intarsia motif:


1. Draw motif.



Watch out the distances between the motifs

During technical editing two yarn carriers are allocated to one yarn carrier rail.

2. Select the diagonals.

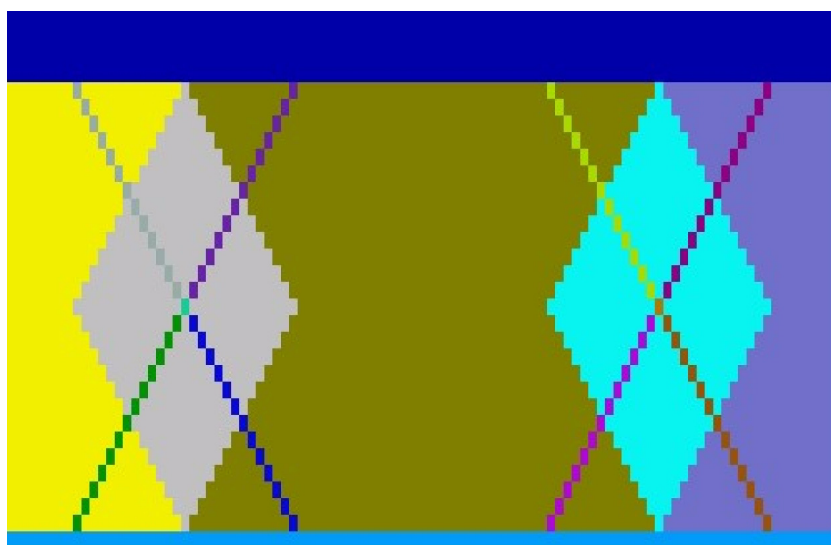
With the drawing function  and the "Color" and "Grow diagonally" settings.

3. Call up the "Jacquards" dialog box.
Via the "Edit" / "Jacquards" menu.

4. Make settings in the "Jacquard properties".
 - Activate the "Adjusted (yarn bridges)" option under "Number of Colors".
 - Select the "Float Jacquard" knitting mode in selection list.
5. Confirm settings.
With "Apply" or "OK".

II. Take up settings in the dialog box yarn field allocation:

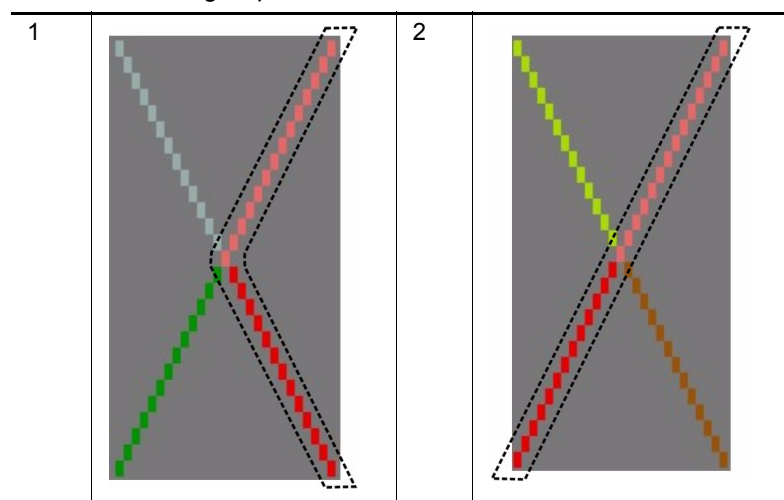
1. Call up the "Yarn Field Allocation" dialog box.



Yarn field view

2. [Group the diagonal color fields \[s. p. 44\]](#) in the "Yarn Field Allocation" dialog box.

Possibilities to group



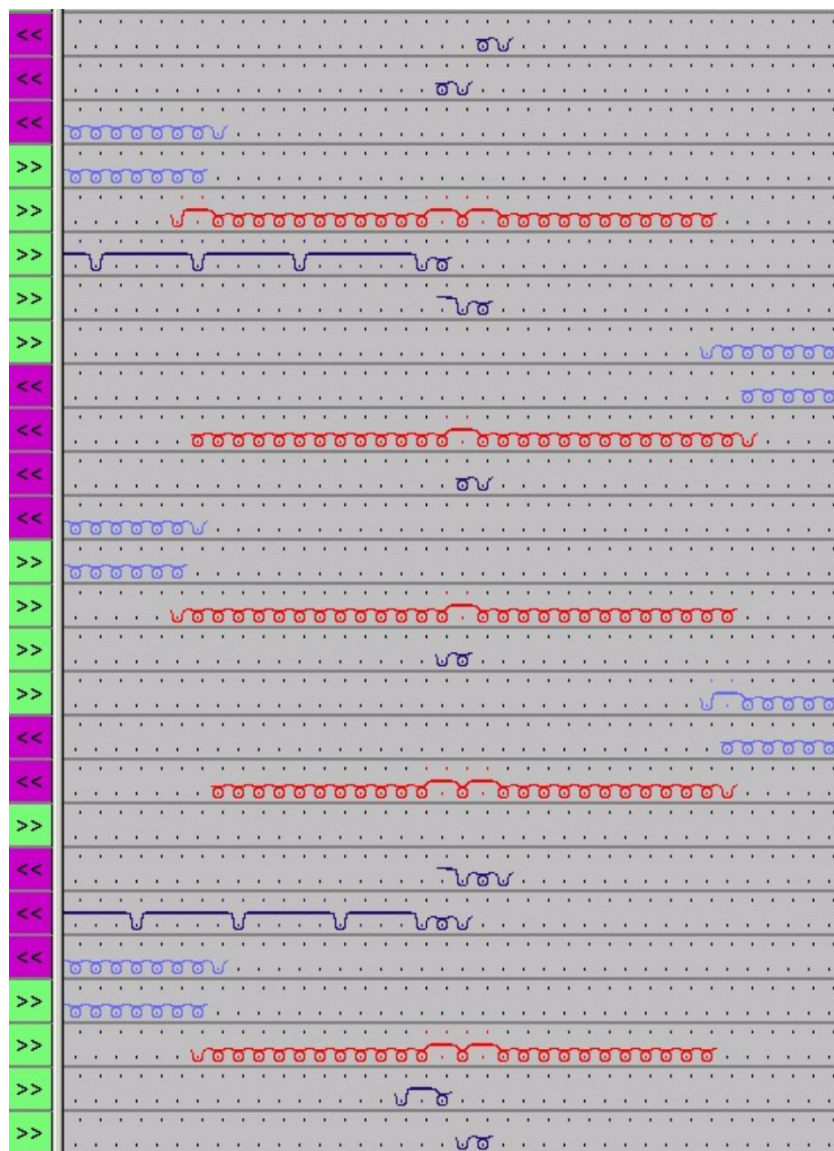
Examples of yarn field grouping

3. Switch off the intarsia binding of the diagonals for both knitting directions in the "Yarn Field Allocation" dialog box.



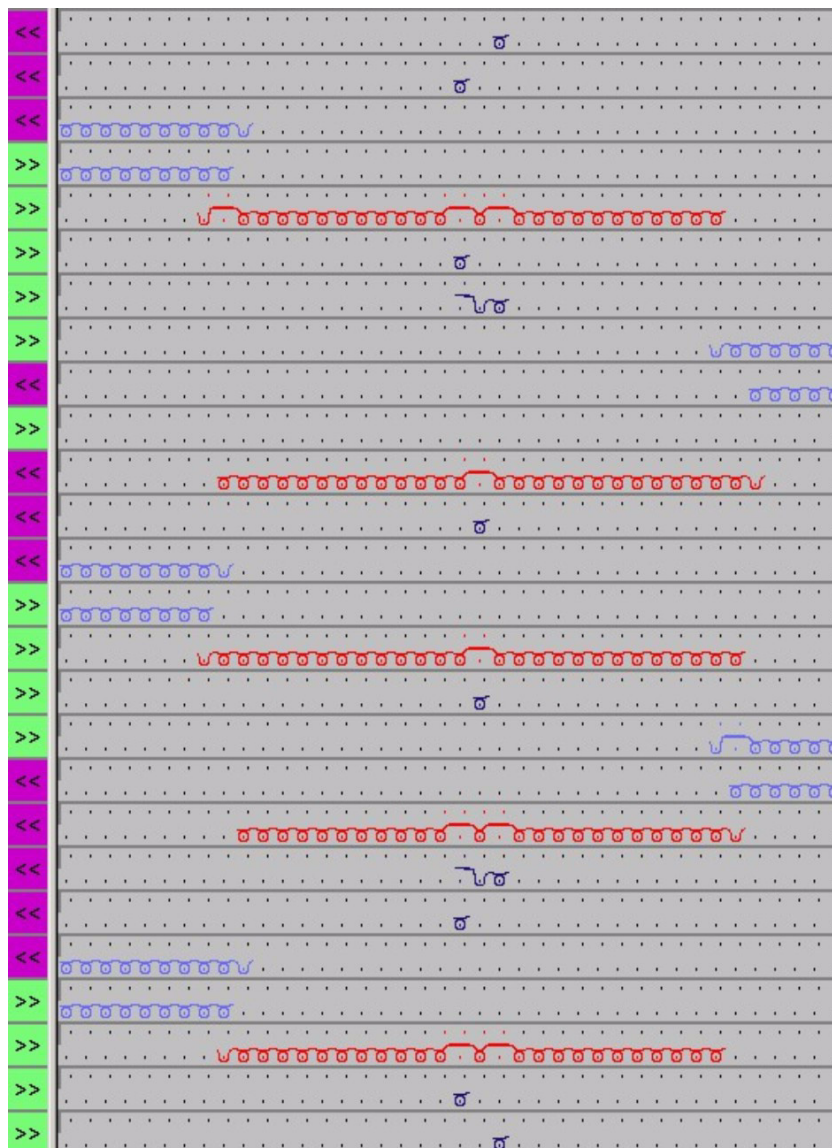
4. Change the knitting in and out of the yarn carriers of the diagonals.

The diagonals of the diamonds are partly broken. The yarn carrier will be placed at the pattern edge at this points and knit in afterwards.



Motif with knitting in and out and with intarsia binding at the diagonals

If you do not desire this you can correct knitting in and out by settings in the "Yarn Field Allocation" dialog box.



Motif without knitting in and out and without intarsia binding at the diagonals

5. Specify the direction of knitting in of the yarn field.



- or -


- Allocate manually the yarn carriers to the yarn carrier rails.

III. Complete the pattern:

1. Carry out technical editing.
2. Generate a Sintral.
3. Conduct Sintral Check.

IV. Further Possibility: Change yarn carrier course:

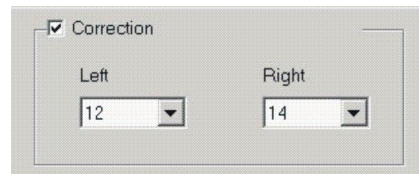
After the technical editing the traversing path of yarn carrier can be changed if needed.

1. Call up yarn carrier display with .
2. Call up the "Change yarn carrier course" function in the context menu of the technical view.
3. Change the yarn carrier course and the overrun path by moving the cursor with the left mouse button pressed.



- or -

- Call up the "Technical row data" dialog box via the "Knitting technique" / "Technical row data" / "Yarn carrier ..." .



4. Close the dialog box with "Apply" or "OK".

V. Complete the pattern:

1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
-> The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
Via "Sintral" / "Sintral-Check..."


1.25 Change knitting sequence

During generation of a pattern especially an intarsia pattern the knitting sequence can be influenced.



You have to change the knitting sequence before the technical editing.

I. Change knitting sequence:

1. Open the "Yarn field allocation" with  - or -
→ Via the "Knitting Technique" / "Yarn fields..." menu.
2. Call up the context menu "Display / edit knitting sequence" in the control column of the "Yarn Field View".
3. Select the area in which you want to change the color sequence.

Existing knitting sequences for both stroke directions are displayed in "Technical rows data" dialog box.

The knitting systems and yarn carriers are displayed by the colors of the yarn fields and the black switches



Attention:

At the maximum the 32 colors of knitting sequence for both the stroke directions are read from the left to the right.



Keys	Meaning
	The knitting sequence defined for the the >> stroke will be applied to the <<stroke (as a copy).
	The knitting sequence defined for the the << stroke will be applied to the >>stroke (as a copy).
"Apply"	Enter the defined knitting sequence in the Technical Row Data dialog box and into the control columns of the Yarn Field View. The dialog box remains open.
"Delete"	Delete entries in the dialog boxes.
"OK"	Confirm settings and close the window.
"Apply only the changed knitting sequences"	Knitting sequences without changes are not transferred into the control column. Control columns without an entry will be edited according to the default rules of the technical editing.
"Apply all knitting sequences"	All listed knitting sequences will be transferred into the control column.

4. Select a yarn field in order to highlight it in the views.

The corresponding colored box of the knitting sequence will be outlined in red in the "Technical Row Data" dialog box.



→ Double click a yarn color of the knitting sequence in the "Technical Row Data" dialog box in order to select the corresponding yarn field in the yarn field view.



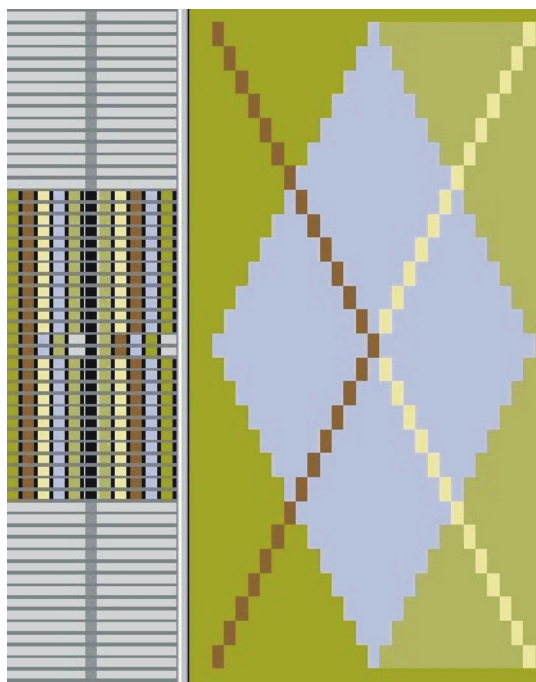
5. Change knitting sequence.
Re-position the color fields with Drag & Drop.



6. Combine color fields by double click on the black switches. By clicking on the system separation, two or more colors are processed in the same system if it is possible with regard to the technique.



7. Confirm the changes and close the dialog with "OK".



8. Close the "Yarn Field Allocation" dialog box.

Knitting sequences entered in the Yarn Field View will be checked and applied by the Technical Editing.

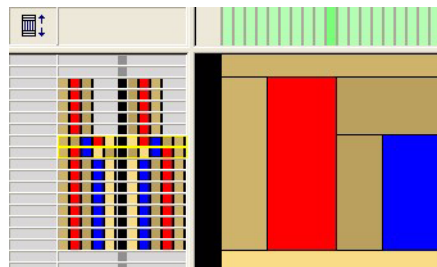
II. Copy knitting sequences:

1. Select the knitting sequence in the "Yarn Field View" and copy it with "Ctrl+C".

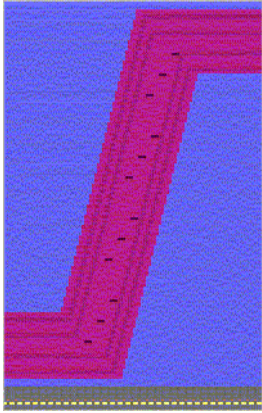
The selected area will be framed in yellow.






2. Click with the cursor on the knitting sequence to be replaced.
 - Copied yarn colors not present in the target knitting sequence will be ignored.
 - Yarn colors of the target knitting sequence which are not present in the copied knitting sequence will be added at the end of the knitting sequence.

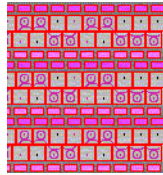


1.26 Different stitch lengths for intarsia

Pattern data	Pattern picture
File: Rapport.mdv Pattern width: 100 Pattern rows: 150	
Machine type	CMS 530
Gauge	8
Start	2x1
Basic pattern	as desired
Knitting technique	Intarsia structure
Pattern technology	<ul style="list-style-type: none"> - different colors and yarns - different colors mean different knitting systems. - Each knitting system can be allocated with another stitch length.

I. Use different stitch lengths for different colors and yarns:

1. Open an existing pattern or generate a new one.
2. Activate stitch length with  of the "Pattern presentations" tool bar.
3. Select the color area in which the stitch length is to be changed.
 Select with  and under Tool properties select the setting "Color" / "Module / Shape symbol" .
 - or -
 → Select color and search with  in the entire pattern.



4. Open the table via "Knitting technique" / "Stitch length ...".

Used / Favorites		Default	k&w								
No		NP	PTS	NP E8 (8)	Description [English]	Grp	F	U	M	S	G
1		1	=	9.0	Net	-	<input type="checkbox"/>	X			X
2		2	=	10.0	Tubular Net	-	<input type="checkbox"/>	X			X
4		3	=	10.5	2x1/2x2-Cycle	-	<input type="checkbox"/>	X			X
9		4	=	11.5	Transition	-	<input type="checkbox"/>	X			X
48		5	=	12.5	Intarsia Col. 1 front	-	<input type="checkbox"/>	X	X		X
49		6	=	12.5	Intarsia Col. 1 back	-	<input type="checkbox"/>	X	X		X
33		7	=	12.5	Color 2 front	-	<input type="checkbox"/>	X	X		X
38		8	=	12.5	Color 2 back	-	<input type="checkbox"/>	X	X		X
43		9	=	13.0	Intarsia NPJ Col. 2 front	-	<input type="checkbox"/>	X	X		X
44		10	=	13.0	Intarsia NPJ Col. 2 back	-	<input type="checkbox"/>	X	X		X
70		11	=	12.5	safety rows	-	<input type="checkbox"/>	X	X		X
68		12	=	11.5	Default front	-	<input type="checkbox"/>	X	X		X
23		20	=	9.0	Start1	-	<input type="checkbox"/>	X			X
24		21	=	10.0	Start2	-	<input type="checkbox"/>	X			X
25		22	=	11.0	Start3	-	<input type="checkbox"/>	X			X
27		24	=	12.0	Start5	-	<input type="checkbox"/>	X			X
29		25	=	17.0	Comb Thread	-	<input type="checkbox"/>	X	X		X

5. Select a present value in the table and entre NPJ settings.

- or -

→ Enter a new entry in the table.

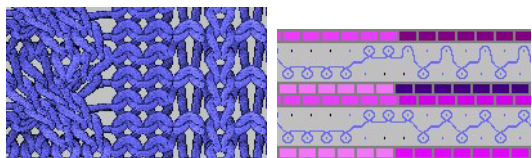
6. In the selection with exchange the colors for stitch lengths.

7. Close the "Find and Replace" and "Stitch length table" dialog boxes .

8. Delete the selection with .

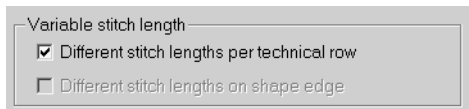
II. Use different stitch length inside an intarsia-color field:

If there are different knitting modes present in one motif color, so use different stitch length.
 During usage of different structure modules other stitch lengths are automatically entered.



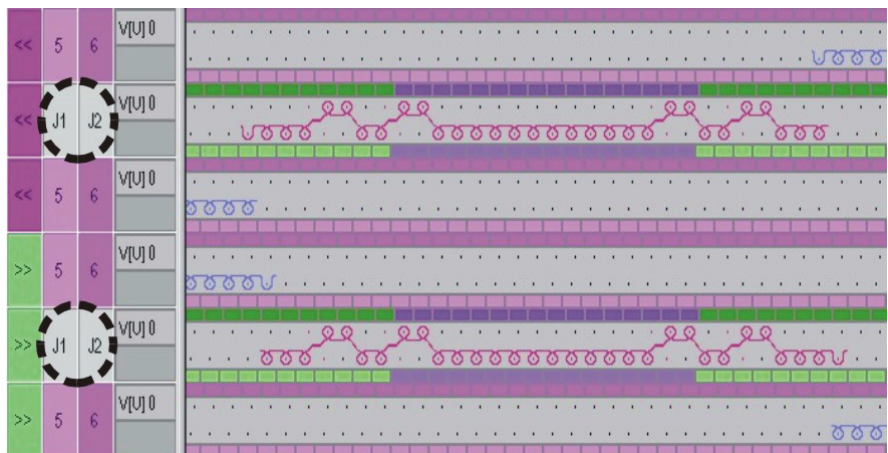
Should a module being used have no separate stitch length then the pattern area is to be selected and is to be provided with another stitch length.

- Activate the "Different stitch length per technical row." checkbox. Within "Configuration" in the "Additional settings" tab in the "Variable stitch length" section.



The machine should be able to carry out changes of stitch length.
 Take note of the motif distances and idle periods.

If different stitch lengths are used within a pattern row then an entry for NPJ will be displayed in the control column.



III. Complete the pattern:

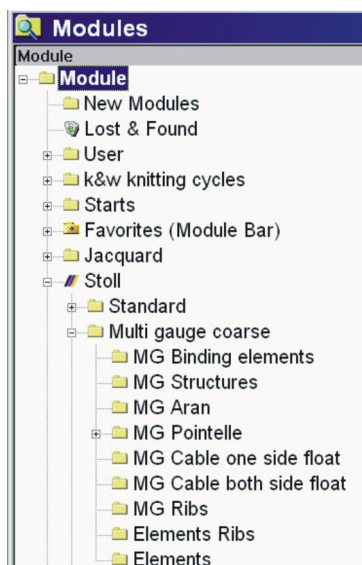
1. Start technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Start the Sintral-Check.
Via "Sintral" / "Sintral-Check..."

1.27 Module Explorer

Provide the modules from the module explorer:

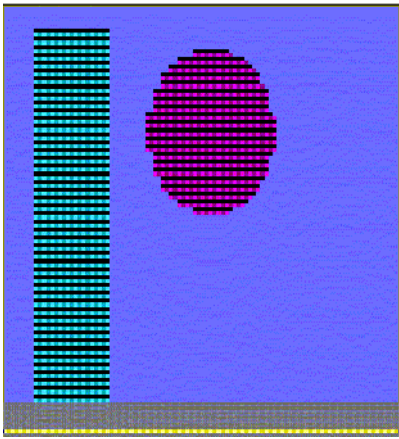
Example: Multi Gauge pattern

1. Open module explorer.





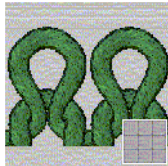


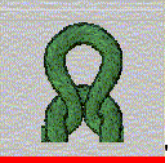

- Insert "MG" modules from the Module Explorer directly in to the drawing.
- or -
- Drag the "MG" modules from the subgroups of modules of the module explorer with drag & drop into the "pattern-local group <Pattern name>" module bar (red entry).
Thus the modules are made available for this pattern in the module bar.
- or -
- Copy a subgroup from the module group "multi gauge coarse" in the module explorer in the module group "Favorites".
Thereby the module groups are always available in the module bar for use.

1.28 multi gauges

Pattern data	Pattern picture
File: Multi-Gauges.mdv Pattern width: 100 Pattern rows: 100	
Machine type	CMS 530
Gauge	5.2
Start	1x1
Basic pattern:	Front stitch with transfer
Knitting technique	multi gauges
Description of pattern:	Multi gauge pattern with coarse and fine areas

I. Generate pattern.

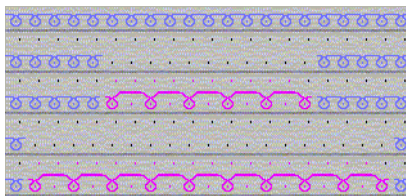
1. Before generation of a motif:
Making the necessary MG module from the [Module explorer](#) [s. p. 119] ready.
2. In "Machine explorer" take up the machine-related settings.
Activate the "Split" checkbox of the "Own machine" dialog box via the "Properties"/"System functions"/"Cam functions" context menu.
However, do this only if the MG transition takes place from coarse to fine by split:
3. Draw the multi gauge motif, thereby switch to multi gauge yarn colors with .



Selection	Module for filling	Module for right edge
	 <p>"Retain the MG_Stitch v Compound"</p>	in the compound module
 	 <p>"MG_Stitch v with transfers"</p>	 <p>"MG_Edge stitch v"</p>



Revert switching to Default Yarn Colors with  for drawing the fine area.

A coarse MG row stretches itself vertically over the two rows.
This second row may not be described.



By using the drawing symbols   on the right motif edge draw-in the "MG_Edge stitch v".

If more coarse areas are placed next to each other, then these have to be set on the same row.

4. Make settings in "Configuration" under the "Intarsia" / "Multi gauge transition coarse/fine" section:
Pick-up split coarse or Pickup stitch fine.
5. Do this before technical editing, but only if the MG transition takes place from coarse to fine by split:
Change pattern-specific settings for machine in [Machine explorer](#) [s. p. 123].

II. Complete the pattern:

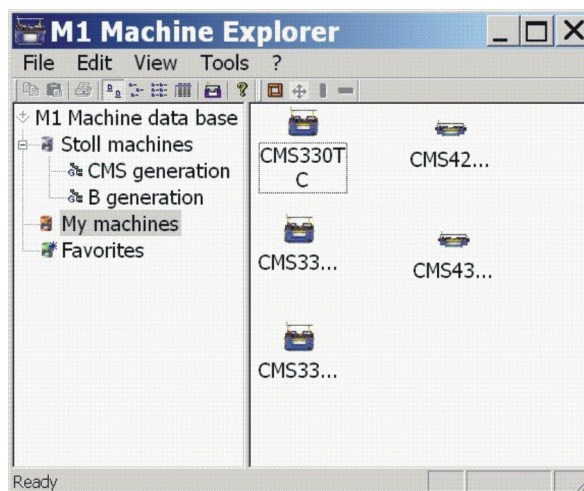
1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
Via "Sintral" / "Sintral-Check..."

1.29 Pattern-specific settings in the machine explorer

For a knitting program with split technique the machine being used should be allocated with the split pieces in the knitting system. This can be done machine-specific before the pattern generation or pattern-specific during the pattern generation.

I. Take up machine-specific settings in the machine explorer:

1. Before the machine start open "Machine explorer".
Via menu "View" / "Machine explorer".
2. Select the desired machine in the "My Machines" directory.



3. Make the settings for split via the "Properties / System functions" context menu.
4. Select knitting system for split.



5. Activate the "Take split" setting in "Cam functions" tab.
6. Confirm entry with "Apply" or "OK".

The machine-specific settings are saved and are used during the generation of more patterns if you select this machine for the program generation.

II. Take up pattern-specific settings in the machine explorer:

1. Generate new pattern.
2. Open the machine explorer.
Via the "Knitting technique" / "Machine Attributes" menu.
3. Call up "System functions".
Make the system and pattern related settings that are used for example for MG-pattern with split.



4. Confirm entry with "Apply" or "OK".

This pattern-related setting is active only for the pattern that is being edited at the moment.

The setting is saved with the pattern automatically.

III. Generate your own machine in the machine explorer:

With the "Generate own machine" function you can add a machine from the Stoll machine database to your own machine pool.

In the process copies from the Stoll machine database are applied. You can specify the properties of My Machines.

1. Open the "Machine explorer".
Via menu "View" / "Machine explorer".
2. Open the "Stoll Machines" "CMS Generation" subgroup.
3. Select the desired machine.
4. Call up the context menu with the right mouse button and select "Generate own machine".
-> The "Generate new own machine" dialog box appears.
5. In the dialog box "Generate new own machine" give the machine specifications and the gauge.
6. Confirm entries with "OK".

The newly generated machine is listed in the "My Machines" directory.

IV. Generate favorites in machine explorer:

In the directory "Favorites" links to the machine from the group "Stoll machines" and "Own machines" can be made. This is advantageous for machines, which are used often or by which you often change settings (e.g. yarn carrier settings).

1. In "Stoll machines" or "Own machines" select the desired machine.
2. Drag with drag & drop to the "Favorite" directory.

V. Change the machine properties:

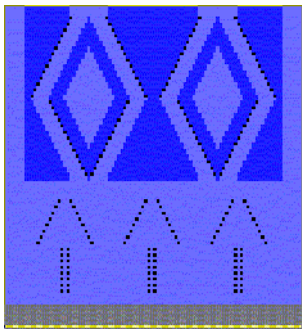
In the directory "Own machines" and "Favorites" the properties of Own machines can be changed.

1. Display the context menu with the right mouse button.
2. Select "My Machines".
3. Select the desired machine in the "Own machines" or "Favorites" directory.
4. Call up the context menu with the right mouse button.
5. Select "Properties".
"Properties of CMSxxx"

Tab	Function
General	Properties of the machine (e.g. Type, Gauge)
System functions	Allocate knitting functions to the systems
Options	List of optional devices and yarn carrier configuration
Tandem mode	Settings for tandem operation
Online parameters	Settings for online connection
Machine data	Display of the machine data during online query
Data security	Select data record lock or assuming of possession of a data record

6. Confirm the entry with "Apply" or "OK".


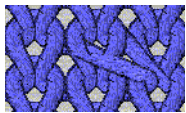


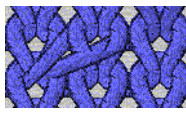

1.30 Split pattern

Pattern data	Pattern picture
File: Split pattern Pattern width: 100 Pattern rows: 100	
Machine type	CMS 530
Gauge	8
Start	2x2
Description of pattern:	Structure pattern in split technique with petinet

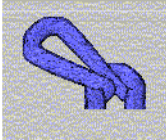
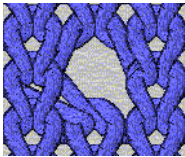


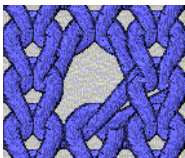

I. Generate structure pattern with petinet.

1. Generate new pattern.
2. Draw structure.
3. Select split and petinet modules from the module explorer and draw them in the motif.
Via "Module / Module Explorer" / "Modules / Stoll / Standard / Petinet".

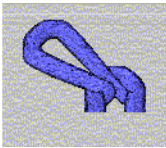

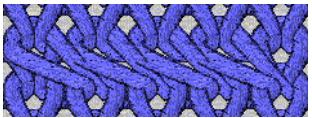
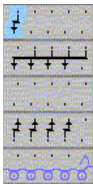
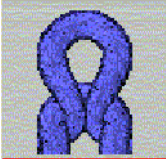

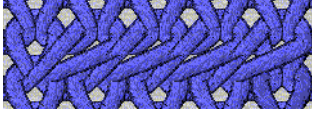

Used module and it's presentations

Module	Fabric View	Technical view
Split_^_left 		
Split_^_right 		

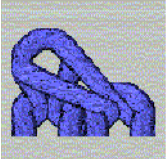
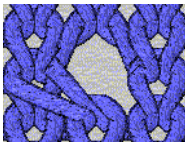
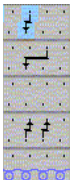

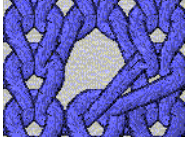
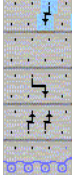
Used module and it's presentations

<p>Stitch_v_left</p> 		
<p>Stitch_v_right</p> 		

Combinations of "Stitch" and "Split" modules

<p>Multiple entry Stitch_v_left</p> 	<p>Simple entry Split_^_left</p> 		
<p>Simple entry Split_^_right</p> 	<p>Multiple entry Stitch_v_right</p> 		

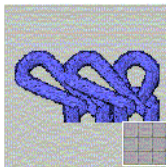
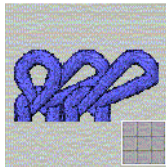
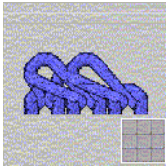
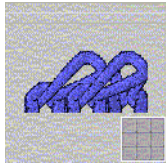
Modules with "Stitch on top"

<p>Loop_v_<_top</p> 		
<p>Loop_v_>_top</p> 		



In the module explorer under "Module" / "Stoll" / "Default" / "Petinet" you can find more combination modules.

Examples for combination modules with and without split.

<p>v_<_Stitch_Split</p> 	<p>v_>_Split_Loop</p> 
<p>v_<_top Loop</p> 	<p>v_>_Loop top</p> 



In order to be able to draw easily switch to fabric view via the context menu on the "Symbol view".

- Set the system in which you want to split.
Call up the "System function" tab via "Knitting Technique / Pattern Parameters / Machine attributes"



- Define the system and activate "Take split".



You can specify split before you start with the pattern via "View / Machine explorer".
Then a setting related to the pattern is no longer necessary.



Attention:
Tuck and R-R are not allowed in the same technical row when you use split!

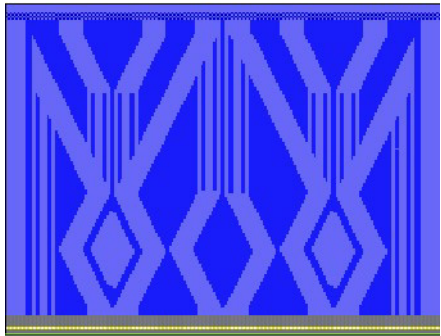
II. Start automatic technical editing and sintral check:

1. Start technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
The "Generate Sintral?" prompt appears after the technical editing.
 2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
- Start the Sintral-Check.
Via "Sintral" / "Sintral-Check..."



Insert split parts into the machine according to your settings.

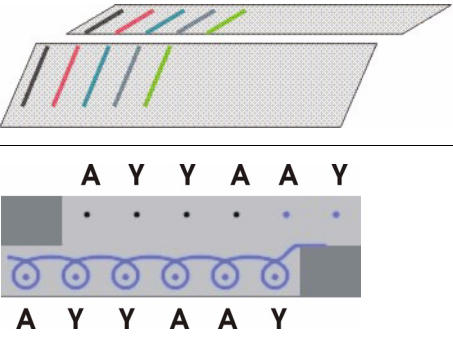
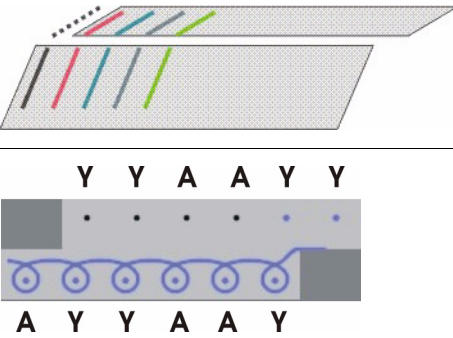
1.30.1 Petinet and Split Technique without Empty Rows

Pattern data	Pattern picture
File: Split pattern Pattern width: 220 Pattern rows: 150	
Machine type	CMS 530
Gauge	8
Start	1X1
Description of pattern:	Petinet and Split Technique without Empty Rows

I. Behavior of the jacquard selection with the back needle bed racked.

The jacquard selection on the back needle bed defers due to the VJA^1 and VJA^0 commands.

You can use it for production increase with petinet and split pattern.

Presentation	Command	Function
	VJA^1 (Default)	The jacquard selection on the back is moved in relation to the front needle bed accordingly to the racking. In other words, if the needle bed is racked the selection is moved as well.
	VJA^0	Even with racking, the jacquard selection on the rear is kept unchanged in relation to the front needle bed. In other words, if the needle bed is racked the selection is kept oppositely.

II. Generate a pattern with petinet and split:

1. Generate a machine of your own with the split function via the "View / Machine Explorer" menu.
2. Call up the "System function" tab via the "Properties" menu of the Machine Explorer.
3. Define systems with split function.



Select a system and activate the "Take split" checkbox.



Insert split parts into the machine according to your settings.

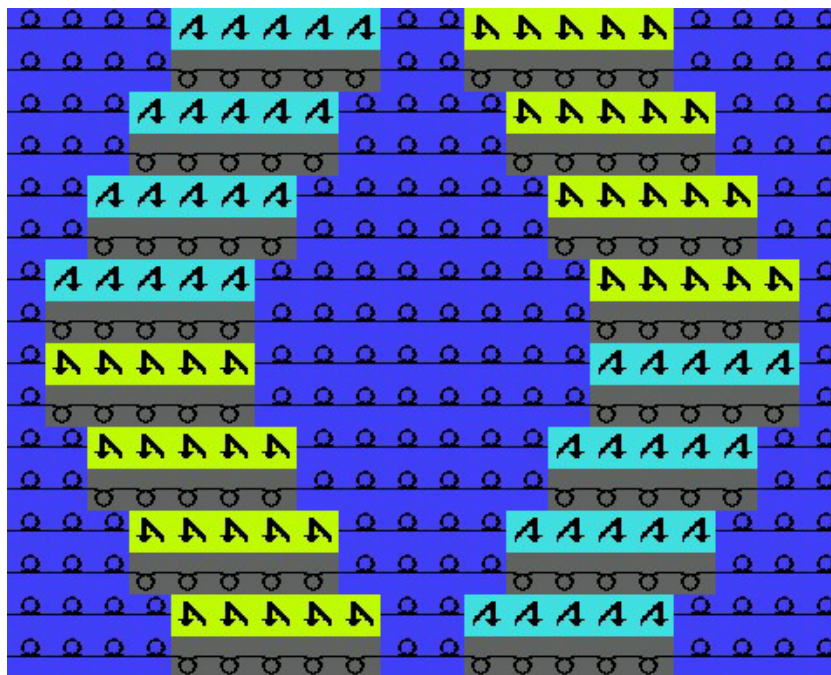
4. Generate new pattern.
With it, select a machine with split function.
5. Define the racking for the knitting rows in alternation over the height of the motif (e.g. V0 - VR1 - V0 - VR1).
Insert the VR1 racking position into the even-numbered knitting rows.
Keep the V0 racking position into the odd-numbered knitting rows.
6. Activate the "VJA" control column in the technical view and insert the VJA^0 command over the height of the motif.

9	9		^0	[V] 0
8	8		^0	[V]R1
7	7		^0	[V] 0
6	6		^0	[V]R1
5	5		^0	[V] 0
4	4		^0	[V]R1
3	3		^0	[V] 0
2	2		^0	[V]R1
1	1		^0	[V] 0

7. Select the "Pointelle Loop_v_<" and "Pointelle Loop_v_>" under "Modul Explorer" / "Modules / Stoll / Standard / Pointelle".
8. Draw the motif.



Switch to the "Symbol View" and draw in the petinet and split motif symmetrically.

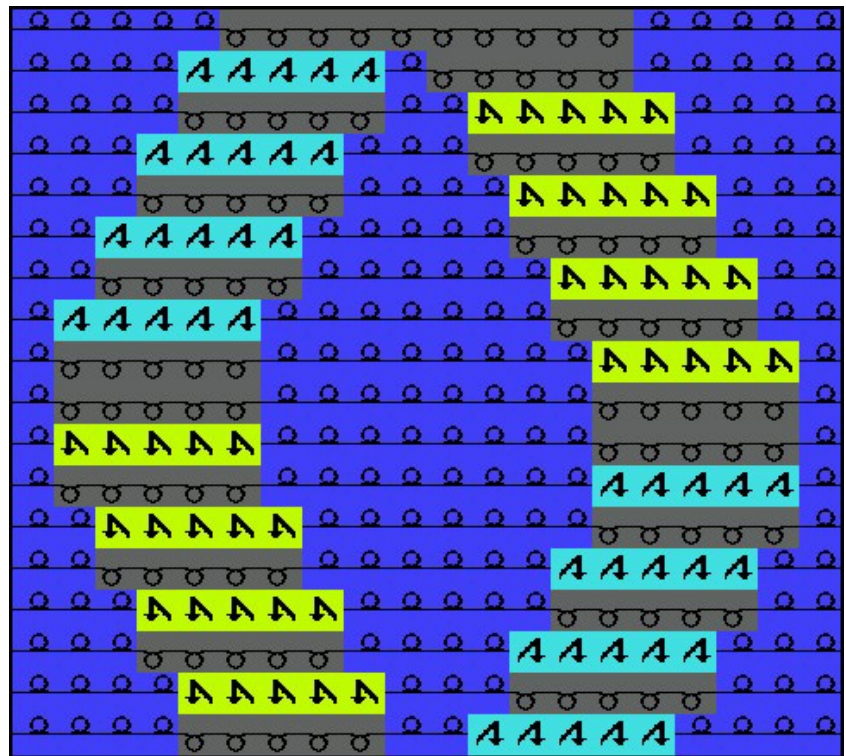


Example: Symmetrical petinet motif



An additional system is necessary in order to transfer the left stitches when drawing the pattern on the left basic pattern.

9. Move the motif in the height:
 - Petinet to the right on an odd row (1,3,5) with V0 racking.
 - Petinet to the left on an even row (2,4,6) with VR1 racking.



Moved petinet motif

24	7	∅0	[U] 0	
23	6	∅0	[U] 0	
22	6	∅0	[U]R1	↑↑↑↑↑
21	6	∅0	[U]R1	
20	6	∅0	[U]R1	
19	5	∅0	[U]R1	↓ ↓ ↓ ↓ ↓
18	5	∅0	[U] 0	↑↑↑↑↑
17	5	∅0	[U] 0	
16	5	∅0	[U] 0	↓
15	4	∅0	[U] 0	↓ ↓ ↓ ↓ ↓
14	4	∅0	[U]R1	↑↑↑↑↑
13	4	∅0	[U]R1	
12	4	∅0	[U]R1	
11	3	∅0	[U]R1	↓ ↓ ↓ ↓ ↓
10	3	∅0	[U] 0	↑↑↑↑↑
9	3	∅0	[U] 0	
8	3	∅0	[U] 0	↓
7	2	∅0	[U] 0	↓ ↓ ↓ ↓ ↓
6	2	∅0	[U]R1	↑↑↑↑↑
5	2	∅0	[U]R1	
4	2	∅0	[U]R1	
3	1	∅0	[U]R1	↓ ↓ ↓ ↓ ↓
2	1	∅0	[U] 0	↑↑↑↑↑
1	1	∅0	[U] 0	

Presentation in technical rows



At the left and right border of a pattern the stitches over the width of the performed racking must be on the front needle bed. Due to the racking movement and VJA^0 the edge stitches will get outside the knitting area and therefore they will not be knitted or transferred.




If necessary you can insert an extension cycle at the start and end of the motif.

III. Finish pattern:

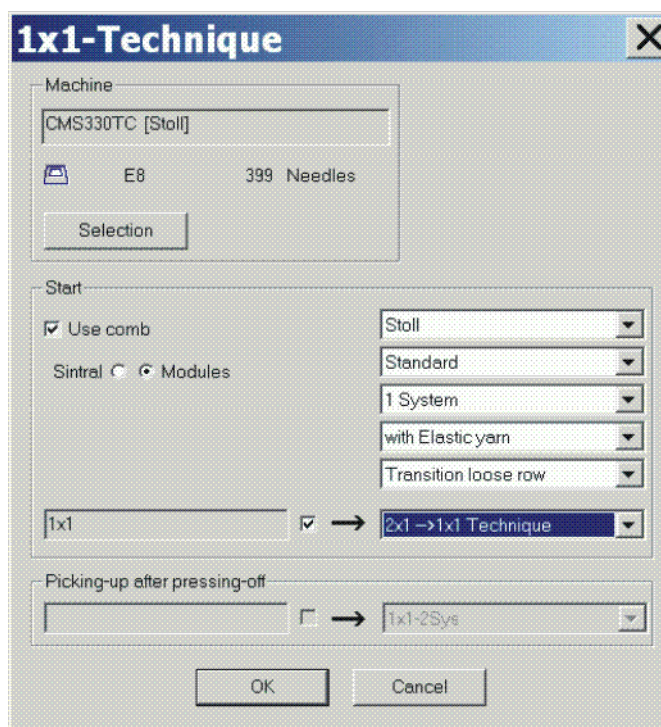
1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
Via "Sintral" / "Sintral-Check..."

1.31 1x1-Technique

Pattern data	Pattern picture
File: 1x1-Technique Pattern width: 120 Pattern rows: 110	
Machine type	CMS 530
Gauge	8
Start	Tube
Description of pattern:	Structure-Jacquard Pattern in 1X1 Technique

I. Change an existing or a newly generated pattern in to 1X1 Technique.

1. Load existing pattern via menu "Knitting Technique/ Load pattern before technique".
2. Call up "1x1 Technical" dialog box.
Via "Edit" / "1x1 Technical".
3. **Change the machine type** [s. p. 56] to a Multi-Gauge machine.
With the "Select" button.
4. Replace start.





5. Insert protective rows at the end of the pattern in 1X1 technique (only by machines with comb).
Via "Knitting Technique" / "Configuration" / "Knitting Zones" / "Special knitting rows" / "Protection Rows" / "Safety row 1x1 Technique".

II. Complete the pattern:

1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.
Via "Sintral" / "Sintral-Check..."

1.32 Two part work

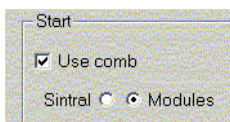
Pattern data	Pattern picture	
File: Double piece knitting		
Machine type	CMS with comb CMS without comb	

Pattern description: Knitting two or more parts of the same pattern side by side on the machine.

I. Double piece knitting on the machines with comb:

Should a pattern with 2 knitting parts per SEN be generated on machines with comb then the following rules have to be kept in mind:

- For the start the setting "Module " is to be selected.



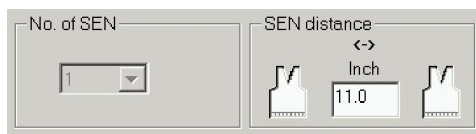
- No width cycles may be used in the pattern.
- One must take care about the total width of the knitting part and the space between the knitting zone.

1. Generate a pattern or use an existing one.
2. Carry out technical editing.



Complete the regular technical editing before you start the technical editing for two-part per SEN.

3. Call up the "Configuration" dialog box.
Via menu "Knitting Technique" / "Configuration".
4. Open the "Knitting zones" tab.
5. Specify the distance of the SEN areas.
Watch the number of yarn carriers.



6. Confirm entry with "Apply" or "OK".
7. Start the Technical Editing of 2 Parts.
With "Knitting Technique"/"Technical editing 2 parts" menu.

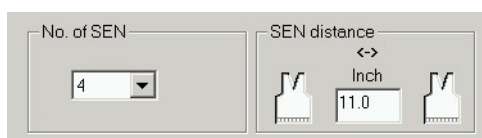
Two parts are shown in the fabric and technical view. Each part has a separate yarn carrier.
The comb thread is, however, used for both parts together.

II. Multi-piece work on machines without comb:



With a machine without a comb and the use of several SEN you have to start the regular Technical Editing only. Technical editing for more parts is not necessary.

1. Generate a pattern or use an existing one.
2. Call up the "Configuration" dialog box before you start the technical editing.
Via menu "Knitting Technique" / "Configuration".
3. Specify in the section "Knitting zones" in the selection list the desired number SEN.
Set for example "Number SEN" 4.



4. Confirm entry with "Apply" or "OK".

Possible settings:

Machine type	Possible settings		
	Number of knitting pieces	Distance of knitting pieces (default)	Function
CMS with comb	2 pieces per SEN	11 inch	Space requirement depends upon the number of used yarn carriers.
CMS without comb	SEN 1 SEN 2 SEN 3 SEN 4	11 inch	

III. Automatic Technical Editing and Sintral Check:


1. Carry out technical editing.
Via "Knitting Technique" / "Automatic Technical Editing...".
-> The "Generate Sintral?" prompt appears after the technical editing.
2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check with "Sintral"/"Sintral Check" menu.

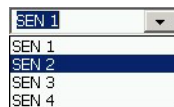


The specified YG and SEN are indicated in the Sintral.

III. Use of different yarn carrier basic positions

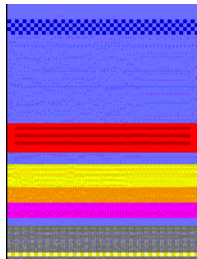
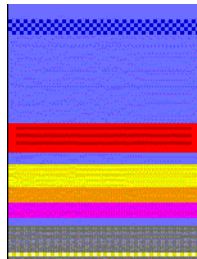
In case of multi-piece knitting without comb the same yarn carrier basic position is automatically calculated for all knitting parts.
If needed a separate basic position can be specified for each knitting part.

1. Call up the yarn field allocation after the technical editing .
2. Allocate the yarn carrier anew on the yarn carrier rails.
3. Select SEN under the yarn carrier allocation.



4. For the further knitting parts allocate the cycle, yarn carrier and set SEN, repeat.
5. Close dialog box yarn field allocation with "OK".
6. Generate sintral, do not carry out any renewed technical editing.

1.32.1 Multi-piece knitting with CMS 822

Pattern data	Pattern picture	
File: Double piece knitting		
Description of pattern:	Knit two or more parts of the same pattern side by side on the machine.	

Without tandem: Multi-piece knitting:

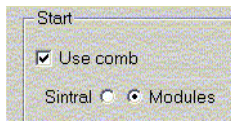


The editing steps have been described in the previous chapter.

Possibilities with normal operation (without tandem)



Start	Configuration: Number of SEN areas	Editing
without comb	1 - 4 SEN	"Automatic Technical Editing"
with comb	SEN 1	1. "Automatic Technical Editing" 2. "Technical Editing of 2 Parts"



with tandem: Multi-piece knitting without comb:



The workflow of CMS 822-2/ CMS 822 corresponds to the workflow of CMS 422 TC / 433TC as tandem.

The knitting program is generated for the left carriage with knitting systems S1 and S2.

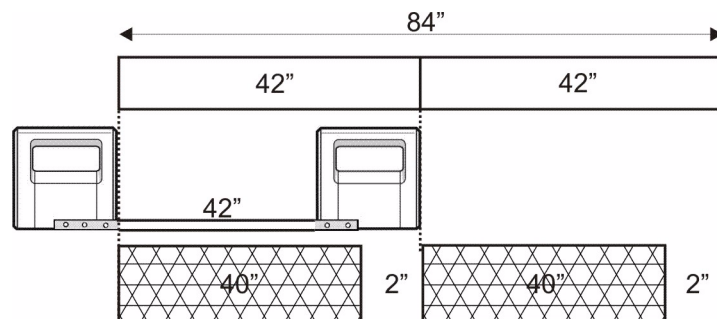
The needle selection is calculated internally for the left knitting piece and is transferred to the right knitting piece with the knitting systems S3 und S4.

1. Activate the "Tandem operation" checkbox and select the coupling width under "Settings for tandem operation" when selecting the machine.

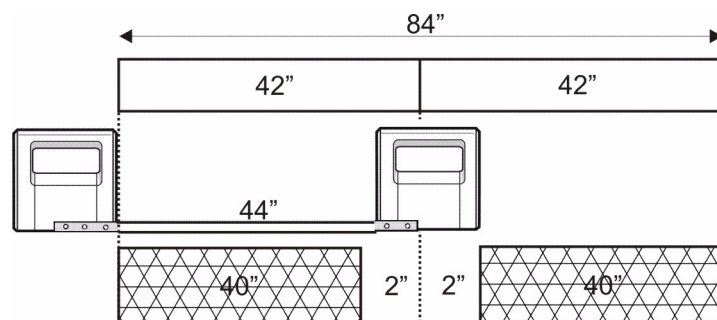
Tandem operation without comb



Start	Coupling width	Working width	Editing
without comb	42 "	42 "	Automatic Technical Editing



without comb	44 "	40 "	Automatic Technical Editing
--------------	------	------	-----------------------------






The actual working width is dependant on the number of yarn carriers. I.e. the distance of both the knitting areas must be sufficient enough to place the yarn carriers.

Take note of the double assignments of yarn carrier tracks.

2. Draw a pattern or use an existing one.

3. Activate  in the knitting area tab of the "Configuration" dialog box.

4. Carry out "Automatic technical editing...".

with tandem: Multi-piece knitting with comb:

Both carriages work as one carriage with a wide space between S2 and S3 with the system sequence.



Same procedure as in the case of CMS 3xx TC machines with comb.



The "Tandem operation" should not be activated when selecting a machine.

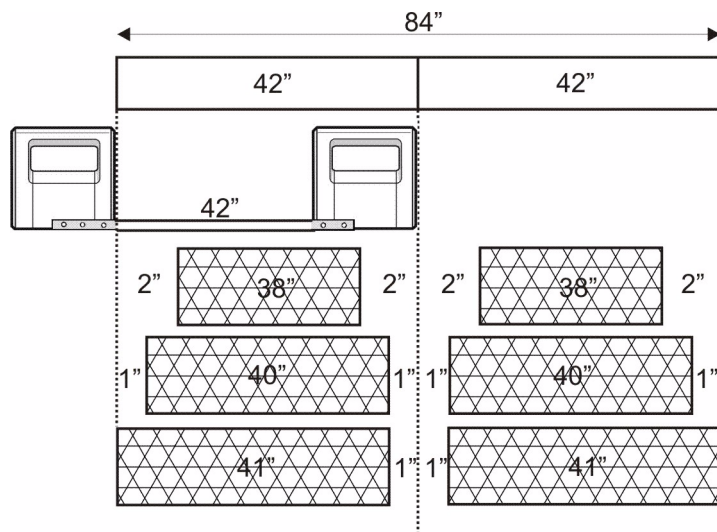
The machine works as a compact machine with comb but with wide coupled carriages.

In Sintral the name of this type of operation is called TANDEM-CCC.

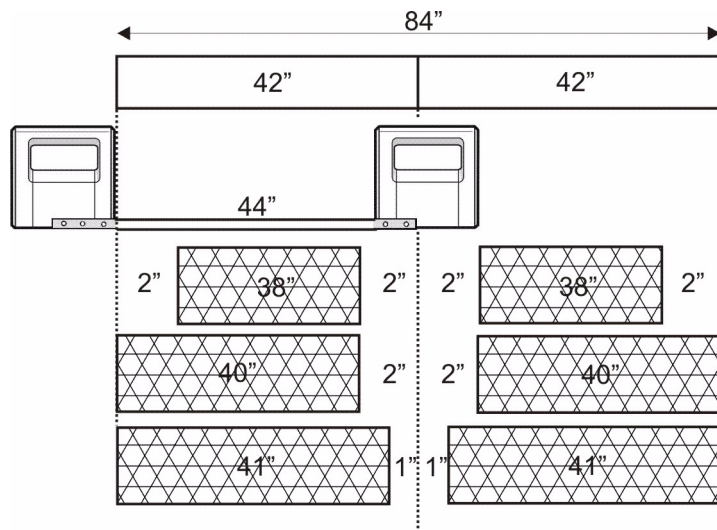
Tandem operation with comb



Start	Coupling width	Working width	Editing
with comb	42 "	42 "	Automatic Technical Editing



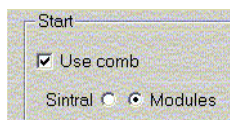
with comb	44 "	40 "	Automatic Technical Editing
-----------	------	------	-----------------------------





The maximum knitting width corresponds to the coupling width minus a needle!

1. Generate a pattern or use an existing one.
2. Set "Module" under the "Start" section.



3. Open the "Knitting areas" tab via "Knitting technique" / "Configuration".
4. Set the placement of knitting piece.
5. Confirm entry with "Apply" or "OK".
6. Carry out "Automatic technical editing...".
7. Call-up the "Knitting Technique"/"Technical Editing of 2 Parts" menu.

Two parts are shown in the fabric and technical view.

All yarn carriers including the yarn carriers for the comb thread, the draw thread and the elastic thread will be doubled by the "Technical editing 2 parts". Each part has a separate yarn carrier.

III. Generate pattern and carry out sintral check:

1. Start generating sintral/jacquard.
2. Conduct Sintral Check.
Via "Sintral" / "Sintral Check...".

1.33 Generate own start

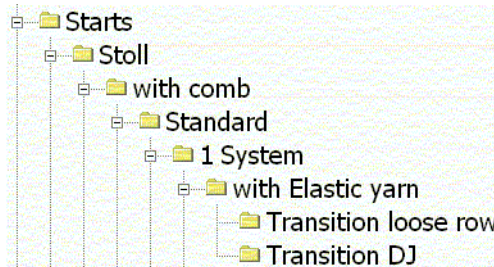
Pattern data	
Action	Generate own start
Machine type:	CMS with comb CMS without comb
M1 working techniques	Copy the already existing start and edit it according to individual requirements

I. Generate an own start in the overview:

1. Copy:
In the module explorer under "Starts Stoll" copy a "Container module" for the start, rename and save under "Starts own" under the same hierarchy.
2. Copy:
Copy, rename and save element for start under "Own" under same hierarchy.
3. Copy:
Copy, rename and save transition under "Own" under same hierarchy.
4. Change knitting sequence:
In the element for start.
In the element for transition.
5. Save changes.

II. Detailed description: Copy and rename the start.

1. Open module explorer.



Example: "Starts/Stoll/with comb/Default/1 System/with elastic yarn /transition loose row or transition RR."

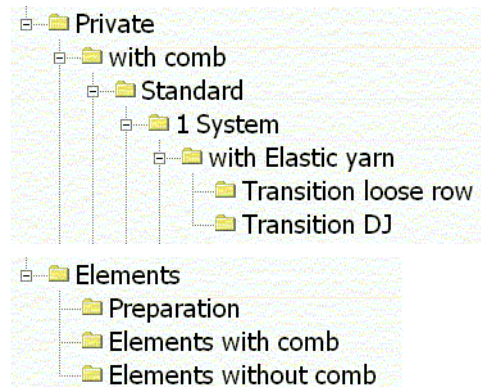
2. Copy from the module group "Transition loose row" or "Transition RR" select and copy Stoll start. Context menu "Generate copy".
3. Enter the new "Modul Name" in the "Properties of <Module name>" dialog box.
4. Select the copied and renamed start and open it for editing. Context menu "Edit".

The start to be edited appears as "Container module". The single elements are visible.

5. Leave the "Container module" open.

III. Copy and rename the elements for waistband and transition:

1. Select element for waist (e.g. "2X2_1sys_G") and generate copy. In "Elements" / "Elements with comb" (or without comb) / "Starts" / "Stoll".
2. In the dialog box "Properties of <Module name>" enter a new module name.
3. Select element for waist (e.g. "2X2_1sys_G") and generate copy. In "Elements" / "Transitions" / "Starts" / "Stoll".
4. Enter the new Modul Name in the "Properties of <Module name>" dialog box.
5. Move all copied and renamed modules (from the module group "Transitions..." and "Elements") from the respective Stoll module group in the respective module group "Own".

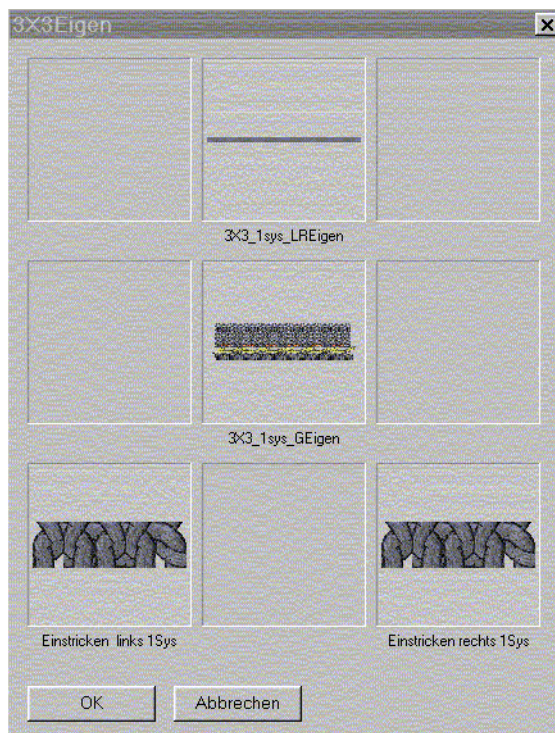


6. Insert the element for waist from the module group "Elements with comb" (without comb) in "Container module" with Drag & Drop.
7. Insert the element for transition from the module group "Transition loose rows" (or RR) in "Container module" with Drag & Drop.
8. Close "Container module" with "OK".
9. Answer the prompt "Save module to module data base?" with "YES".

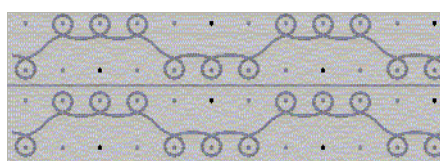
The elements and pattern elements for own start are copied and renamed.

IV. Change knitting sequence:

1. Activate copied and renamed start in the module group "own" / "Transition".




2. Select the start element "3X3_1sys_GEigen" in the centre column of the container module and open it to edit. Context menu "Edit".
3. Change the knitting sequence in the module editor.



4. Thereby use the color palette "Yarn colors (Technical yarns)".

	No.	Function	Color no.
	1	Rib thread 1	201
	2	Rib thread 2	202
	3	Rib thread 3	203
	4	Rib thread 4	204
	5	Protective thread 1	205
	6	Protective thread 2	206
	7	Draw thread1	207
	8	Comb thread 1	208
	9	Elastic yarn 1	209
	10	Draw thread 2	210
	11	Comb thread 2	211
	12	Elastic yarn 2	212
	13	Rib thread 5	213
	14	Rib thread 6	214
	15	Rib thread 7	215
	16	Rib thread 8	216

5. Draw the knitting sequence.

With binding element and drawing tool 





If the number of stitch rows has been changed to a large extent then the periodic cycle of clamping and cutting also gets changed. The clamping and cutting has to be carried out sooner or later corresponding to the changed number of rows.

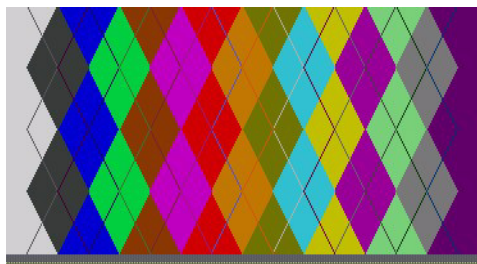
6. Close the module editor with .
7. Reply the "Should the changed module data be saved?" prompt with "YES".

If you generate a new pattern then select the "Own" module group in the selection list of the "Transition" section. The own start is inserted in the new pattern.

2 Further topics

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2.1 Pattern with Intarsia Yarn Carrier Type 2

Pattern data	Pattern picture
File: Intarsiafadenführer Typ2.mdv Pattern width: 370 Pattern rows: 200	
Machine type	CMS 822 with 2x16 clamping and cutting devices
Gauge	E 6.2
Start	1X1
Basic pattern	Front stitch with transfer
Knitting technique	Intarsia with 29 yarn carriers
Description	Intarsia pattern with intarsia yarn carrier type 2

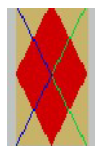
I. Generate intarsia motif:

1. Generate a new pattern without a start.
2. Generate a rhombus as a pattern element.

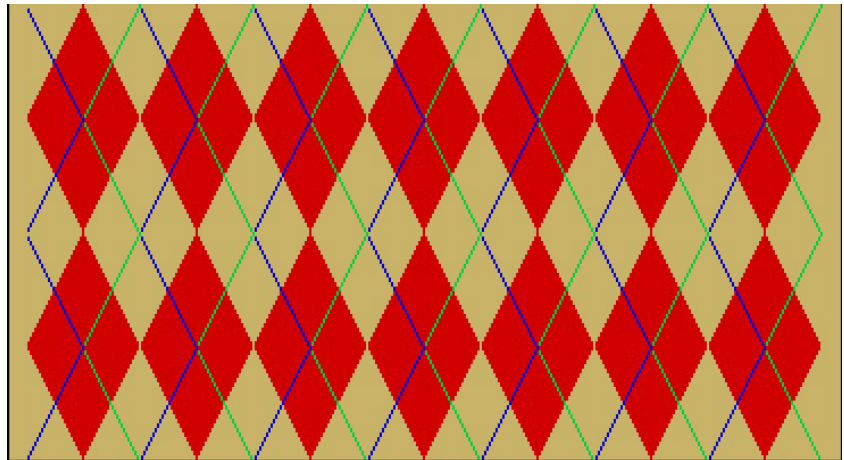


The minimum width of the rhombus corresponds with distance of two yarn carriers on the same rail, that is 4 inch.

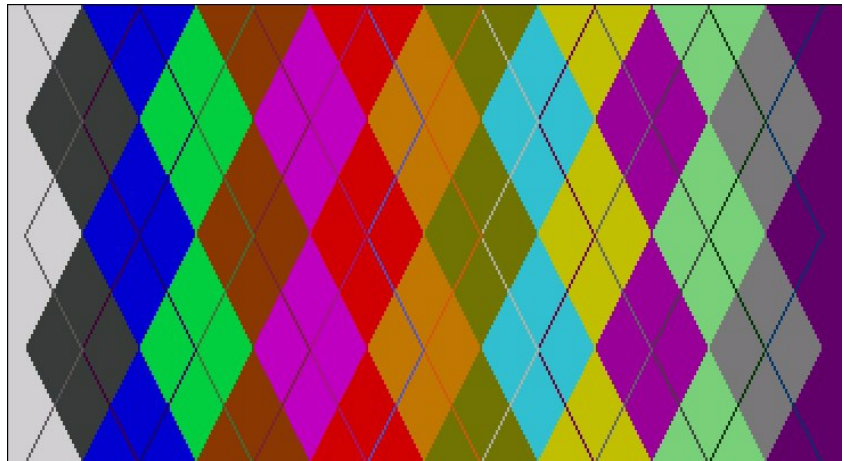
Example: With the E 6.2 (12) gauge it equals 49 needles.



3. Generate motif with the pattern elements.



4. Fill the rhombuses and the diagonals with different colors.



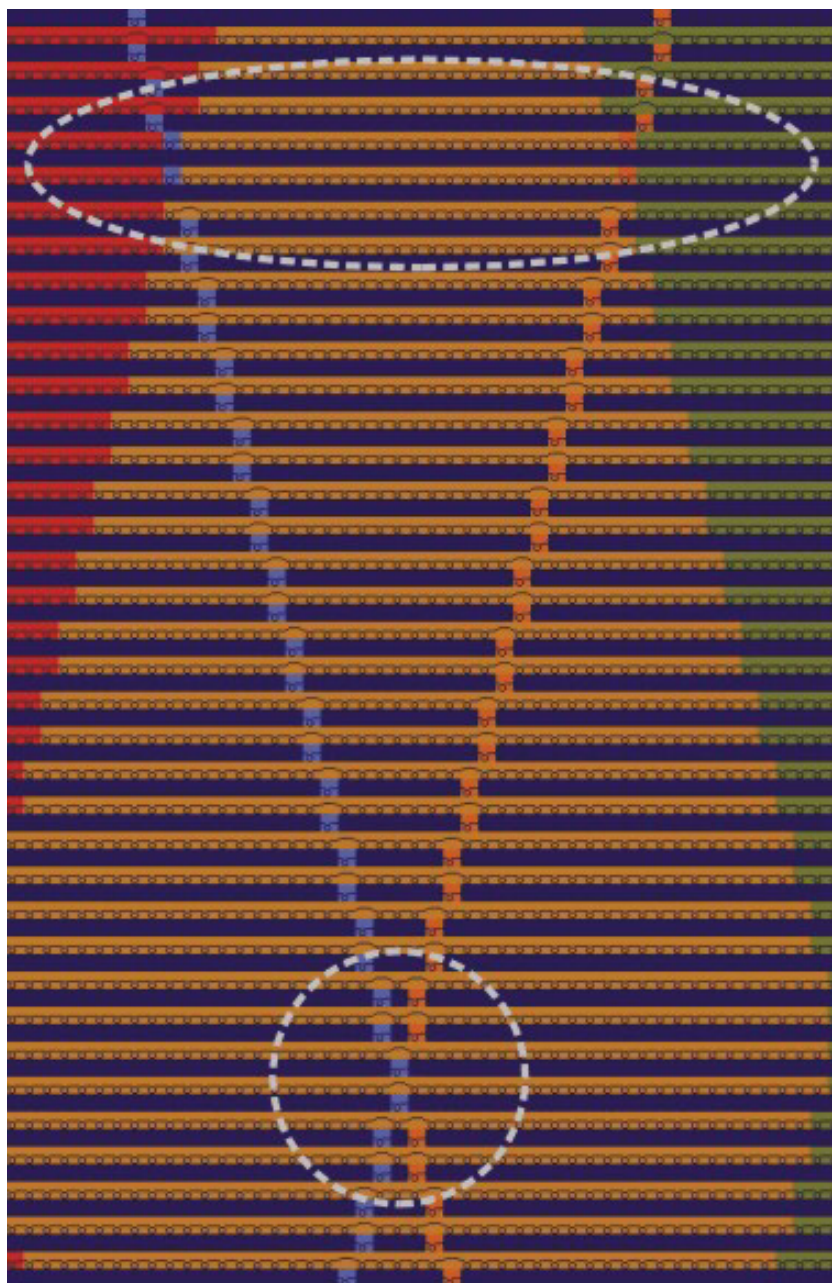
5. Select the diagonals and generate the "Float Jacquard" yarn bridges.



6. Modify the motif in order to achieve a more reliable run and a better look

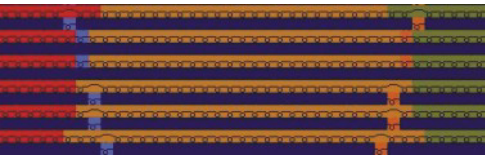

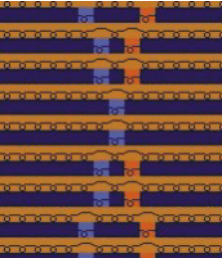
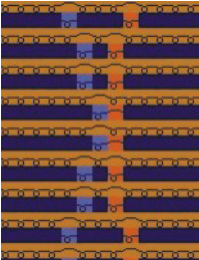


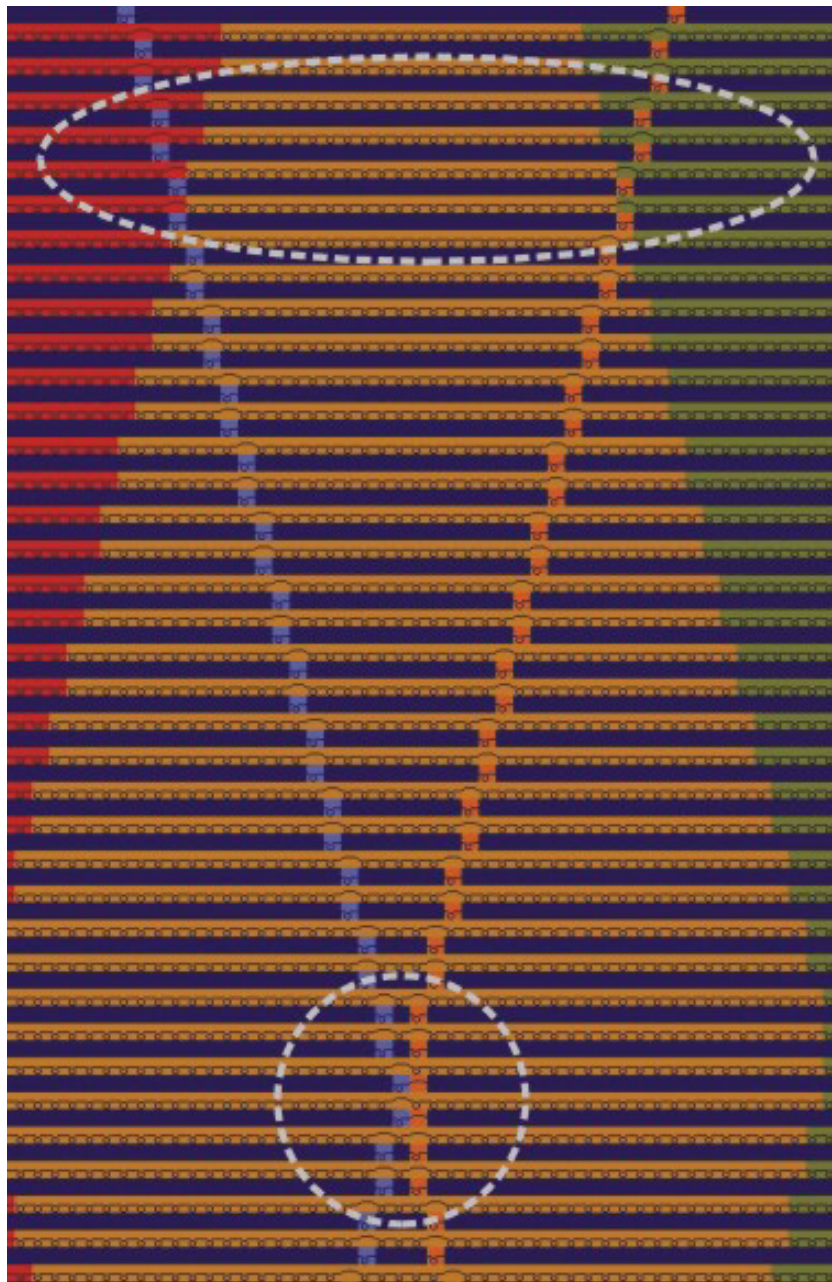
You can remove the jacquard generator for the correction.



Part of the motif without correction

Further topics

Before the correction	After the correction
1. At the points where the diagonals come in and out of the rhombus.	
	 <ol style="list-style-type: none"> 1. Insert empty rows manually. 2. Draw-in Stitch with transfer into the empty rows. 3. Replace stitch with transfer with Float.
2. At the crossing points of the diagonals.	
 <p>Only one color runs through.</p>	 <ol style="list-style-type: none"> 1. Draw-in the Float needle action with a second color.



Part of the motif with correction

7. Insert the start.

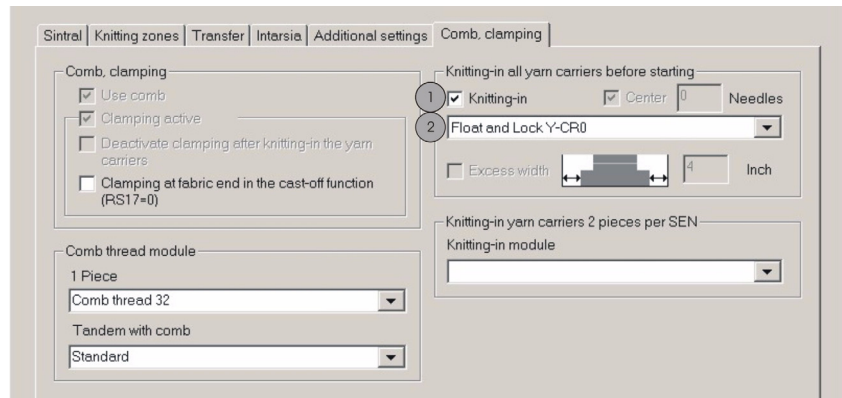


Select a start knitting by one system only and without elastic yarn.
You can use more yarn carriers in the pattern with it.

II. Activate the knitting-in of yarn carriers:

The knitting-in of all yarn carriers is necessary if you will use more than 16 yarn carriers, meaning that yarn carriers must be positioned within the outer group of the clamping/cutting bed.

1. Activate knitting-in of the yarn carrier in dialog box "Configuration" / "Knitting zones" (1).



2. Select a module specially prepared for knitting-in and locking of yarn carriers (2).

→ Modules for knitting-in and locking with an active clamping/cutting bed:
"Knitting-in and Locking"
"HK_Float and Lock"

- or -

→ Modules for knitting-in and locking with an clamping/cutting bed deactivated:
"Knitting-in with locking Y-CR0"
"HK_Float and Lock Y-CR0"

III. Switch-off tuck binding:

→ Switch-off the tuck bindings for the diagonals on both sides in the Yarn Field Allocation dialog box.



IV. Allocate the yarn carriers to the yarn carrier rails:

The yarn carriers are automatically allocated to the yarn carrier rails by the technical editing of the M1.

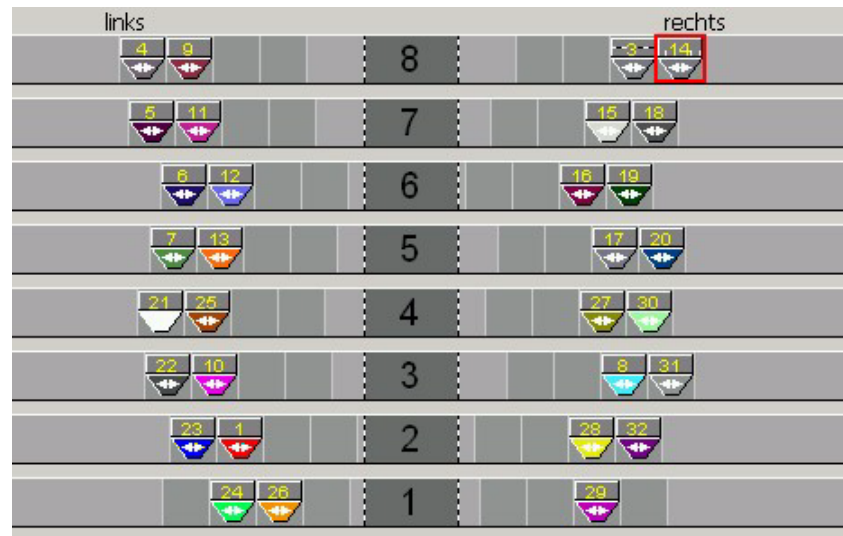
With a large number of yarn carriers in use however it is useful to allocate them manually to the rails.

1. Allocate the yarn carriers of the diagonals to the yarn carrier rails at the rear.
This leads to a better look.
2. Allocate the yarn carriers of the rhombuses to the other yarn carriers rails.



Whatch out the minimum distances when allocating manually!

Situation	Yarn carrier distance
Two yarn carriers on the same rail swiveling in the same direction must have a distance of 4.0 inch.	
Two yarn carriers on the same rail swiveling in the oposite direction must have a distance of 4.2 inch.	
Two yarn carriers on the same rail having an oposite knitting direction must have a distance of 5.7 inch.	



Yarn carriers allocated to the rails

Rules for allocating the yarn carriers.

- With the use of more than 24 colors allocate a color of the motif to the yarn carrier of the start.
- With the use of 31 colors allocate a color of the motif to the yarn carrier of the draw thread.
- With the use of 31 colors allocate the yarn carrier of the draw thread to rail 8 and to clamping position (8B or 8C) beside the yarn carrier of the comb thread.
- With the use of 31 colors and of a comb thread carrier position the comb thread carrier on rail 8 to the most outer clamping position on the left (8A) or right (8D).
- Select the "Comb thread 32" module in the "Configuration" dialog box under "Comb, clamping" / "Comb thread module" / "1 Piece".

V. Combine yarn carriers in the Configuration dialog box:

Due to the large number of yarn carriers in use combine several yarn carriers in one system in order to achieve a better productivity.

→ Activate the "Combine yarn carriers" checkbox in the "Configuration" under "Additional Settings"

Setting		Function	Special feature
Combine yarn carriers	activated	Several yarn carriers will be combine in one system by the technical editing.	Inferiority of the fabric Shorter run time
	deactivated	Yarn carriers will not be combined.	Best quality of the fabric Long run time
Methods of combining the yarn carriers			
Standard		Combining the yarn carriers automatically. Can not be influenced	Shortest run time. Problems with the tuck binding possible.
Secure yarn insertion at color widening		Automatical combining with an optimized knitting procedure for secure yarn insertion with the tuck binding.	Average run time No problems with the tuck binding
Distance for the yarn carrier correction			
Additional yarn carrier distance for corrections on the machine:		Adjust the safety distance in order to make corrections on the machine.	You can specify a shorter yarn carrier distance especially with coarser gauges. Default setting: 3

Combine yarn carriers in the Yarn Field Allocation dialog box:



You can deactivate the combining of yarn carriers coming from the "Yarn Carrier Allocation" dialog box by settings in the "Configuration" dialog box.

The yarn carriers of the diagonals shall be combined only.

1. Select the diagonals in the "Yarn Field View".
2. Call up the context menu in the list field of the "Yarn Carrier Allocation" dialog box with the right mouse button.
3. Select the mode of combining.

→ "Combine yarn carriers before (V)"

- or -

→ "Combine yarn carriers afterwards (^) "



In this example the yarn carriers before it will be combined.

Select "Do not combine yarn carriers" if you want to undo the combining.

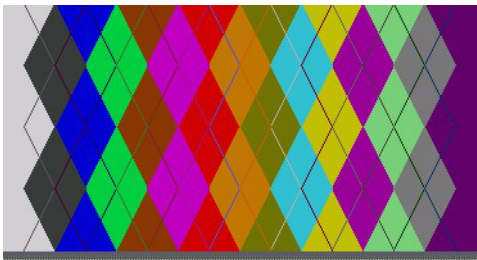
VI. Complete the pattern:

1. Carry out technical editing.

The "Generate Sintral?" prompt appears after the technical editing.

2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Conduct Sintral Check.

2.1.1 Further possibilities of the pattern with stretched stitches

Pattern data	Pattern picture
File: Intarsiafadenführer Typ2.mdv Pattern width: 370 Pattern rows: 200	

I. Modify the motif:

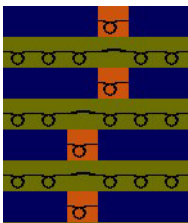
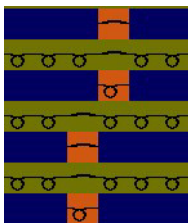
You can replace every second stitch of the diagonals by a float in order to get stretched stitches.


A better look and more reliable run can be achieved by it.

1. Draw motif.
2. Select the diagonals and generate the "Float Jacquard" yarn bridges.
3. Correct the motif.
 Modify the stitch number of the diagonals.

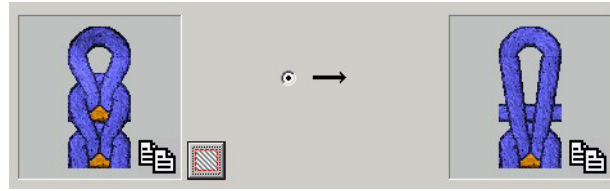


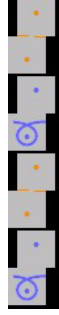
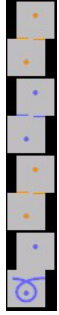
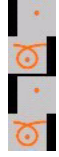
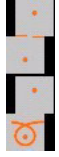
You can remove the jacquard generator for the correction.

Before the correction	After the correction
	

4. Perform the correction with the "Find and Replace"  drawing tool.
 Make selections and replace them.

Further topics

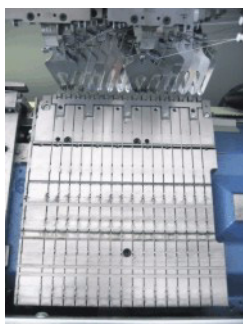


Module for the search	Replacement module
	
	

2.1.2 M1 settings for Intarsia Yarn Carrier Type 2

OKC machines can optionally have 8 or 16 clamping/cutting positions on each side of the machine.

You have to make the corresponding settings on the M1 when generating pattern.



Clamping and cutting bed with 16 yarn carriers on each side of the machine

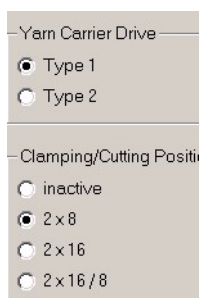
Settings on the M1:

1. Adjust the Yarn carrier type and the number of clamping/cutting positions before starting programming.

→ in the "MC Attributes" dialog box under "Options"

- or -

→ in the "Machine Explorer" / "My Machines" / "Properties" dialog box under "Options".



Element	Meaning
"Yarn Carrier Drive" section	
Option field "Type 1"	Use Intarsia yarn carrier type 1 (120 mm).
Option field "Type 2"	Use Intarsia yarn carrier type 2 (85 mm).
"Clamping/Cutting Positions" section	
Option field "inactive"	Activate this option field if the threads are to be clamped and cut.
Option field "2 x 8"	Activate this option field if the machine has two 8 times clamping/cutting beds.
Option field "2 x 16"	Activate this option field if the machine has two 16 times clamping/cutting beds.
Option field "2 x 16 / 8"	Activate this option field if the machine has two 16 times clamping/cutting beds and if the threads are to be clamped and cut at every second position only.

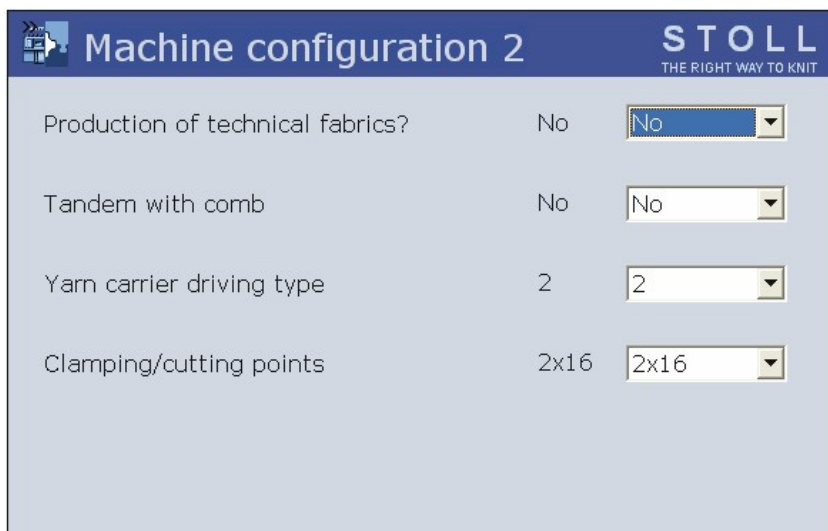
2. Close the dialog box with "OK".

2.1.3 CMS Settings for Intarsia Yarn Carrier Type 2

You have to make the settings once in the "Machine-Configuration 2" window in correspondance to the machine equipment with 8 or 16 clamping/cutting positions.

Adjust the Yarn Carrier Drive Type and the number of clamping/ cutting positions on the machine:

1. Switch on machine at main switch.
2. Press the "Installation and Configuration" key in the "Start Menu" window.
3. Make the settings in the "Machine Configuration 2" window



	Selection	Setting
1	Yarn carrier driving type	2
2	Clamping/cutting points	2x16

4. Finish the installation and configuration.

2.1.4 Special features with Intarsia Yarn Carrier Type 2 and Clamping and Cutting (2x16)

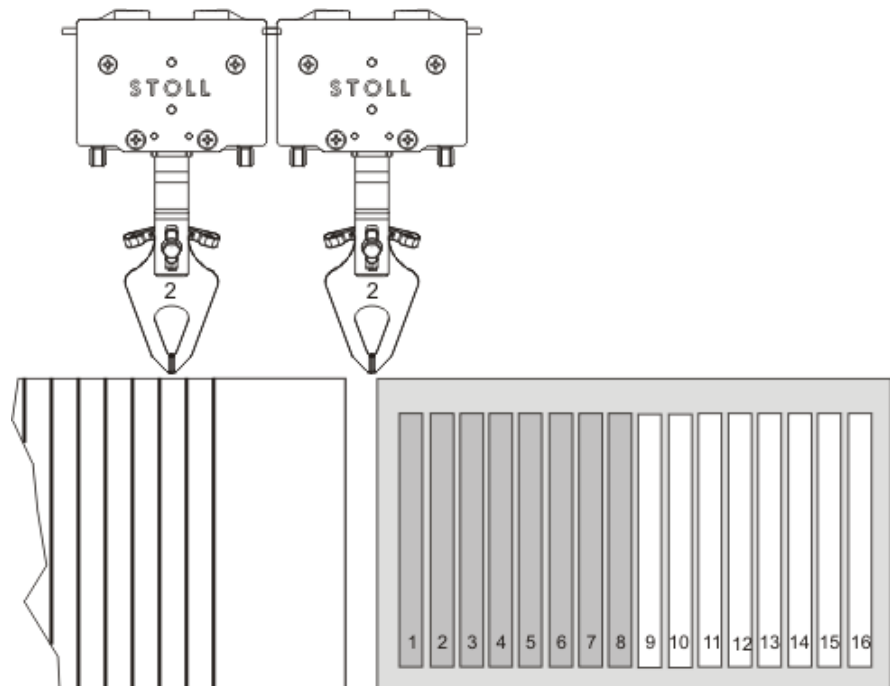
2.1.4.1 Knitting width in dependence on the yarn carrier allocation

I. With double allocation of yarn carriers on one side of the machine with the clamping/cutting bed active:

The knitting area can be reduced due to stopped yarn carriers.

Rules of positioning:

- The outer yarn carrier is positioned in such a way that it will not be stopped on the clamping and cutting bed.
- The inner yarn carrier is positioned as close as possible next to the outer. In unfavorable cases the inner yarn carrier is positioned within the needle bed.
- No yarn carrier is positioned within the clamping/cutting bed



Stop positions with the clamping/cutting bed active

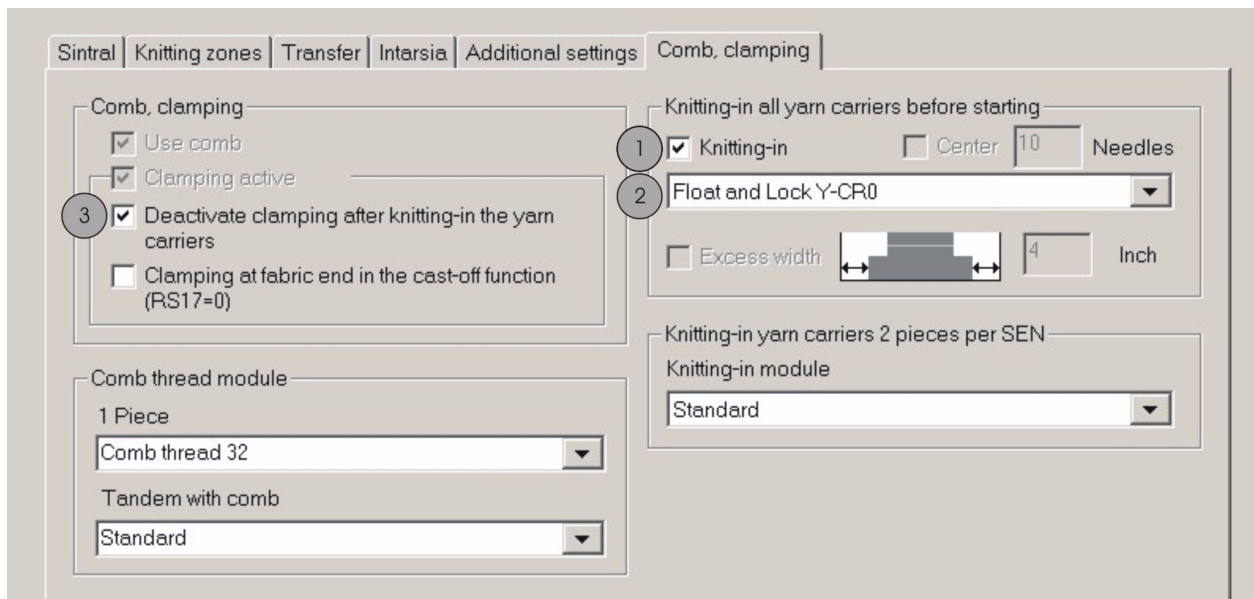


You can deactivate the clamping/cutting function if the available knitting area is emerged as too little by the technical editing.

II. With double allocation of yarn carriers on one side of the machine with the clamping/cutting bed deactivated:

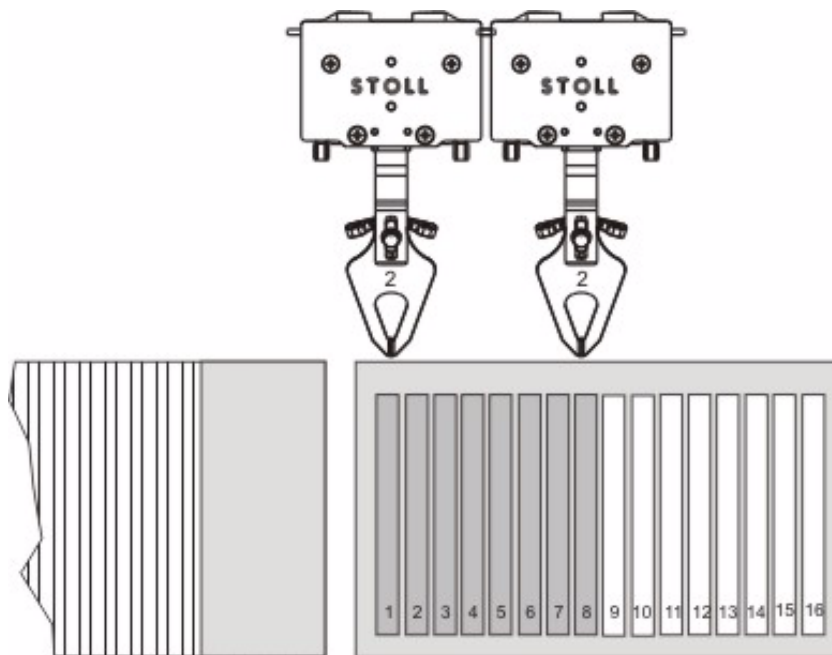
It is possible to knit over the total width of the needle bed.

1. Activate the "Deactivate clamping after knitting-in of the yarn carrier" checkbox (3) in the "Configuration" / "Comb, clamping" dialog box.



The clamping/cutting beds will be deactivated by the Y-CR0 command after knitting in the yarn carriers.

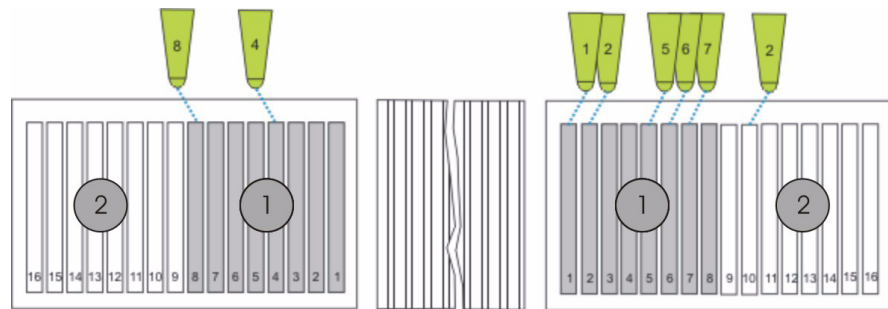
The yarn carriers will be positioned within the clamping/cutting bed.



Stop position with the clamping/cutting bed deactivated

2.1.4.2 Rules for allocation of the clamping positions

If more than 8 yarn carriers are used on one machine side, crossings of the threads can arise in the area of clamping/cutting bed. Crossings of the threads will be avoided by grouping into an inner and outer group and by a corresponding allocation.



Grouping of the clamping positions

1	Inner group with 8 clamping positions (1-8) each
2	Outer group with 8 clamping positions (9-16) each

If you prepare a knitting program manually you have to watch out that now thread crossings occur.

Situation	Rule
Take yarn carrier out of clamp	<p>If a yarn carrier of the outer group is used (clamping point 9 to 16), all yarn carriers of the inner group (clamping point 1 to 8) with a higher number must have already been knitted-in in the fabric.</p> <p>Example: Yarn carrier 3 (outer group) should be taken out of the clamp. Then the yarn carriers 4 to 8 of the inner group may not stand in the clamping point any longer, they must already be knitted-in.</p> <p>i: This also holds good for yarn carriers that are not used in the fabric.</p>
Bring the yarn carrier in the clamping position	<p>If a yarn carrier of the inner group has to be clamped (Clamping position 1 to 8), all yarn carriers of the outer group (Clamping position 9 to 16) must be clamped already with a lower number.</p> <p>Example: Yarn carrier 3 (inner group) should be brought in the clamp. Then the yarn carriers 1 and 2 of the outer group must already be in their clamp.</p> <p>i: This also holds good for yarn carriers that are not used in the fabric.</p>



Yarn carriers of the inner group that are not used in the pattern must be thread out if a yarn carrier of the outer group with a lower track number is being used in the pattern.



These rules are supported by the M1.

2.1.4.3 Basic positions and combination possibilities of the yarn carriers

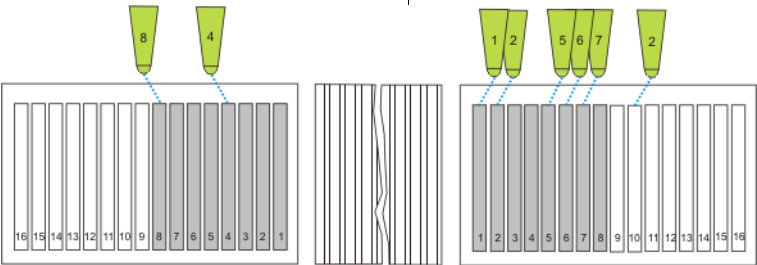
I. Yarn carrier basic positions with 2x16 clamping/cutting positions:

Using the clamping and cutting beds (2x16) the yarn carrier basic position will be indicated by YGC.

The yarn carrier will be allocated to clamping positions with the same number.

Example of yarn carrier basic position

Left side of the machine / Number of yarn carrier		right side of the machine / Number of yarn carrier	
Outer group	Inner group	Inner group	Outer group
	8, 4	1, 2, 5, 6, 7	2



YGC: 4 8 / 1 2 2 5 6 7;

II. Possibilities to combine yarn carriers:

	Clamping and cutting bed 2x8	Clamping and cutting bed 2x16	Clamping and cutting bed 2x16/8
Intarsia yarn carrier type 1	X	----	X
Intarsia yarn carrier type 2	X	X	X
Intarsia yarn carrier type 1 + 2	----	----	----
Normal yarn carrier	X	X	X
Normal yarn carrier Intarsia yarn carrier type 2	X	X	X
Plating yarn carrier (max. 2x8 pieces)	X	----	X



The possible combinations for normal and intarsia yarn carriers are unchanged.

2.1.4.4 Protection rows

The last yarn carrier used will automatically be used for the protection rows.

This one (its clamping positions) can be blocked by an other yarn carrier, which is why an error message (collision) appears during technical editing.

Avoid a yarn carrier collision:


1. Switch off protection rows in the "Configuration" / "Knitting Zones" / "Special knitting pieces" dialog box.

Draw in two stitch rows at the end of the pattern with the color which will be clamped at last.

- or -

- Generat a protection row module with the color which will be clamped at last and insert it.

2.2 Picture import

Pattern data	Output image
File: Picture import Pattern width: 315 Pattern rows: 226	
Machine type	CMS 530
Gauge	8
Start	2X1
Technique:	Picture import

I. Step 1: Import a picture file:

1. Call up "Import picture" dialog box.
Via "File" / "Import" / "Picture..."



Before "Load" default settings can be made via the dialog box "Settings".
These are effective while importing a picture.

2. Load the picture with the "Load" button.



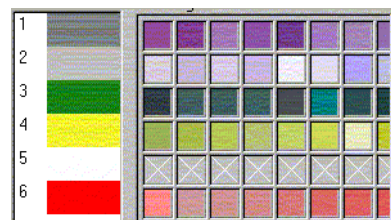
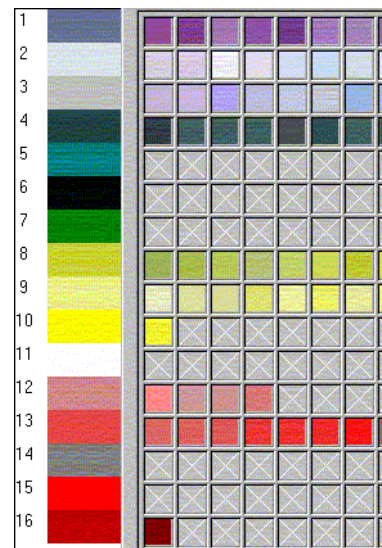
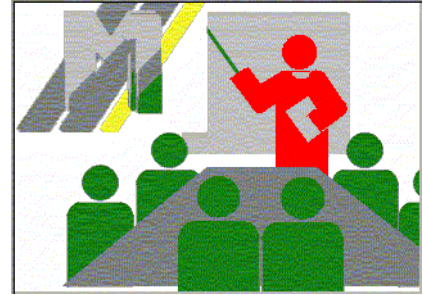
Pictures of formats bmp, tif and pcx can be imported.

3. Reduce color number in case of imported picture.
In the "Stage 1: Color selection" with the "Color reduction" button and with the entry of the number of colors in the selection field.

Motif and number of colors from the imported picture automatically reduce to 16 colors



Motif and number of colors after reduction to 6 colors



A color reduction can be carried out manually also.

4. Selection of machine type and start.
5. Specify details for picture editing:

Possibilities for picture editing	Function
Pure Jacquard	A color jacquard with back side is produced.
Struct./Intarsia/Jacquard	A structure pattern or intarsia pattern is produced.
Shape	Convert the picture to a shape.

6. Under "Pattern" make the setting: "Structure/Intarsia/Jacquard".
7. During "Finishing" a fabric and technical presentation is generated.
- or -
8. With "Further>" to editing stage 2.

II. Step 2: Edit imported picture:



In every editing stage by pressing the key "<Back" one can go back to the previous editing stage.

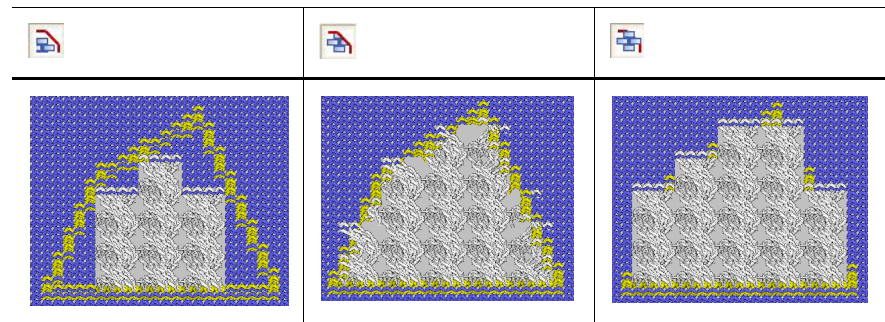
1. Allocate modules or Jacquard generators to the different target colors under "Module name".
2. Allocate different yarn colors under "Yarn".
3. Switch to the next editing step by "Continue>" "Step 3: Module positioning "

Allocated modules are laid on a grid.

III. Step 3: Position module:

1. Specify the insert mode of the module:

Specification	Setting	Function
Grid	deactivated	Modules are positioned irregular
	activated	Modules are positioned irregular
Edge	free	Modules are only complete therefore are not always filled till the color edge.
	exactly	Modules are filled to the color edge
	covered	Modules are filled over the color edge



2. By "Calculate new module positions" the settings are carried out.

- or -

→ By "Apply default" the positionings are reversed.

3. Press the "Finish" button.

The imported picture is transferred to a pattern and is presented in the fabric and technical view.

Resolution: Ein Pixel (color point) of the picture file corresponds to one stitch in the pattern.

IV. 1:1 Technique

You can double the width of a picture with the picture import function by switching in the "Step 1: Color selection" dialog box to 1:1 technique in the presentation section.

By this the motive will be doubled in the width, which is helpful when generating a k&w pattern.



Do not compare this possibility to the conversion of a pattern into 1X1 technique.

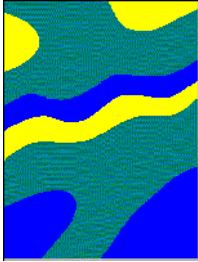
V. Import pattern and shape simultaneously:

A picture and a shape can be imported simultaneously with the picture import function.

1. In the dialog box "Step 1: color selection" switch over with the key "Settings" to the "Default settings".
2. You can select "shape" and the desired "knitting mode" under pattern
3. Confirm settings with "OK".
4. Activate "Shape" in the "Step 1: Color selection" dialog box under pattern.
The picture to be imported is presented in two colors.
5. Select one of the two colors in target colors and mark it under shape as "<- within".
6. With the key "Finishing" the imported picture is generated as shape.

In the "Shape view" the shape can be edited.

2.3 Save area as Picture

Pattern data	Pattern picture
File: Saving a picture Pattern width: 150 Pattern rows: 200	
Machine type	CMS 530
Gauge	8
Start	2X1
Technique:	Save motif as picture

I. Save a motif or part of a motif of a pattern as a picture file:

Fabric view is active with small zoom step..

1. In the fabric view generate a selection via the desired area.
2. Save the selected area.
Via menu "Extras" / "Save symbol/fabric view as picture (Section)...".
- or -
- Save the entire pattern as picture.
Via menu "Extras" / "Save symbol/fabric view as picture".
3. Specify path and format (.bmp).

You can load the picture file under its mentioned path.

Via menu "File" / "Import" / "Picture" / "Load".

2.4 Online to machine

Pattern description:

Prepare online connection to the machine for transfer of pattern and machine data.



I. Transfer machine data to the machine:

1. The carriage should stop at the left reversal point in the stroke from left to right.
2. Open machine explorer.
Via menu list "View" / "Machine explorer".
3. Select machine.
Via the "My machines" tab.
4. Select a machine.
5. Call-up "Load data in machine" in the context menu.
6. Click on file type to be loaded: "Sintral", "Jacquard", "Setup" etc.
7. With "Browse" specify the path under which the file to be transferred is saved.
8. With "Start" carry out transfer to the machine.

II. Save pattern data from the machine:

1. Open machine explorer.
Via menu list "View" / "Machine explorer".
2. Select machine.
Via the "My machines" tab.
3. Select a machine.
4. Call-up "Load data in machine" in the context menu.
5. Click on file type to be loaded: "Sintral", "Jacquard", "Setup" etc.
6. With "Browse" specify the path under which the file to be transferred is saved.
7. With "Start" carry out transfer from the machine.

III. Add a machine in the network:

1. Open machine explorer.
Via menu list "View" / "Machine explorer".
2. To add a machine.
Via tab: "Own machines" / context menu "Add machine".
3. Specify properties.
Via tab "Online Parameter" / context menu "Properties".
4. Confirm entry with "OK".



2.5 Read and edit data from floppy disk and knit memory card

The data sintral, jacquard and setup can be read in from the floppy disk or knit memory card on M1. Data that are transferred have to be converted. This conversion is automatically carried out by saving in the cardimag file of the floppy disk or on the knit memory card.

Data that can be saved for transfer on to the disk or KMC:


- Sintral
- Jacquard
- Setup

I. Read data from floppy disk or KMC:


1. Open the "STOLL Knit Memory Card" dialog box within the M1 program.
Via menu "File" / "Knit-Memory-Card..."
2. Open the container in KMC window:
With symbol  on the disk.
3. Select the path for the drive of disk A and open the file cardimag.img.
- or -
→ With symbol  on the knit memory card.
4. Select the files Sin. Jac. and Set., that have to be transferred.



The files must be saved on the hard disk so that they can be edited.

5. Save the files to any desired directory.
Via menu "Edit"/"Save File(s) from KMC as...." or by 
6. Close the dialog box "STOLL Knit Memory Card..."

II. Open Sintral:

1. Open the Sintral Editor via "Sintral" / "Sintral Editor".
2. Load the Sintral from the specified directory via "File" / "Open..." or the symbol .
3. The Sintral will be shown in the "Sintral Editor" and it can be changed if necessary.
4. Save edited sintral.

III. Open jacquard:

1. Load the Jacquard from the specified directory via "File" / "Open..." .
2. In the dialog box "Open" under file type switch to "MC-Jacquards (*.jdv, *.jac)".
3. Load the selected jacquard file with "Open".
4. The jacquard is displayed in the "Symbol view " and can be edited if required.
5. Save edited jacquard.



Feedback and editing in the M1 technique and the generation of a M1-pattern file (.mdv) is not possible.

III. Sintral check

With the sintral check changed knitting programs can be tested.

6. Call up the Sintral Check program via the "Sintral" / "Sintral-Check" menu.
7. The program to be tested must be loaded.

Press in the row Sintral the key .



8. Start the Sintral Check with the  button.



More information in chapter [Sintral-Check](#) [s. p. 197].

2.6 Data conversion and data exchange

In order to carry out an exchange from SIRIX to M1 or M1 to SIRIX via network the data are to be converted. The conversion produces formats that can be read by M1 and SIRIX. The conversion is always carried out on SIRIX. The programs required are:

- "SIRIX_to_M1"
- "M1_to_SIRIX"

The programs for the data conversion are on the SIRIX in the directory "Tools "/" M1".

Data that must be converted:

- Sintral
- Jacquard
- Setup
- Sintral check data, packed and unpacked
- Sequence file
- Sequence file list
- Picture file
- Text file
- Machine data

I. Data conversion SIRIX to M1:



The sintral check must be carried out on the SIRIX and the check data should be saved.

9. Put the pattern file with the sintral check data in the program SIRIX to M1.
10. A folder is generated with the same name and ending .M1.



Note that the colon in the name of the SIRIX file or in the SIRIX folder is not permissible in Windows and will therefore automatically be replaced with the equals sign during data conversion.

The colon appears especially in the machine type CMS330:6. .

Use of the imported data on M1:

File	Ending	Ending SIRIX	Use in the M1
Sintral	.sin		Archiving.
Jacquard	.jac		Online transmission to the machine. Transmission on KMC and disk. Changes through sintral editor.
Sintral check data	.check		Generate patten element/ piece.
Sintral check data, compressed	.check.z	.check.gz	
Setup	.set		Archiving. Online transmission to the machine. Transmission on KMC and disk. Changes through setup program. Transfer of data in the pattern.
Sequence	.seq	.seq	Archiving. Online transmission to the machine. Transmission on KMC and disk. Changes through text editor.

II. Data conversion from M1 to SIRIX.

The data has to be extracted from the M1 pattern file (.mdv) before the conversion .

II A. Extract data on M1:

1. Call up the "Extract jac/sin/set-files..." dialog box.
Via menu "Sintral" / "Extract jac/sin/set-files...".
2. Specify the directory in which the files should be extracted and accept with "OK".



If the file name for SIRIX contains a sign that is not permitted then a message appears and the name will be automatically adjusted.

3. Save the extracted files like Sintral, Jacquard, Setup on floppy disk or put it into a SIRIX shared directory to do the data transfer.



Create a new folder with the same name like the sintral, jacquard, setup files that have been created in this folder.

Advantage: All the files found in folder are converted on the SIRIX in one step.

II B. Carry out the data conversion on SIRIX:

The data on M1 must be extracted from the .mdv File.

1. Drop the files Sintral, Jacquard and Setup individually onto the "SIRIX_to_M1" program of SIRIX and convert them.
2. A folder with the ending .# will be created which contains the file converted at first.
3. When the next file will be converted the "Pattern folder with this name exist already. Overwrite?"
 - By selecting "YES" the converted file is saved in the existing folder.
 - By selecting "NO" the conversion is not carried out.

II C. Use of imported data on SIRIX:

File	Ending	Use in the SIRIX
Sintral	.sin	Archiving. Online transmission to the machine. Transmission on KMC and disk. Changes through sintral editor.
Jacquard	.jac	Archiving Online transmission to the machine, Transmission on KMC and disk. Editing in jacquard program.
Setup	.set	Archiving. Online transmission to the machine. Transmission on KMC and disk. Changes through setup program.
Sequence	.seq	Archiving. Online transmission to the machine. Transmission on KMC and disk. Changes through text editor.

The pattern can be further edited on SIRIX.

III. Sintral check data import from SIRIX to M1:

The sintral check data generated on SIRIX must be converted by the program "SIRIX_to_M1". Thus a format readable for M1 is produced. For transmission of sintral check data from SIRIX to M1 the systems should be networked together with each other. (Samba). Or the data will be transferred via floppy disk or Knit-Memory-Card from SIRIX to M1.

1. Save data to be imported to a drive of the M1.
2. Extract compressed Sintral Check data (.check.gz).
3. Call up the "Import Sintral check" dialog box.
Via menu "Sintral" / "Import Sintral-Check...".
4. Select a machine.
5. Make "Import settings".

2 Further topics

Setting		Function
Take cycles into account	Switched on	Cycles and their repetitions of the SIRIX program will be transferred into the cycle table of the M1. The repetitions will not be displayed in the technical view.
	Switched off	Cycles of the SIRIX program will not be transferred into the cycle table of the M1, but will be displayed with the corresponding set repetitions in the technical view.
Optimize pattern width	Switched on	Empty columns left and right from the fabric edge are deleted.
Remove overrun paths/edge floats	Switched on	The overrun path of the yarn carriers will be displayed.
	Switched off	The overrun path of the yarn carriers will not be displayed.
Group pattern rows as per jacquard 1	Switched on	A jacquard row corresponds to a pattern row. (SIRIX Jacquard #1) Jacquard rows will be grouped to one pattern row.
	Switched off	Each knitting row results in a separate own pattern row. Transfer rows are always grouped with the knitting row below them independent of the setting.
Pattern start with undefined racking	Switched on	In the first knitting row undefined racking by the symbol V? is entered. The racking position will be kept until a needle bed will get empty by transferring or casting off.
Import before technical editing	Switched on	The sintral check data are read-in, the technical editing can be carried out again.
Generate shape from shape counter #L...#R	Switched on	The shape counters will be used to generate the shape.

6. Select the file to be imported and start the import.
With the "Import" button.

The data are imported and displayed in a Technical view window. Via "View" / "Open new fabric view" or "Open new symbol view" the desired presentation can be activated.

This knitting program does not consist of modules. Therefore a further processing is relatively difficult



The yarn type specification in the Sintral check file is ignored. Each yarn carrier is shown in a separate yarn color.

If you want to generate the Sintral from the pattern, always carry out technical editing beforehand. This technical editing completes the movement of the yarn carriers.

2.7 Import setup data

I. Import setup files to the M1:

Setup data can be imported in M1:

- From another M1 pattern.
- From the machine.
- From the Sirix.

The setup data can contain:

- Stitch length (NP)
- Fabric take-down (WMF)
- Yarn carrier correction (KI / K <I>)
- Carriage speed (MSEC)
- Yarn carrier distance (YD)

1. Call up dialog box "Import Setup".
Via menu "Sintral" / "Import Setup..." .
2. Select file with setup data (.set).
3. Confirm with "Import".

The data are imported and are entered in pattern parameter, yarn field allocation and in the knitting program.

4. Behavior during import of setup data.

Import setup data	Result	Function	Result	Function	Result
After technical editing	→ All imported data is transferred.	Renewed technical editing	→ All imported data remain intact.	Load pattern before technique	→ All imported data remain intact.
		Load pattern before technique	→ Now only the data that is used in the pattern before the technique is available.		
Before technical editing.	→	During import only the data that is used in the pattern before the technique is imported.			

2.8 Networking

For the data exchange between Windows and UNIX pattern units a network for equipment with different operating systems is necessary. Such a network is possible via "Ethernet". In this case the installation of a File-Server-Software (e.g. Samba) on the SIRIX is needed. Data exchange between both systems is made possible through networking. In the Windows system the UNIX system is accessed on a shared directory.



Samba can be procured free of cost and can be downloaded via the internet.

Since the software in question is free of cost the company H. Stoll GmbH & Co.KG does not take any guarantee for the same.

2.9 Technical Editing

In case of patterns that have been re-generated or changed, a technical editing must be carried out. Thereby the different technical regulations are run and the pattern is examined for its functions.

→ Possibilities of technical editing:

- Automatic Technical Editing
- Stepwise Technical Editing

I. Automatic Technical Editing:

1. Generate a new pattern or load an existing one.
2. Start the automatic technical editing.
Menu "Knitting Technique" / "Automatic Technical Editing".

Technical editing runs through all technical rules without stopping. Occurring problems and any value adjustments required are edited with preset solutions.

3. After technical editing appears a prompt in the technical assistant
"Generate sintral/jacquard/setup?"
"Switch off or on the sintral generation with the check box and confirm with "OK" .

II. Stepwise technical editing:



The stepwise technical editing can be stopped and continued.

1. Generate a new pattern or load an existing one.
2. Start stepwise technical editing.
Menu "Knitting Technique" / "Stepwise Technical Editing".
3. Activate the technical editing with "Start".
The technical editing runs through till the end or till the next set stop.
4. With "Next" stepwise to the next rule.
5. After technical editing the "Generate Sintral?" prompt appears in the technical assistant.
Switch on or switch off the sintral generation with the check box and confirm with "OK".

Elements in technical assistant	Function
"Start"	Technical editing is started.
"Continue"	Technical editing is continued.
"Next"	Next step of the technical editing.
"Stop"	Technical editing is stopped.
"Intermediate Backup"	Save pattern and the technical regulations that have been carried out. Note: Pattern must be saved before technical editing.
"Exit"	Technical editing ends
"Always apply solution without prompting".	Occurring problems do not cause technical editing to stop. The solution displayed in the Solution table is used. Corresponds to the automatic technical editing.
"Apply solution as specified".	Occurring problems that do not have the status Never confirm in the solution table stop technical editing and are displayed with the existing solutions.
"Always apply solution with pause and prompting".	All occurring problems stop technical editing and are displayed with the existing solutions.



Pattern changes that effect the knitting procedure must be carried out before the technical editing. Therefore cancel the already running technical run (Menu "Load pattern before technique").

Changes that do not effect the knitting procedure can be carried out after the technical editing is done. A renewed technical editing is, however, necessary.

2 Further topics

III. Set markings in case of technical editing:

To cancel technical editing, one or several stop markings can be set.

1. Generate a new pattern or load an existing one.
2. Call up menu "Knitting technique" / "Stepwise technical editing".
3. In "Technical assistant" set the marking for stop by pressing the key



By repeated pressing of key  the stop can be deactivated.

Load	Save	Stop	Rule	State
			Determine yarn carrier parking position	Executed
			Reorganizing transfer	Executed
			Transfer surrounding	Executed
			Apply module data in the pattern	Executed
			Insert clamping and cutting into the pattern	Executed
			Combine cast-off and transfer rows	Executed
	<input type="checkbox"/>		Intermediate backup 3	
			Determine yarn carrier parking position	Executed
			Determine yarn carrier allocation	Executed
			Knit in start with yarn carrier	Executed
			Displace yarn carrier	Executed
			Transfer in 1x1	Executed
			Combine yarn carriers	Executed
			Specify strokes	Executed
	<input type="checkbox"/>		Intermediate backup 4	
			Insert needle related standard values	
			Adjustment of the stitch lengths	
			Determine yarn carrier parking position	
			Insert stroke related standard values	

Always apply solution without prompting
 Apply solution as specified
 Always apply solution with pause and prompting

[Solution table](#)

4. Press the key "Start".
Technical editing is carried out till the stop mark.

- or -

- Press the key again.
The technical editing is carried out further till the next stop or till the end.

IV. Possibilities of technical editing.





New pattern / existing pattern			
↓			
Automatic or stepwise technical editing			
↓	↓	↓	
	Load pattern before technique		
	↓	↓	
	Change module	Change pattern after technical editing	
	↓	↓	
	Automatic or stepwise technical editing	Automatic or stepwise technical editing	
	↓	↓	Undo last technical editing
			↓
			Change module
			↓
Automatic or stepwise technical editing			
↓	↓		
Generate a Sintral	Generate a Sintral	Generate a Sintral	

2.10 Data back up of the Technical Editing

You can set 4 defined stop positions with the stepwise technical editing.

I. Activate the stop positions:

1. Call up "Stepwise technical editing...".
2. Activate one or more stop positions by clicking on them.

Load	Save	Stop	Rule
	<input type="checkbox"/>		Insertion of I-yarn carrier swivel
	<input type="checkbox"/>		Zwischensicherung 2
			Determine yarn carrier parking position
			Reorganizing transfer
			Transfer surrounding
			Insert clamping and cutting into the pattern
			Combine cast-off and transfer rows
			Transfer in 1x1
			Adjustment of the knock-over values
	<input type="checkbox"/>		Zwischensicherung 3
			Adjustment of the take-down values
			Adjustment of the carriage speeds



By renewed clicking the stop is deactivated again.

II. Generate data backup:

Data backups can be generated during stepwise technical editing. Thereby you can change the determined knitting cycles manually. These modifications will not be checked once again by the repeated technical editing if they had been checked already by rules before the intermediate back up.



Manual modifications after the technical editing are risky!




Save the pattern before technical editing so that the path is specified for the data backup.

3. Call up "Stepwise technical editing...".
 4. For data backup, activate the checkbox in the "Save" column.
 5. Carry out the technical editing with the "Start" or "Next" button.
- or -
- You can carry out a backup manually before every stop position with the "Data backup" button.

III. Load data backup:

A data backup can be loaded.
Any technical rules already made are no longer taken into account.

To activate the data backup "Load pattern before technical editing" must be carried out.

1. Call up "Stepwise technical editing...".
2. Click on the  icon in the "Load" column.
The data backup gets activated.
3. Continue with technical editing with the "Continue" or "Next" button.

2.11 Sintral check

With Sintral check, knitting programs for CMS machines can be tested for their knitting ability and functions.

The Sintral Check cannot be carried out until after technical editing.

1. Call up the Sintral Check program via the "Sintral" / "Sintral-Check" menu.
The program currently being edited is automatically loaded.



2. Start the Sintral Check with the  button.

I. Cross reference from Sintral check to the corresponding row in the M1:

Editing in the Sintral Check gets more simple by cross references. A selected row is displayed in the different views of the Sintral Check. In the fabric view as well as in the technical view.

II. Determine data for yarn consumption and run time:

The yarn consumption and the knitting time can be determined in the Sintral Check.

- Calculate the data via the "Requirements"/"Calculate knitting time" or "Calculate yarn consumption" menu.

III. Save Sintral Check data:

You can save the Check Data as a text file in the Sintral Check.

1. Call up the "Settings" / "Program configuration" menu.
2. Select the corresponding option in this menu and confirm with "OK".

Yarn consumption and knitting time	
Options	Meaning
Do not save	Data will not be saved
Save in Sintral directory	Data will be saved as txt file under the same path as the .mdv file
Save in a specified directory	Data will be saved as .txt file in a specified directory

3. Conduct Sintral Check.
4. Call up the "File" / "Save Sintral Check Data" menu.
The "Data are saved (... .sim)" message appears.

Backup of the pattern	Path to the file
Pattern is saved	Same path as the .mdv file
Pattern is not saved yet	Under: D / Stoll / M1 / Tmp

2.12 Installing M1 software

The STOLL pattern software M1 is contained on DVD for installation on a PC using the MS Windows XP operating system.



Selected components (for e.g. Languages for the user interfaces of the M1-Programmes) can be installed subsequently or can be removed separately.

You are guided step by step on the screen with all installations. The language of the instructions can be selected. All required settings and the current installation state are automatically taken into account here.



To install the M1 software under Windows XP, logon as the administrator. For M1 dialog boxes to be displayed properly, the DPI value for the Display must be set to 120 DPI via the Control Panel.



A backup copy of the module database is generated during the installation of a new version. Here, the module database is stored as a compressed file in the ConfigDataBackup directory. The requirement here is that the PowerArchiver component has been selected during installation.



The global pattern parameters and the machine database can be transferred from one M1 to another M1. Both M1 workstations must have the same software version.

The global pattern parameters and modules are saved in the file
D:\Stoll\M1\ConfigData\GlobalParameters.mdv as default.

The machine database is saved in the file
D:\Stoll\M1\Database\Machine\mcclient_backend.mdb as default.

2.13 Program settings

The dialog box "Program settings" is called up with the function "Program settings" in the menu "Extras".

The following tabs are available for this:

Tab	Contents
Save	Optional settings for the data backup.
Load	Selection of views to be displayed when loading/generating a pattern/module.
Modules	Display of the directory in which the module database is saved
Symbol/Fabric View	Setting the grid color
Technical view	Settings for - Show transfer in color.
Shape view	Color setting of the reference edges
Jacquard editor	No option available
Fonts	Setting of the used knitting types.
Directories	Display of the directory for program pieces of M1
Help system	Display the directory in which the help files are located
Miscellaneous	Settings for: - Buffer size for undo/redo - Generate sintral after technical editing. - Extended coordinate display - Display log file after technical editing - Selection with hotspots - Use shape counters for the left and right knitting piece
Hardware	Optional settings for additional equipment
Sintral	Settings for cycle switch and sintral editor

2.14 Description of pattern:

In order to supplement a knitting program to M1 a pattern description can be generated. Thereby information about the knitting program gets listed that could be helpful for setting-up on the knitting machine.

I. Generate a pattern description:

1. Generate pattern and carry out sintral check:



If a pattern description has been generated before the sintral check then the data about the yarn carrier, knitting time, yarn consumption etc are not specified.

2. Call up the "Pattern Description" dialog box.
Via menu "File" / "Properties..." .

Overview and functions of the pattern description:

Tab	Section	Meaning
General		Information about the pattern with figure
	Identification	Pattern name is displayed. Over the list fields customer, category and order no. can be entered. Via "Administer customers" the customer mailing list can be created. Under "Administer category" the knitting technique can be described.
	Comments	Text input field for comments
	M1 Version description	Display of M1 version and the pattern data version
Size / Running time	Pattern size	Pattern width and pattern height are displayed in the pattern and technical rows. Specifications for the fabrication and piece size can be made.
	Access	Statistical information on the pattern. Under Version the number of times the pattern has been saved is shown.
	Running time knitting machine	Input fields for the running time, length, width, speed and description of the knitting technique.
Report		With the button "Generate" the report is generated and displayed. By "Print" the report can be printed. By "Save under" the report can be saved in any desired directory. Tip: In the context menu of the report display different zoom stages can be set.

3. Close with "OK" the pattern description.

Description is saved in the pattern file *.mdv.

The pattern data are saved as temporary files under C:/Documents and Settings/<user name>/LocalSettings/Temp/~KsReport.snp.

This file is overwritten by changes or new pattern descriptions.

4. To open a pattern description, open the pattern file on the M1 and call up the "pattern description" window via "File"/"Properties..."

II. Copy pattern data sheet or send:

- The temporarily saved pattern data saved under C:/Documents and Settings/<user name>/LocalSettings/Temp/~KsReport.snp can be copied or sent to any desired directory.

2.15 Archiving

To prevent data loss, you should make backup copies of your data and programs at regular intervals.

Over time, a large number of files (modules and patterns) also collect on the hard disk. To maintain an overview, you should archive the files currently no longer required on the DVD-RAM and then delete them from the hard disk.

Unformatted DVD-RAM or DVD-RAM formatted in the FAT16 format should be formatted in the FAT32 format to make full use of the memory capacity.

Do not use any other format even for your written DVD's any longer, as FAT-16 will no longer be supported by the M1.

I. Archiving data on a DVD-RAM:

1. Start the Windows Explorer.
2. Select the files or directories to be archived in the Windows explorer and drag them onto the DVD drive with Drag & Drop.

When you use Windows 2000 or XP on your computer, you can also use the utility program Backup. This program supports you to make a back up of your hard disk. If the original data on the hard disk are accidentally deleted or overwritten, or if they are no longer available due to a hard disk fault, you can then restore the lost or damaged data from the copy.

II. Start the backup program under Windows 2000:

1. Click on "Start" in the task bar.
-> The menu is opened.
2. Move the cursor onto Programs / Accessories / System Programs / Backup.
3. Click on the backup icon.

The backup program is started. Here you are provided with an assistant for data backup, for data restoration and for the emergency floppy disk.



If you are using Windows XP, learn about the relevant procedures from the Windows XP help function.



Additional information on using the backup program is contained in the Help menu of the program.

2.16 How to create and change user accounts

The administrator allocates authorizations to each user. This is a setting that determines whether the user is allowed to install software, view other users' documents or use network resources (e.g. printer and server). It often happens that the administrator grants authorization to a particular group of user accounts, known as a Group account. When the administrator adds a user to a group, he allocates to the user all rights that have been previously granted to the entire group. The following accounts and authorizations are pre-defined in Windows 2000:

- Standard user is a constituent of the group account known as Main user. Standard users may modify computer settings and install programs, but they may not view any other users' documents.
- Users with restricted access are constituents of the group account known as User. Users with restricted access may run programs and save documents. However, they may not change computer settings, install programs or view documents created by other users.
- Other contains a list of all predefined accounts: "Administrators", "security operators", "guests", "main users", "replication operators" and "users".

Action	Authorization needed:
Load, create and save pattern	User
Use, create and save module	User
Format DVD	Administrator,
Use DVD	User
Install M1	Administrator
Install M1 in user-defined mode	Administrator
Add new user	Administrator
Configure network	Administrator

I. Create a user account:

1. Log on to the computer as an administrator.
2. Click on "Start" and point your mouse to "Settings". Then click on "System management".
3. Double click in System control on "User and password".
4. On the User tab click on "Add".
5. Enter the user name and, if the user account is part of a network domain, the domain's name. Then click on "Continue".



Your network administrator will provide you with the information you need to set up a user account in a network domain.

6. Select the access rights that you would like to allocate to the user. Click on "Finish".

To change the password attributes or group membership of an existing user account, follow the procedure described below.

II. Change a user account:

1. Log on to Windows 2000 as an administrator or as a user with administrator's rights.
2. Click on "Start" and point your mouse to "Settings". Then click on "System management".
3. Double click in System control on "User and Passwords". Click on the Extended tab.
4. Under extended user administration click on "Extended".
5. In the "Local user and group" window, click on the User file. Then click on the user account that is to be changed.
6. Make the required changes:
 - Use the General tab to deactivate the account or to modify password attributes. Here, you can (among other things) specify that the user must change their password the next time they log on; or that the password will never be deactivated.
 - You can add or delete groups to which the user belongs on the Membership tab.
 - To enter a logon script or a root directory for a user, use the Profile tab.



For further information, refer to Processing network information MS-ITS:C:\WINNT\Help\mui\0407\Getstart.chm::wgs_gs_02013.htm in Chapter 2 of Windows 2000 Help.

After creating a user account for yourself, you can use it to logon to Windows 2000. It is assumed in the procedure below that you have logged on as an administrator and that you have already created your own user account.

III. How to log on from your computer with your own user account:

1. Click on the "Start" button. Then click on "Exit".
2. In the "Exit Windows " dialogue field, click on the Down arrow key to select one of the following options. Click on Administrator log off and then on "OK".
3. When the prompt Log on to Windows is displayed, enter your user name (logon name) and password in the relevant fields. Click on "OK".

Windows 2000 now starts. If you have selected a domain, a connection with the network is established.

2.17 Stoll Customer Support

In the online help of M1 you will find on every page the symbol .

This calls up the Stoll Customer Support.


In addition to FAQs, tips and tricks, you will also find download options for software and documentation here.

For "Stoll Customer Support", the "Customer" and "PIN Number" must be entered.

2.18 M1 Online Help

The M1 pattern workstation is provided with an online help feature in which all functions and their uses are described. Help can be started directly for the individual functions.

Calling up context-sensitive help:

1. Click on the icon  in the "Default" toolbar.
-> A question mark also appears on the cursor.
 2. Click on a position within the M1 for which help is desired.
- or -
1. Position the cursor on a position within the M1 for which help is desired.
 2. Press "F1" key of the keyboard.

Help on the selected function appears.

The most important search and navigation functions in the M1 Online help	Meaning
1. Menu bar of M1 Help program	
"Display" Only available in the case of hidden navigation bar:	Left navigation bar with the three tabs Contents, Index and Find is superimposed.
"Back" Only available when you have already jumped to another page	Back to the last displayed page
2. Tab of navigation bar	
"Contents"	In this tab the contents of the M1 help program are shown.
+ symbol before entries	Display subdirectories by clicking on the "+" symbol
- symbol before entries	Hide subdirectories by clicking on the symbol.
"Index"	In this tab the key word directory (Index) is displayed.
"Find key word"	Enter a search term in the input field to jump to the corresponding entry in the index.
"Display"	Display of page selected in the index
"Search"	Search function for the entire document
"Find key word"	Enter a search term in the input field to display pages with the desired key word in the navigation bar.
"List of topics"	Starts search with the help of M1
"Display"	Display of pages marked in the tab

3 Fully Fashion and Special Training for M1 Pattern Software

Fully-Fashion patterns are generated based on practical examples.

Shapes from the shape database are assigned to the existing patterns or they are used as a basis for new patterns.

Existing shapes are altered, new ones are generated and are saved in the database.

The different module types of M1 are prepared.

Based on practical examples own modules are generated and used.

Requirements: Previous knowledge of M1 Pattern Software corresponding to the basic course.

3.1 Generate cuts and shapes

I. Tools and methods to generate cuts and shapes:

Tool	Methods to generate shapes:
Shape view	Graphical method
Shape editor	Table (enter values)
ShapeSizer	Grading (Stoll cut)
Picture import	Import the picture of a shape:

II. Tools and formats:

Tools to generate Fully Fashion shapes	Designation	Unit of measure	Presentation	File extension
Shape view	Grid	Stitches	Grid	.shr
Shape Editor	Vector	Millimeter / Inch	Lines	.shv
	Pixel	Pixel	Stitches / Steps	.shp
ShapeSizer	Vector	Millimeter / Inch	Stitch / millimeter	.shp

- You will find shapes of the .shv format in the Stoll shape file. Standard attributes are assigned to those shapes.
- You will find the Stoll shape directory under: "D / Stoll / M1 /shape".
- The format .shv - or- .shp is generated (by conversion according to the stitch density specification) in the Shape Editor.
- The .shr format is generated in the shape view. A shape saved under this format can be converted to the .shp format.

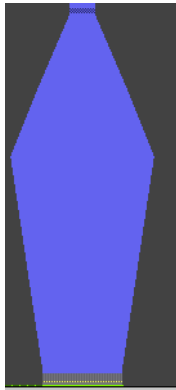
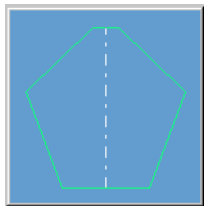



You will not find a shape within the mdv pattern file

The shape attributes only are saved as pattern specific parameters. You have to save shapes separately.

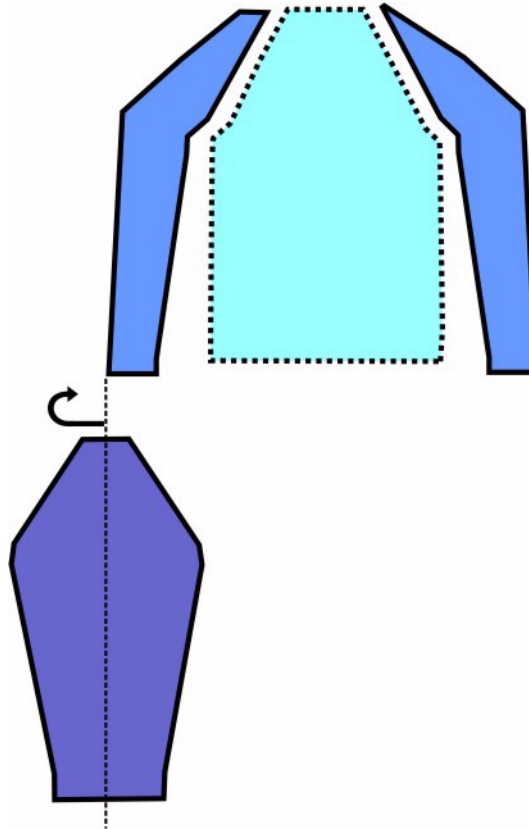
With an open pattern you can save a shape to any desired file via the "Open Shape / Save Shape as" menu.

3.2 Fully Fashion-Pattern: Sleeve

Pattern data	Pattern picture
File: Aermel.mdv Pattern width: automatically Pattern rows: automatically	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Shape	 1_raglan-sleeve-38.shv
Knitting technique	 Structure - RL


Pattern description:
 Structure pattern with RL (single jersey)

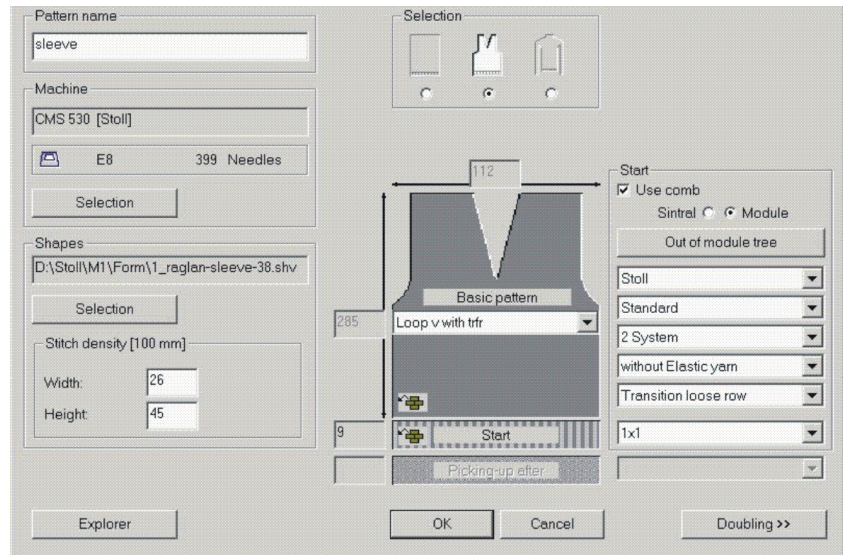
I. Rules for generating a shape for raglan sleeve.



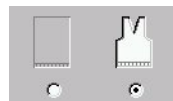
Shape attributes	Rules
Knitting mode:	single jersey
Widening width:	1 stitch per knitting row
Widening height:	As desired
Narrowing width:	1-3 stitches
Narrowing height:	As desired

II. Generate pattern with shape.

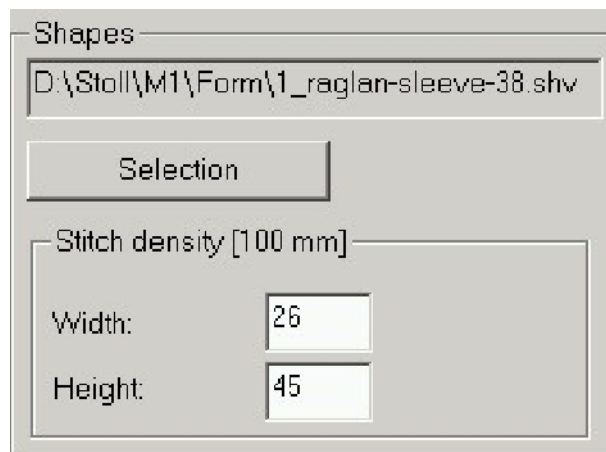
1. Generate a new pattern via "File / New..." 
2. Make settings in the "New Pattern" dialog box.



3. Select Fully Fashion.



4. Select a shape from the shape directory (e.g. "D:\Stoll\M1\Form\1_raglan-sleeve-38.shv")
5. Set the desired stitch density.



6. Select the binding for the basic pattern via the selection list.



The size of the pattern is specified automatically by the shape and the allocated stitch ratio.

7. Specify the settings for the start.
8. Confirm entries with "OK".

The shape will be calculated and displayed as a Fully Fashion pattern.

III. Further settings for Fully Fashion:

You can make further settings with Fully Fashion pattern before the technical editing.

Configuration	Tab	Setting	Function
	"Additional settings"	Different stitch lengths at the shape edge	Activate the checkbox if you want to use a different stitch length at the shape edge.
	"Knitting zones"	Knitting-in all yarn carriers before starting	You can knit in all yarn carriers knitting in the pattern ahead of the draw thread.
Yarn field allocation	Yarn carrier allocation	YG:nF	By allocating the symbol F the yarn carrier is driven to the left edge (counter #L) or right edge (counter #R) according to the counter. This setting is only used for Fully Fashion patterns without a comb start.
		Knit-in before the Start	The yarn carrier is knit in ahead of the draw thread
		YDF=	Additional yarn carrier distance with fully fashion knitting.

IV. Complete the pattern:

1. Carry out technical editing.
2. Start generating Sintral.
3. Conduct Sintral Check.
4. Knit pattern.

3.3 Changing of a shape in the shape view




I. Correct the shape:

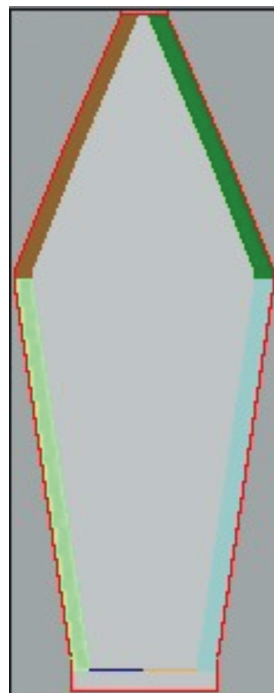
You can correct the shape in the Shape View.

1. Open the "Shape view" via the "Shape" menu.

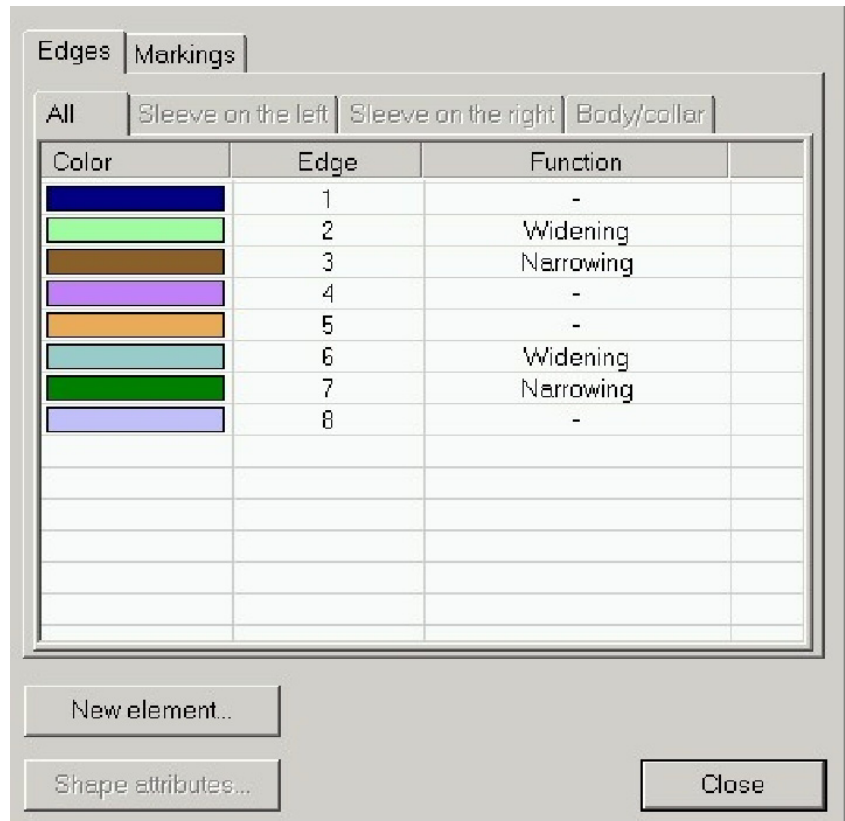
- or -

→ with the toolbar.

	Presentation
	Shape Symbols and Edge Color
	Edge Color as Background
	Shape Symbols
























2. Call up the "Select Shape Element..." context menu of the Shape View.



3. Select the color of the shape edge which you want to modify.
4. Select Drawing tools.

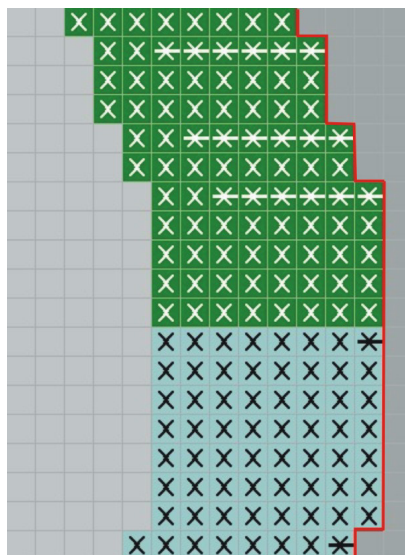


Toolbar Shape tools

Function	Meaning
 Within shape	Generate or edit shape
 Outside shape	Generate or edit shape
 Gore	Enlarge gore area
 Delete gore	Reduce gore area
 Suspend	Enlarge area for suspension during knit and wear
 Delete suspension	Reduce area for suspension during knit and wear
 Narrow/Widen	Draw narrowing symbol in the shape edge.
 Delete narrowing/widening	Delete narrowing symbol in the shape edge.
 Fade out	Draw fade-out symbol in the shape edge.
 Delete fade-out	Delete fade-out symbol in the shape edge.
 Separation	Edit automatically generated separation.
 Delete separation	Delete separation.
 Bind-off	Draw binding-off symbol in the shape edge.
 Delete binding-off	Delete binding-off symbol in the shape edge.
 Stitch length change	Draw stitch length change symbol in the shape edge.
 Delete stitch length change	Delete the symbol stitch length difference in the shape edge
 Separation of layers	Draw in a separation between the front and back layer of a shape row at the shape edge.
 Delete separation of layer	Delete separation between the front and back layer of a shape row at the shape edge.
 Multi-step narrowing	Draw in an icon for multi-step narrowing based on specifications in Narrowing M dialog box.
 Delete multi-step narrowing	Delete the icon for a multi-step narrowing according to the specifications in the "Narrowing M" dialog box.
 Use shape	Connect shape to the pattern. Add the shape attributes anew in the pattern in case of a shape that already exists.

5. Correct the shape:

- Outer edge shape
- Fade-out width
- Narrowing width



Shape edge with reference edge



The icons Narrowing, Fade-out and Separation are active only when a color is selected for a shape edge.

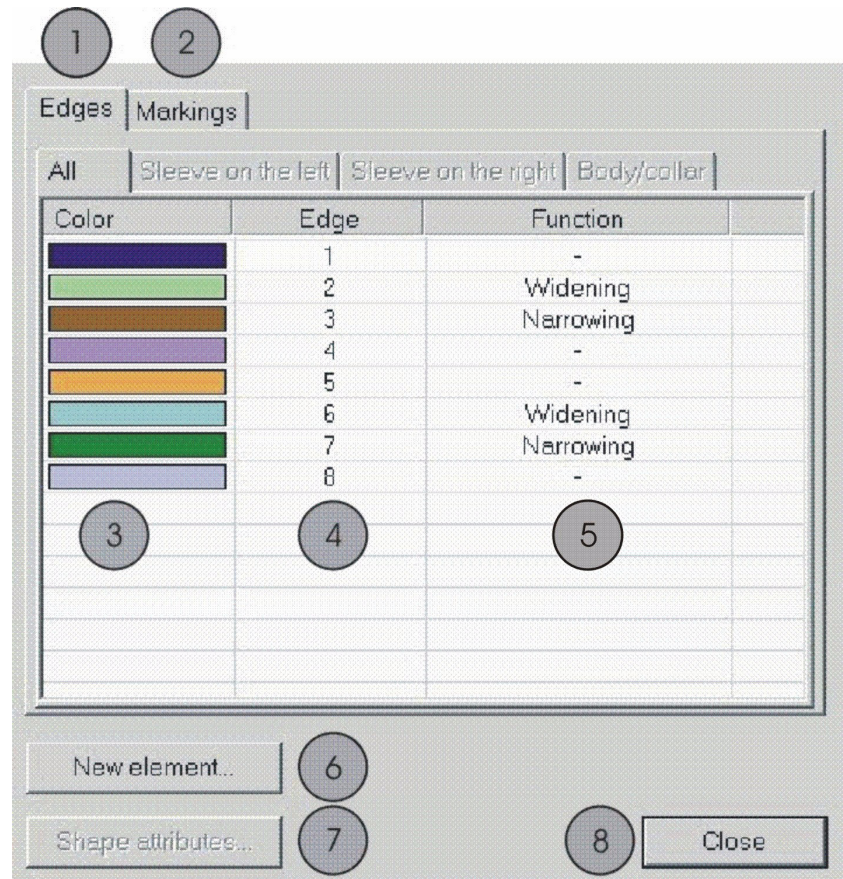
6. Calculate shape anew with  Use shape.

- or -

➔ Via the "Shape" / "Use shape (Re-insert modules)..." menu.

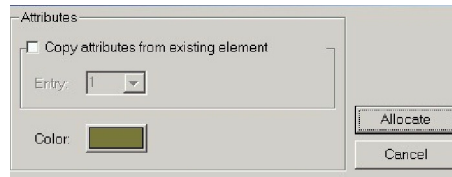
II. Create new shape edge:

1. Call up the "Select Shape Element..." context menu of the Shape View.



1	Tabs of the shape edges.
2	Tabs of the marks.
3	The shape edges are displayed in colors in the Shape View.
4	Number of the color edge.
5	Display of the allocated function.
6	New shape edge / Generate marking.
7	Open the Shape Attributes dialog box.
8	Close dialog box.

2. Press the "New Element..." button to create a new color for a shape edge.



3. Press the button "Allocate" in the "New shape element" window to insert the edge color with consecutive numbering in the table. Then no attributes have been allocated to this edge yet.

- or -

- Activate the "Copy attributes from the existing element" in the "New Shape Elements" dialog box.
4. Specify the edge number of which you want to copy the attributes in the "Entry" list field.
5. Insert the new edge color in to the table with the "Allocate" button.
-> Existing attributes are allocated to the new edge then.

III. Allocate new attributes:

1. Select new edge color and call up "Shape attributes..."

- or -

- Call up the "Shape attributes..." context menu in the Shape View.
2. Select the new edge color.
3. Specify the function in the "General" tab. (Widening, narrowing and binding-off).
4. In the "Narrowing" tab:
 - Specify the desired narrowing method for the knitting mode in the selection list.
 - Specify the narrowing width.
 - Specify the steps for binding-off.
5. In the "Binding-off" tab:
 - Specify for the knitting mode in the selection list the desired fade out, e.g.: "Stitch in front" / "Stitch at the back".
 - Specify fade-out width.



"Initialize shape view":

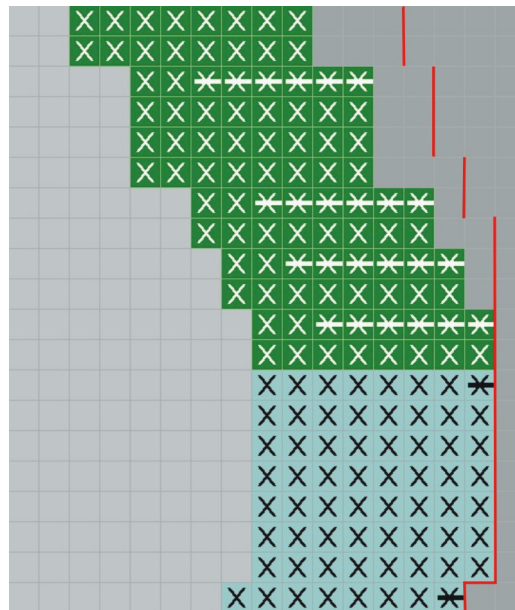
All entries are applied in shape attributes and saved. Changes drawn in manually are overwritten.

"Apply in shape view":

Only the change in the shape attributes are applied in the shape view.

IV. Modify the Shape View:

1. Select the color of the new shape edge.
2. Select Drawing tools.
3. Draw in the shape edge(s) in the shape-editor.



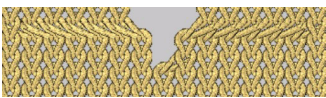
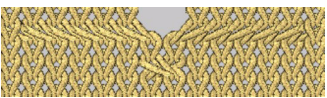
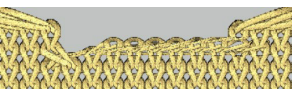
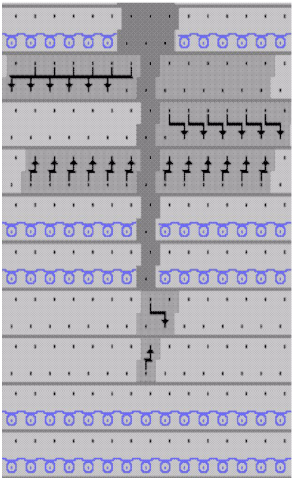
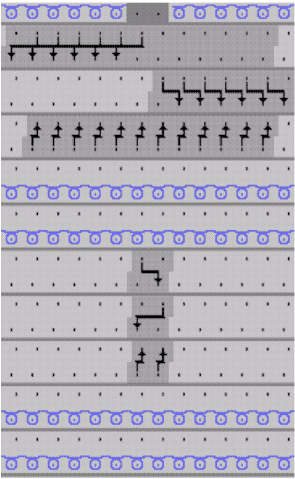
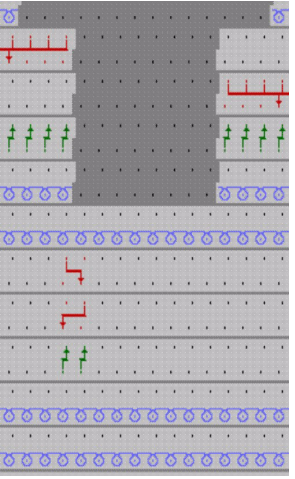



Changed shape edge with original reference edge



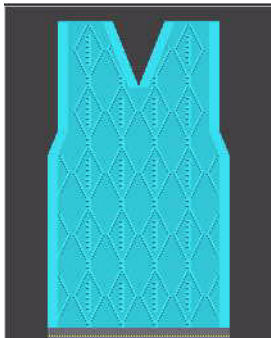
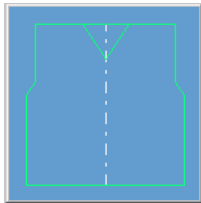

The reference edges (outlines) are helpful when changing the shape. The deviations from the original shape are shown.

3.4 Cut-outs

You can insert a start module at the beginning of a neck opening.

Start of the V-neck	1 wide	2 wide	More than 2 wide
Description	Settings of the basic element: Distance of the shape halves: 1 Result: Odd width of the shape	Settings of the basic element: Distance of the shape halves: 0 Result: Even width of the shape	Settings of the basic element: Distance of the shape halves: >1 Result: Width of shape is dependent on spacing of shape halves
Fabric View			
Technical View			
Shape View with reference point for start module (marked)			
	The starting point of an edges lies on the first color mark. (marked) The ending point of an edge lies on the last color mark of the same edge color. The starting point is the reference point to position the V-neck start module.		
Starting module	Module: "Structure single jersey V1"	Module: "Structure single jersey V2"	Module: "Structure single jersey V2"
Distance of shape halves	1	0	0
Offset horizontal X Axis ↔	1	0	-5
Offset vertical Y Axis ↓	- 1	- 1	-1

3.5 Fully Fashion-Pattern: V-neck with structure

Pattern data	Pattern picture
File: V-Aran.mdv Pattern width: 208 Pattern rows: 250	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Back stitch with transfer
Shape:	 2_set-in-front-v-neck-38.shv
Knitting technique	 Pattern element Aran-4

Pattern description:
Structure pattern with pattern element aran and cable 2x2

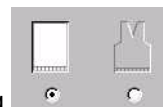
I. Rules for generating a shape for front with inserted sleeve:




Shape attributes	Rules
Knitting mode:	Structure: Cable / Aran etc.
Widening width:	No
Widening height:	No
Narrowing width:	1-3 stitches
Narrowing height:	As desired

II. Generate pattern without shape:

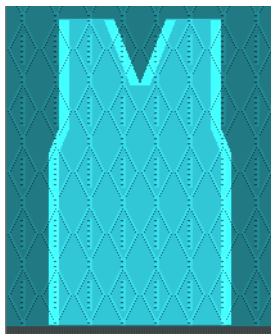
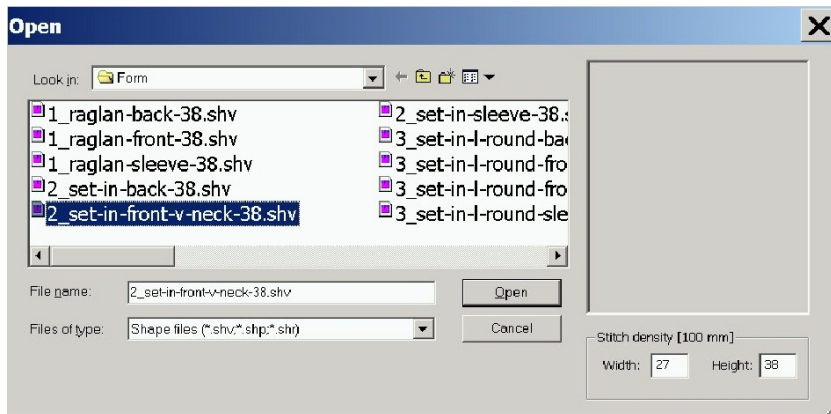
1. Generate a new pattern via "File / New..." 




2. Activate the standard setting  in the "New Pattern" dialog box.
3. Confirm the New Pattern dialog box with "OK".
4. Generate the structure.

III. Place shape onto pattern:

1. Open shape via "Shape" / "Open and Position Shape(shv, shp, shr)..."
2. Select the desired shape.
3. Specify stitch density: Width: 27 / height: 38.
4. Load shape into the pattern with the "Open" button.
(D:\Stoll\M1\Form\2_set-in-front-v-neck-38.shv)



5. Position the shape with the  icon activated and the left mouse button pressed.
- or -
with the "Shape" / "Move shape" menu. - or -
with the arrow keys of the keyboard.
6. Edit the shape via "Shape" / "Use shape (Cut, Fade out, Narrow)".



The default attributes that are allocated to the shape are automatically applied to the pattern.

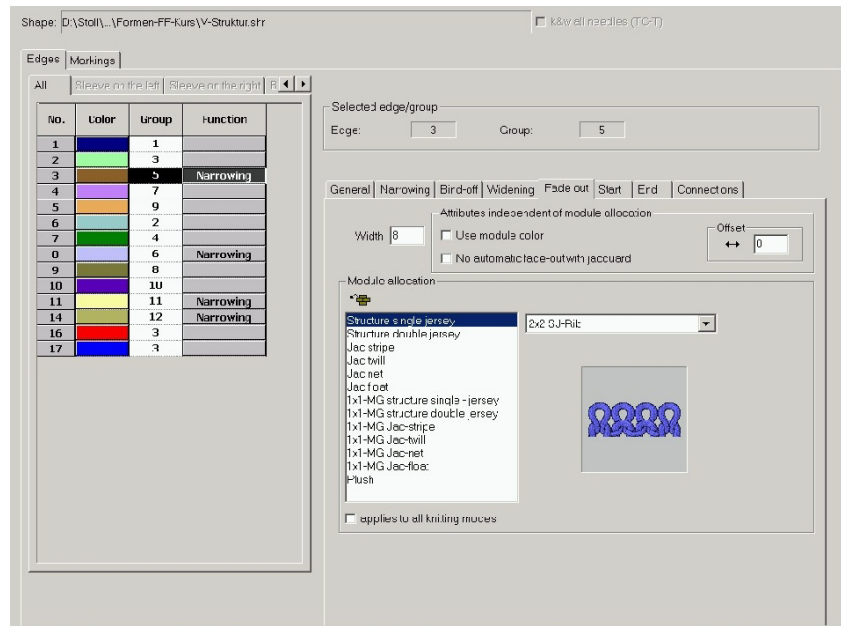
IV. Edit in the shape view:

1. Open the shape view via the "Shape" menu.
- or -


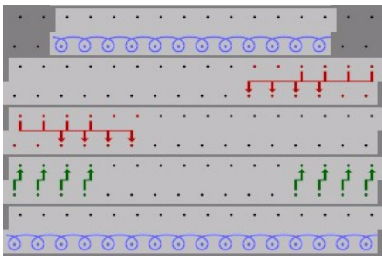
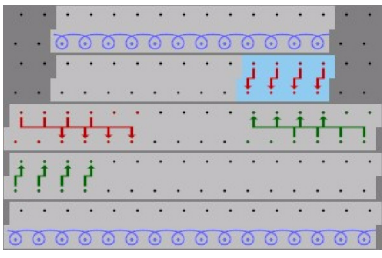
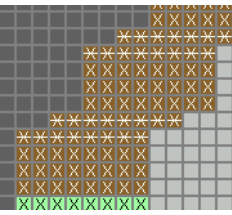


→ With the shape icons

2. Call up the "Shape attributes ..." context menu.

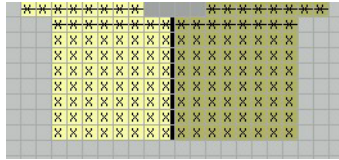


3. Change settings in the tabs.

Outer shape edges and V-neck		
Tab	Change	Presentation
Fade out	2x2 RL rib	
Narrowing	Separate processing	
	Common processing	
Narrowing width	8 stitches	
Narrowing step	4 stitches (2x2 stitches)	
Fade-out width	8 stitches	

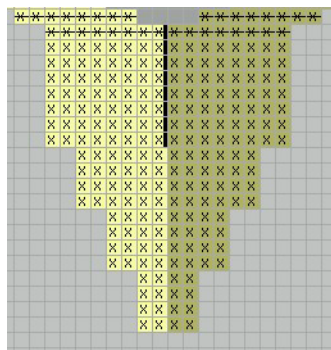
V. Make further changes:

To improve the optical result the start of the V-neck can be changed.



V-neck start - Standard

1. Use the present edge colors and draw in the correction of the shape edges below the V-neck start in the Shape View.

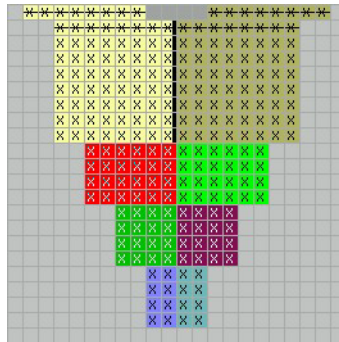


V-neck start - Modified


2. Re-calculate shape with  (Use shape).

- or -

- Generate new shape elements and correct the shape edges.




V-neck start - Modified with new edges

3. Allocate attributes to the edges and confirm with the "Apply in shape view" button.
4. Re-calculate shape with  (Use shape).



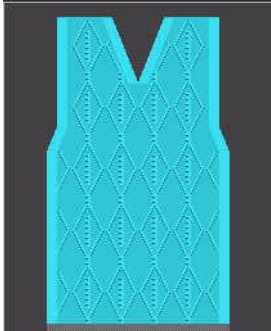
The number of rows up to the start of the v-neck opening has to be even.
Check the height upto the start of the V-beginning!

5. Close shape with 

VI. Complete the pattern:

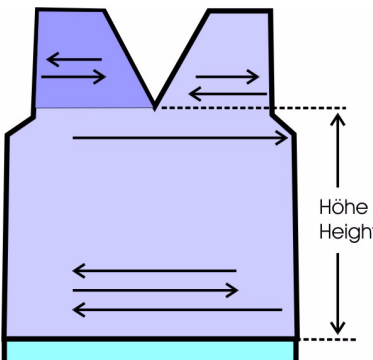
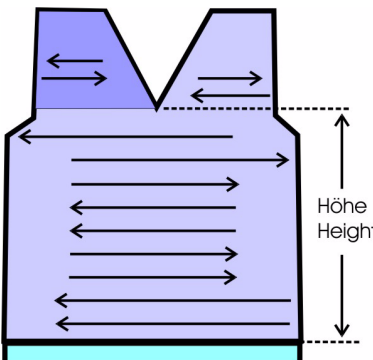
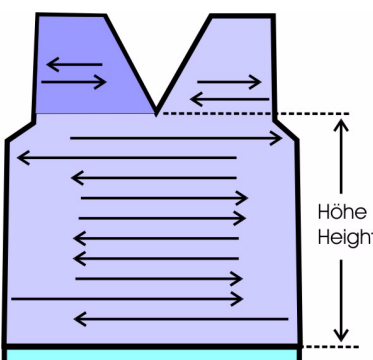
1. Start technical editing.
2. Start generating Sintral.
3. Start the Sintral-Check.

3.6 Use of a different number of yarn carriers with cut-out

Pattern data	Pattern picture
File: Pattern with cut-out	

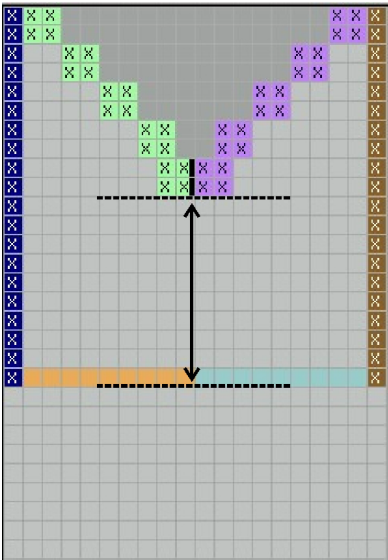
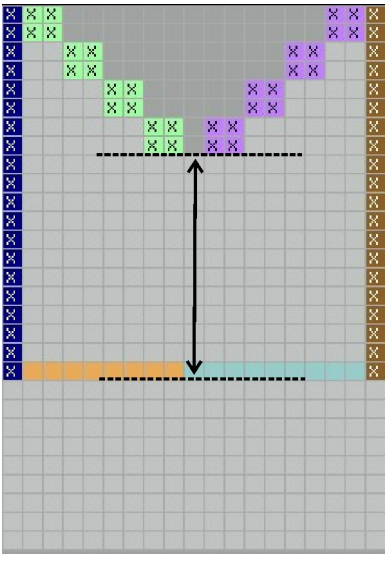
I. Use of a different number of yarn carriers in case of a cut-out:

In order to maintain a correct knitting procedure, the number of rows between the start of fabric and the beginning of the cut-out has to be aligned to the number of yarn carriers in use.

Presentation	Number of Yarn Carriers	Height up to the cut-out
	One yarn carrier	even
	Two yarn carriers in the same home position	odd
	Two yarn carriers in different home position	even

II. Specify the height:

The number of rows between the start and the beginning of the cut-out is the leading factor when specifying the height. Therefore you have to measure between the start and the beginning of the cut-out or of the first split-up.

Presentation	Function
	<p>Two needles wide with split-up</p>
	<p>One needle wide</p>

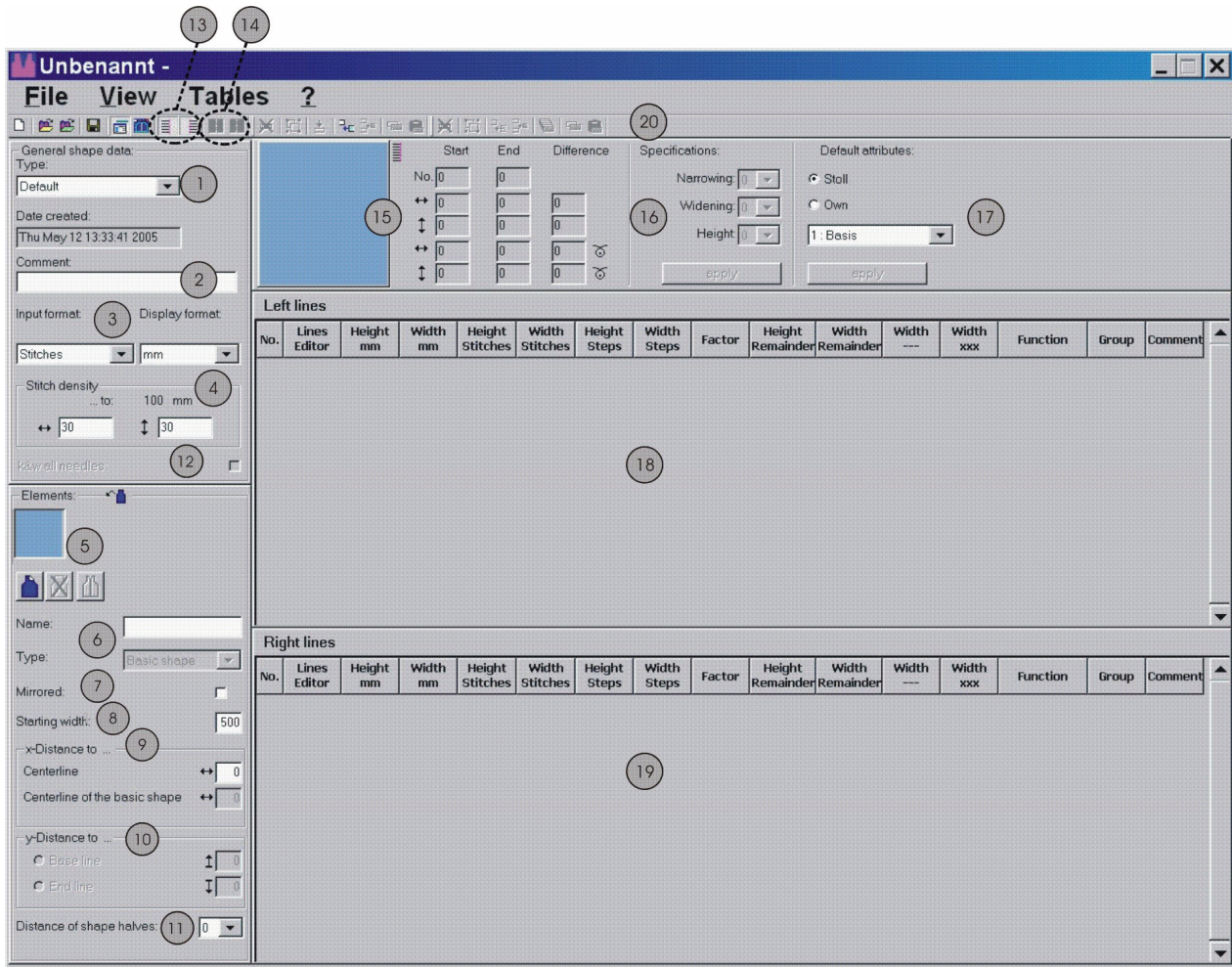


If the shape is not directly set on the start rather it is set higher, some knitting rows remain in between that must be taken into account during calculation of the height.

3.7 Working with the shape editor








I. The Shape Editor:

→ Open the shape editor above: "Shape" / "Generate / Edit Form...".





No.	Designation	Function	
1	Type	Type of shape - Standard or k&w	
2	Comments	Notation on the shape (for information only).	
3	Input format / Display format	Possibilities to generate a shape:	
		Lines	in millimeter or inch
		Stitches	
	Steps		
4		Enter stitch density corresponding to the selected display format	

3 Fully Fashion and Special Training for M1 Pattern Software

No.	Designation	Function	
5		Individual display of all the generated elements	
		Generate new element	
		Delete element	
		Display of all elements in a graphic	
6		Name of the elements: - Basic cut (VT, RT, Sleeve) - Neck opening (with symbol out of shape) - Hole (with symbol out of shape) - Gore (with symbol within shape) - Opening (separation)	
7		Mirrored:	
		Yes	Shape symmetrical
		No	Shape asymmetrical
8		Starting width of the entire element	
9		x-Distance to ...	
	Centre axis	Horizontal distance of the element halves to the centre axis	
	Centre axis of the basic shape	Horizontal distance of the entire element in relation to the centre axis of the basic element	
10		y-Distance to ...	
	Base line	Vertical distance of an element to the base line	
	End line	Vertical distance of an element to the end line	
11		Distance of the shape halves: Value: 0 = shape half will be mirrored Value: 1 = shape half will be mirrored and inserted with spacing of 1 column.	
12		k&w Generate shape with all needles (for CMS 330 TC-T)	
13		Display table for the left shape half	
		Display table for the right shape half	
14		Display table for the left markings	
		Display table for the right markings	
15		Graphic display and coordinates of the selected element	
16		Specification for stepping in case of narrowing and widening edges.	
17		Default attributes for the shape edges (simple allocation of attributes)	
	Stoll	Selection list with STOLL Default attributes for narrowing, widening and fade-out depending upon the machine type.	
	Private	Selection list with self-generated default attributes	
18		Table with edge lines left	
19		Table with edge lines right	
20		Icon bar for processing of the tables	


II. Edit an existing shape:

1. Load in the Shape Editor an existing shape via "File" / "Open".
2. Rename the existing shape under General shape data.
A comment can be entered.
3. With  (13) open the window "Lines left" for the left shape edge.
With  open the window "Lines right" for the right shape edge.
With this the left and right fabric edge can be generated separately.





In case of symmetrical shapes, the check box Mirrored: is to be activated. Thereby the specifications for the left edge (Window "Lines left") are automatically applied for the right edge.








In order to get an enlarged representation of the shape, call up the "View" / "Display graphic" menu or click on  in the M1 Shape Editor.

4. Let the shape be converted in stitcgcs via the "File" / "Convert and save under ..." if it was generated in millimeter or inch input format.
- or -
→ Save shape via the "File" / "Save" or "Save under..." if it was generated in the stitches or steppings input format.

III. Generate new shape:

1. Generate a new shape via "File" / "New".
2. Specify in the shape editor point (1-8) of the table above.
3. By clicking on  (13) and , open the window for entering the shape edges.
4. Tools of the shape editor / line editor:



	Function
	Delete selected lines
	Group selected lines or cancel groupings
	Produce end line
	Add new line at end
	Insert new line before selected line




5. Insert new lines.
6. Enter the outline of the shape (specifications for the width and height).
7. Add end line. (marked green).



Residual values may occur by setting width and height.
They are marked in color.

IV. The Line Editor:

1. Click on the "Line Editor" column.
Tools of the Line Editor, with which you can give a special form to an edge or resolve residual values:

	Function
	Stepping of a diagonally running line.
	Stepping of a curve rounding at the bottom.
	Stepping of a curve rounding at the top and bottom.

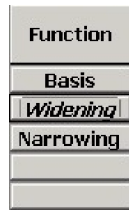
2. Allocate an existing shape edge.
- or -
→ Generate own settings in the Line Editor.
3. Close the line editor with "OK".
4. Finish the shape and apply attributes for fade-out and narrowing.
5. Save shape via "File / Save" or "Save as..." . .
6. Close the shape editor.

3.8 Changes in the shape editor

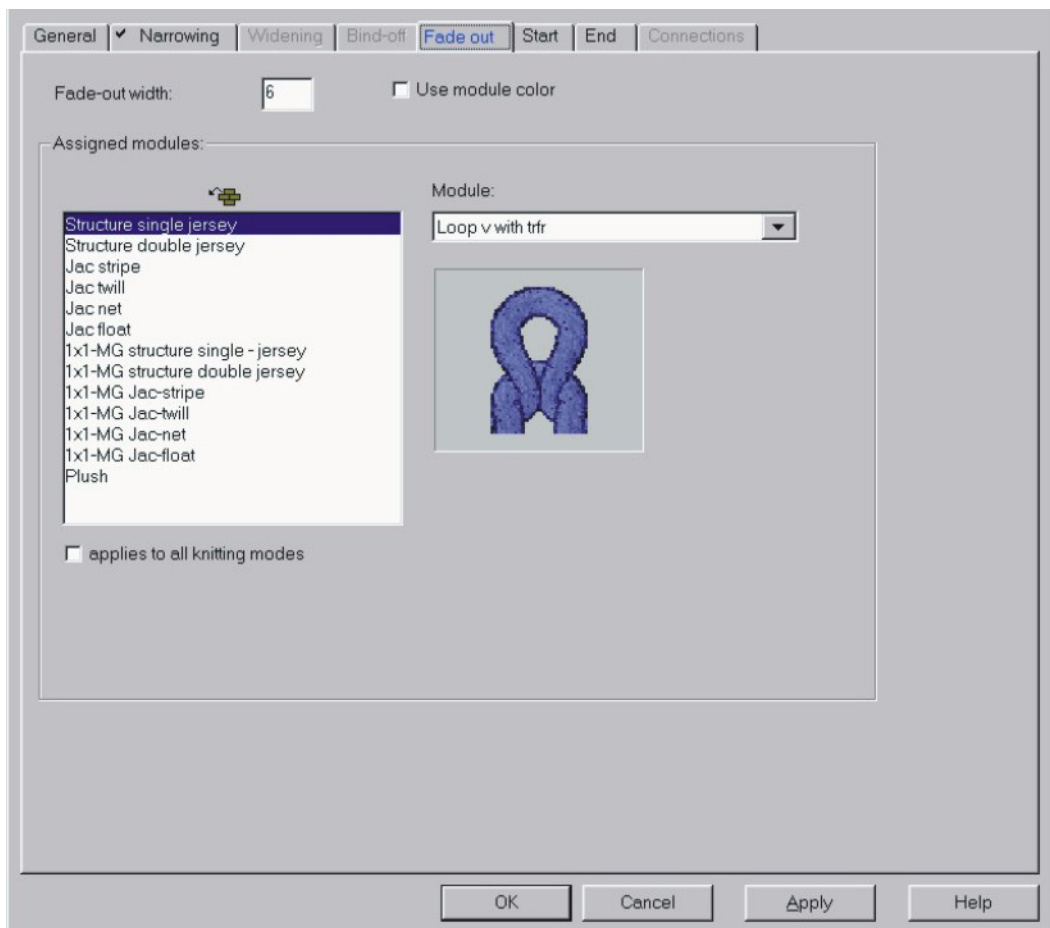
You can change the width for fade out and narrowing in the shape editor. You can influence the narrowing method and the width and height stepping as well.

I. Modify hiding:

1. Click on the desired edge in the "Function" column.



2. Open the "Fade-out" tab.

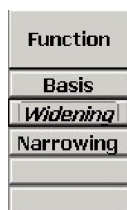


3. Specify the width for Fade out in the tab.

4. Specify the knitting mode for Fade out in the selection bar.
Possibilities:
 - "Stitch with transfer"
 - "Stitch ^ with transfer"
5. Further Possibilities:
 - Drag and draw modules from the module explorer with the left mouse button pressed to the knitting mode which shall be faded out under Allocated Modules.
 - Allocate a module from the module bar according to the same procedure.
6. Confirm entry with "Apply" or "OK".

II. Change the narrowing width:

1. Click on the "Narrowing" function.



2. Change the width to in the "Narrowing" tab.



You can modify the width of narrowing and fading-out in the table as well. Therefore "applies to all knitting modes" must be activated under Assigned modules.

Width ---	Width xxx	Function
4	6	Narrowing
0	0	

III. Change narrowing method:

1. Select the desired method for narrowings.

Via the selection bar:

- "L-R combined transfer"
- "Separate transfer single jersey"
- "Stitch ^ separate transfer overlying"
- "Stitch v separate transfer overlying"
- etc. depending on the knitting type and the machine type

- or -

- Insert a module group from the module explorer.
Therefore call up the "Module explorer".
2. Save specifications.
Therefore call up "File" / "Save as".

IV. Make settings for the steps in the width and height of narrowing and widening:

Make the settings for narrowing and widening in the table of the shape editor:

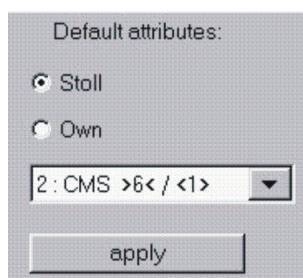
Specifications: section	Function
Narrowing	Setting of the step in the width for narrowing.
Widening	Setting of the step in the width for narrowing.
Height	Setting of the step in the height.

3.9 Default attributes

Default attributes are existing in the shape editor.
You can choose between different attributes.



I. Select default attributes:

→ Select the desired number in the selection list.


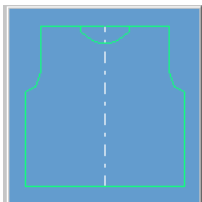


No.	Standard attribute	Meaning
1	Basis	Without knitting technique. This attribute is used for the first line (Start line).
2	CMS >6< / <1>:	Module for narrowing. Width: 6 Needles. Module for widening. Width: 1 needle. These attributes are automatically used from the second line on.
3	CMS >6< / <6>:	Module for narrowing. Width: 6 Needles. Module for widening. Width: 6 Needles.
4	CMS TC4 >6< / <0>:	Module for narrowing CMS TC4, Width of narrowing edge: 6 Needles. No module for the widening.
5	CMS 1x1 >4< / <0>:	Module for the narrowing with 1x1 technical. Width of narrowing edge: 4 Needles. No module for the widening.
6	CMSTC-R >6<:	Module for narrowing CMS-TC-R. Width of narrowing edge: 6 Needles.
7	CMSTC-R V:	Module for narrowing TC-R-V cut-out. Width of narrowing edge: 6 Needles.
8	Fair Isle U	Multi-step narrowing Narrowing underneath
9	Fair Isle ^	Multi-step narrowing Narrowing above

II. Create own attributes:

1. Open the shape editor via "Shape"/"Generate/Edit Shape...".
2. Select in the "File"/"Open Default Attributes..." / "Own"/"Default" menu.
3. Open the table with .
4. Insert a new line at the end of the table with the  button.
5. Click at the new column under function.
The tabs are opened.
6. Select a function in the selection list of the "General" tab.
7. Make corresponding settings in the "Fade-out", "Narrowing" etc. tabs.
Confirm with "OK".
8. Apply the new attributes as defaults via "File"/"Save".

3.10 Fully Fashion-Pattern: Round neck with binding-off

Pattern data	Pattern picture
File: Round neck-binding-off.mdv Pattern width: automatically Pattern rows: automatically	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Shape:	 <p>3-set-in-l-round-front-r-neck-38.shv</p>
Description of pattern:	Structure pattern R-L single jersey with round neck and binding-off
M1 working techniques	Modify existing shape in M1 shape editor. Generate pattern with stitch in front together with the shape.


I. Rules for round neck with binding-off:



Shape attributes	Rules
Knitting mode:	Structure: Structure single jersey
Widening width:	No
Widening height:	No
Narrowing width:	1-3 stitches
Narrowing height:	As desired
Bind-off	With more than 3 stitches
Type of binding-off	BO-SJ-01 BO-SJ-02

II. Modify the basic shape:

You can use a shape of the M1 shape database and adjust it to your own needs.

1. Open the shape editor via "Shape" / "Generate/ Edit Form...".
2. Open shape. 

Select shape in the shape list, for example:
D:\Stoll\M1\Form\3-set-in-l-round-front-r-neck-38.shv
3. Convert the existing shape to the format *.shp, via "File" / "Convert and Save under..." .
4. Modify the external edge of the front part.
Change narrowing at the sleeve cut-out in binding-off.
All shape changes should have a step width of 2 or more rows.
On the shape edges on which binding-off must be carried out, a line editor that might be present should be removed.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function	Group	Comment
1		0	-255	0	-69	0	-69	1	0	0	0	0	Basis	0	
2		373	0	142	0	142	0	1	0	0	0	0		0	
3		0	29	0	8	0	8	1	0	0	0	0	Bind-off	0	
4		63	22	24	6	4	1	6	0	0	0	0	Narrowing	0	
5		178	0	68	0	68	0	1	0	0	0	0		0	
6		0	203	0	55	0	55	1	0	0	0	0		0	

Base shape corrected

5. Allocate binding-off to the shape edges that show a bigger stepping than 3 needles.
Call-up "Narrowing" in the Function column.



6. Select "Binding-off" in the selection list of the Function column in the "General" tab.
7. Select the "Abk-RL-01" or "Abkl-RL-02" module group in the selection list of the "Binding-off" tab.
8. Confirm settings with "OK".

III. Modify the neck opening:

1. Activate the shape element for neck opening.
2. Activate the tables for "Left Lines" and "Right Lines".
3. Modify the neck cut-out as per requirement.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function	Group	Comment
1		0	-37	0	-10	0	-10	1	0	0	0	0	Bind-off	0	
2		21	-29	8	-8	2	-2	4	0	0	0	0	Narrowing	0	
3		21	-14	8	-4	4	-2	2	0	0	0	0	Narrowing	0	
4		52	0	20	0	20	0	1	0	0	0	0		0	
5		0	81	0	22	0	22	1	0	0	0	0		0	

Cut-out neck corrected

4. Select edge no.1 for binding-off.
5. Select "Binding-off" in the Function column.
6. Activate the "End" tab.
7. Select "Neck opening lower centre" in the Function selection list.
8. Select the "Structure double jersey V2" start module in the Module selection list.

- or -

- Select the desired module in the module explorer.
9. Define the horizontal and vertical position via Offset.



For positioning of the start module the "Mirrored:" has to be deactivated in the "Neck opening".

10. Save shape.

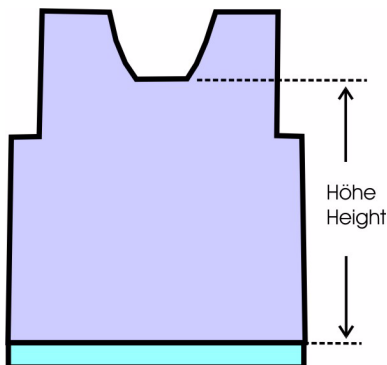
IV. Possibilities to bind-off:

Binding-off is directional!

The direction of binding-off is defined automatically and depends on the height of the position of the neck opening.

Should be linked off to the right than the height up to the opening has to be even.

Should be linked off to the right than the height has to be even.



The height of the position of the neck opening depends on:

- The height of the shape.
- The position of the neck opening.

Bind-off	Direction	Positioning the start module:
	to the left	End of the basic line of the right edge.
	to the right	End of the basic line of the left edge.
	To the left and to the right	Start of the basic line of the left edge.

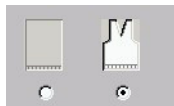
Note:

Binding-off from the center to the left and to the right works only if the left and right binding-off of the round neck are offset in the height.

You can achieve that by insert of a separation in the Shape View.

Generate V. pattern together with the shape:

11. Run the "File" / "New" menu to generate the pattern. 



12. Select Fully Fashion  in the New Pattern dialog box.

13. Define the path to the generated shape via "Selection" under Shape.

14. Select shape file and activate it via "Open".

15. Make further settings and close the "New Pattern" dialog box with "OK".

The Fully Fashion pattern will be generated with the selected shape and the set basic pattern.

The attributes for narrowing and fade-out which are applied to the pattern derive from the original shape of the shape database.



You can correct or enlarge the basic pattern as desired.

VI. Complete the pattern:

1. Before Technical Editing carry out the usual settings of Fully-Fashion patterns.

2. Start the automatic technical editing.



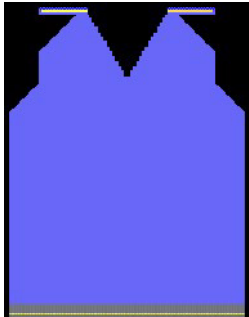
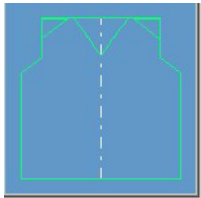
During technical editing the knitting procedure is entered for binding-off.

3. Start generating Sintral.

4. Start the Sintral-Check.

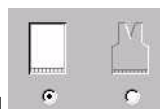
5. Knit pattern.

3.11 Fully Fashion-Pattern: Shoulder gore

Pattern data	Pattern picture
File: Schulterspikkel.mdv Pattern width: 200 Pattern rows: 240	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Shape:	 2_set-in-front-v-neck-38.shv
Knitting technique	Fully Fashion with shoulder gore
Description of pattern:	Fully Fashion with shoulder and V-neck

I. Generate pattern without shape, position shape afterwards:

1. Generate a new pattern via "File / New..." .



2. Activate the Standard setting  in the "New Pattern" dialog box.
3. Confirm the "New Pattern" dialog box with "OK".

II. Create shape:

Generate a new shape or open an existing shape.

1. Generate the shape element for the front.



No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function	Group	Comment
1		0	-266	0	-80	0	-80	1	0	0	0	0	Basis	0	
2		433	0	130	0	130	0	1	0	0	0	0		0	
3		66	66	20	20	1	1	20	0	0	0	0	Narrowing	0	
4		166	0	50	0	50	0	1	0	0	0	0		0	
5		0	200	0	60	0	60	1	0	0	0	0		0	

2. Generate shape element V-neck.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function	Group	Comment
1		173	-86	52	-26	2	-1	26	0	0	0	0	Narrowing	0	
2		6	0	2	0	2	0	1	0	0	0	0		0	
3		0	86	0	26	0	26	1	0	0	0	0		0	

3. Generate shape element for the gore.

Generate a further element for the left and right shoulder gore. Select "Gore" in the selection list below "Type".

4. Generate the left and right gore element via "Mirrored" or the  and  button.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function	Group	Comment
1		80	0	24	0	24	0	1	0	0	0	0		0	
2		0	80	0	24	0	24	1	0	0	0	0		0	
3		-80	-80	-24	-24	-1	-1	24	0	0	0	0		0	



If you want different steppings for the left and right gore then generate two separate elements with different off-set values.

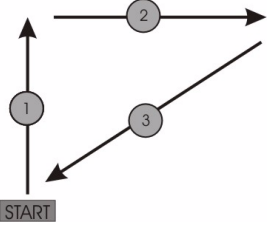
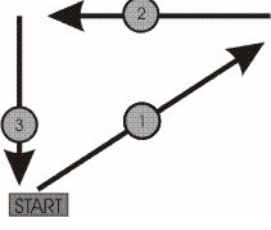
5. Position the gore.

You have to generate several lines for one gore element.

Select "Gore" in the selection list below "Type". The element contains Not knitting within form.

Draw the lines always beginning at the start upwards.

Position gore elements:

	
Distance from center axis:	Specify the horizontal position of the gore.
Distance to the end line or Distance from base line:	Specify the vertical position of the gore.

6. Save shape.

IV. Position the shape onto the pattern:

1. Open shape via "Shape" / "Open and Position Shape(shv, shp, shr)..."
2. Call-up "Shape" / "Use shape (cut, fade out, narrow)".

V. Various options for protection rows:

1. After "Apply shape" insert two additional rows.
2. Draw in manually the protection rows in the motif color in the 1X1 offset into the inserted rows.
3. If necessary, draw in one draw thread each on the left and right before the start of the protection rows.
The technical editing inserts further protection rows automatically then.

Further Possibility:

1. After "Apply shape", insert all required rows for protective rows.
2. Draw in the protection rows offset manually in the motif color in the 1X1 into the inserted rows.
3. If necessary, draw in one draw thread each on the left and right before the start of the protection rows.
4. Switch off protection rows in order not to get further protection rows by the technical editing. For this purpose, select no setting for the protection rows with "Knitting Technique"/"Configuration"/"Knitting Zones"/"Special Knitting Parts".


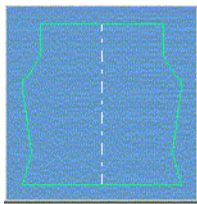

VI. Settings in the "Yarn field allocation" dialog box when using a drawthread:

Thread in the draw threads into yarn carriers at the front in order to remove the draw thread between the pattern end and the protection rows easily. The yarn carriers of the two draw threads must be located in front of the pattern yarn carrier.

VII. Complete the pattern:

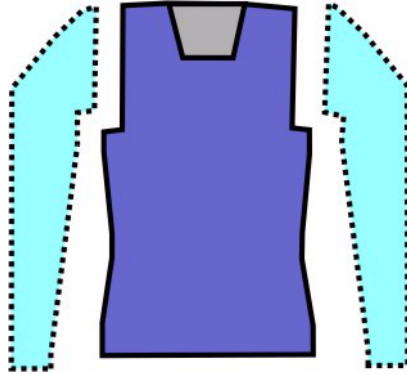
1. Start the automatic technical editing.
2. Start generating Sintral.
3. Start the Sintral-Check.
4. Transfer data to the machine.
5. Knit pattern.

3.12 Fully Fashion-Pattern: Jacquard

Pattern data	Pattern picture
File: Jacquard-FF.mdv Pattern width: 270 Pattern rows: 380	
Machine type	CMS 530
Gauge	8
Start	Tube
Basic pattern:	Front stitch with transfer
Shape:	 5_Top-front part.shv
Knitting technique	 Stitch V with transfer

Pattern description:
 Jacquard float and net back 1x1 with narrowing and binding-off.

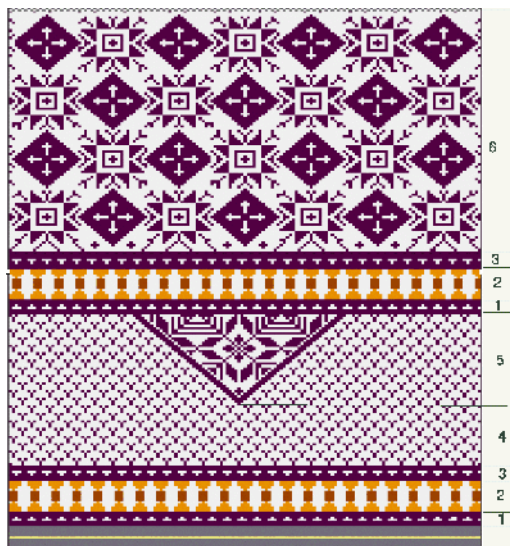
I. Rules for generating a shape for front with binding-off:



Shape attributes	Rules / possible settings
Knitting mode:	Structure: Different color jacquards
Widening width:	No
Widening height:	No
Narrowing width:	Float Jacquard 1-3 stitches Double jersey jacquard 1 Stitch (Stripe, Twill, Net)
Narrowing height:	As desired
Bind-off	With more than 3 stitches
Type of binding-off (depending on the Jac. Type)	BO-DJ-01 BO-DJ-02 BO-TC4-DJ-01 BO-TC-R-DJ-01 BO-TC-T-RR-01


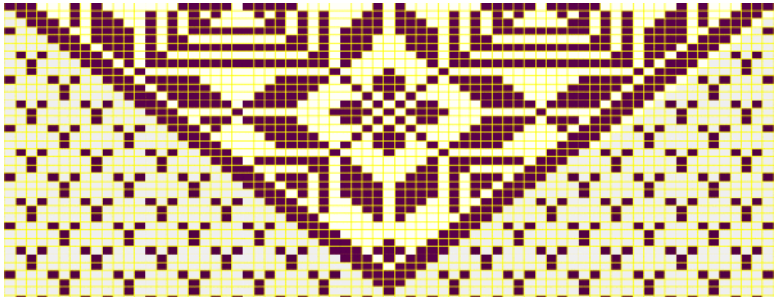
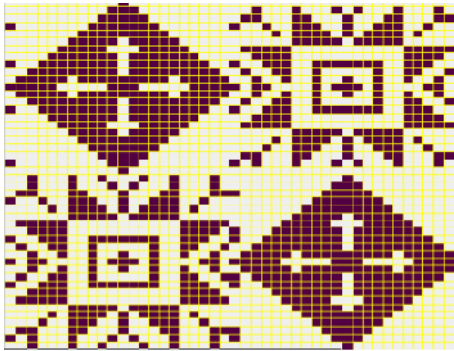
II. Generate pattern without shape:

→ Draw Jacquard:



The functions "Scaling", "Moving" or "Rotating" of the "Selection" menu are helpful for drawing.

Area	Description	View
1	Jacquard float	
2	Jacquard float	
3	Jacquard float	

Area	Description	View
4	Jacquard float	
5	Jacquard net 1x1	
6	Jacquard net 1x1	

III. Generate shape:

1. Edit shape: Select shape via the "Shape" / "Generate/Edit shape" menu:
(D:\Stoll\M1\Shape\5_Top front part.shv)
2. Convert the existing shape to the format *.shp, via "File / Convert and Save as...."
3. Modify form.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-250	0	-70	0	-70	1	0	0	0	Basis
2		117	28	40	8	5	1	8	0	0	0	Narrowing
3		235	-28	60	-8	10	-1	8	0	0	0	Widening
4		29	0	10	0	10	0	1	0	0	0	
5	/	88	53	30	15	0	0	0	0	0	0	Narrowing
6		117	0	40	0	40	0	1	0	0	0	
7		0	196	0	55	0	55	1	0	0	0	

Entries for basic shapes

3 Fully Fashion and Special Training for M1 Pattern Software

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-28	0	-9	0	-6	1	0	0	0	Link-off
2		35	-14	12	-4	3	-1	4	0	0	0	Narrowing
3		147	-35	50	-10	5	-1	10	0	0	0	Narrowing
4		8	0	3	0	3	0	1	0	0	0	
5		0	78	0	22	0	22	1	0	0	0	

Entries for V-neck

- Allocate the fade-out and narrowing attributes to the edges corresponding to the knitting mode in the column function.

Knitting mode	Fade out	Narrowing		Bind-off
	Type:	Width:	Stepping:	Method:
Jacquard float (single jersey)	The motif colors at the border are automatically knitted in 1X1. In the shape attributes, you can switch this off in the fade-out tab.	As desired	1-3 stitches	BO-SJ-01 BO-SJ-02
Jacquard stripe (double jersey)	Not possible	1 Stitch	1 Stitch	BO-DJ-01 BO-DJ-02 BO-TC4-DJ-01 BO-TC-R-DJ-01 BO-TC-T-RR-01
Jacquard twill (double jersey)	Not possible	1 Stitch	1 Stitch	BO-DJ-01 BO-DJ-02 BO-TC4-DJ-01 BO-TC-R-DJ-01 BO-TC-T-RR-01
Jacquard net (double jersey)	Not possible	1 Stitch	1 Stitch	BO-DJ-01 BO-DJ-02 BO-TC4-DJ-01 BO-TC-R-DJ-01 BO-TC-T-RR-01

- Save shape.

IV. Position and apply shape:

- Loading the changed shape: "Shape" / "Open and Position Shape...".
- Position shape on the motif. 





- "Shape" / "Use shape (cut, fade out, narrow)".

V. Complete the pattern:

1. Start the automatic technical editing.
2. Start generating Sintral.
3. Start the Sintral-Check.
4. Transfer data to the machine.
5. Knit pattern.

3.13 Fully Fashion-Explanations: Double jersey intarsia

Pattern data	Pattern picture
Basic pattern: Stitch-Stitch	
Knitting technique	 Stitch-Stitch
Description of pattern:	Positioning of narrowings
	Methods for narrowing of double jersey
	Comparative information for the use of different machine types.

I. Positioning of narrowings:

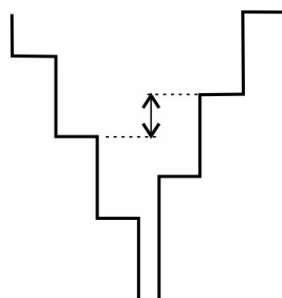
V-neck with narrowing at the same height.

You can position the narrowings with double jersey as usual at the same height.

- or -

V-neck with narrowing displaced in the height.



With intarsia pattern you have to place the first narrowing on the right one pattern row higher than the narrowing on the left in order not hinder the narrowing procedure in the V-neck



II. Set the knitting cycle in configuration:

You can choose between two methods for the technical editing of the knitting mode of Fully Fashion pattern.

- Make settings in the "Configuration" dialog box in the "Further settings" tab at "Separate rows with separate pattern areas":

"Standard method"	"Intarsia method"
	
The yarn carriers are placed at the outer fabric edge during narrowing.	The color areas are worked like an intarsia procedure.




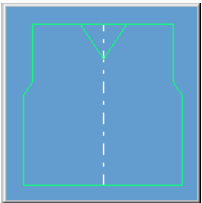

The Technical Editing automatically works with the intarsia method (from the start of the V-neck on) when several colors are in use at the shoulder of a Fully Fashion pattern combined with intarsia.

You can switch to the standard method when carrying out the "Step by step technical editing" if you do not want this method.

III. Narrowing widths with narrowing of double jersey:

Machine CMS 5xx / 7xx / 8xx / 9xx		Machine CMS TC4 / TC-R / TC-T / T	
Narrowing step	Narrowing width / Type of narrowing	Narrowing step	Narrowing width
1 needle	1 Stitch	1 -2 needles	As desired
1 needle	As desired		
As desired, 3 needles at max.	1X1 border		

3.14 Fully Fashion-Pattern: double jersey intarsia

Pattern data	Pattern picture
File: TCR-Intarsia-FF.mdv Pattern width: 200 Pattern rows: 300	
Machine type	CMS 330 TC-R
Gauge	8
Start	Tube
Basic pattern:	Stitch-Stitch
Shape:	
Knitting technique	 Stitch-Stitch

Pattern description:
Intarsia pattern with FF and V-neck for TC-R or RR narrowing with more than one needle.

I. Rules for generating a shape for v-neck intarsia:



Shape attributes	Rules
Knitting mode:	Structure: double jersey intarsia
Widening width:	1
Widening height:	As desired
Narrowing width:	As desired
Narrowing step:	1-2 stitches
Narrowing height:	As desired

II. Generate pattern without shape and position shape afterwards:

1. Draw pattern.
2. Generate a new shape via "Shape" / "Generate / Edit Shape...".
3. Generate the table for the front.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function	Group	Comment
1		0	-261	0	-89	0	-89	1	0	0	0	0	Basis	0	
2		428	0	180	0	180	0	1	0	0	0	0		0	
3		47	29	20	10	2	1	10	0	0	0	0	Narrowing	0	
4		352	0	148	0	148	0	1	0	0	0	0		0	
5		0	232	0	79	0	79	1	0	0	0	0		0	

4. Select the standard attribute No.6: TC-R>6< and allocate it to all edges of the front.



5. The V-neck for double jersey knitting is started with one needle. In that case set the Distance of shape halves in the basic shape to 1.
6. In the neck cut-out switch off the check box Mirrored because of narrowing displaced in the height.

III. Generate a cut-out with narrowing displaced in the height:

Place the first narrowing on the right one pattern row higher than the narrowing on the left so that the narrowing procedure in the V-neck does not get hindered by the yarn carrier.

1. Generate a table for the left edge of the V-neck.

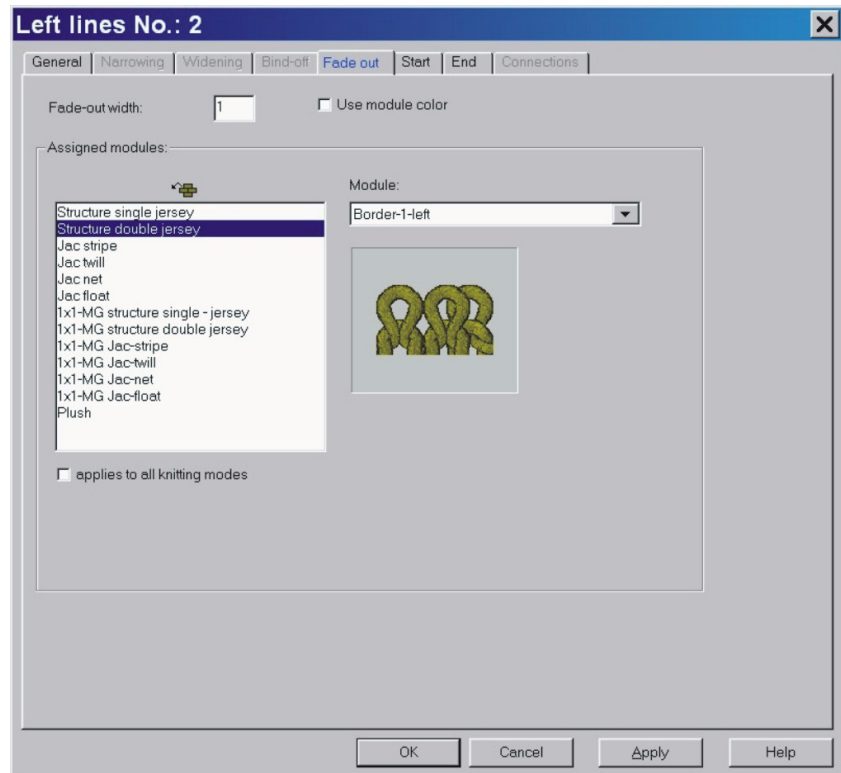
No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function	Group	Comment
1		304	-47	128	-16	8	-1	16	0	0	0	0	Narrowing	0	
2		9	0	4	0	4	0	1	0	0	0	0		0	
3		0	47	0	16	0	16	1	0	0	0	0		0	

2. Generate a table for the right edge of the V-neck, offset in the height.

- ➔ Insert a additional row for the right edge of the V-neck in the Shape Editor in the "Line right" dialog box.
- Set the last straight line on the left below the end line in the window "Line right" 1 pattern row lower for compensation.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function	Group	Comment
1		2	0	1	0	1	0	1	0	0	0	0		0	
2		304	47	128	16	8	1	16	0	0	0	0	Narrowing	0	
3		7	0	3	0	3	0	1	0	0	0	0		0	
4		0	-47	0	-16	0	-16	1	0	0	0	0		0	

3. Select the standard attribute No.7: CMSTC-R V and allocate it to all edges of the front.
4. Allocate the fade-out modules in the shape edges of the outer form and of the V-neck.



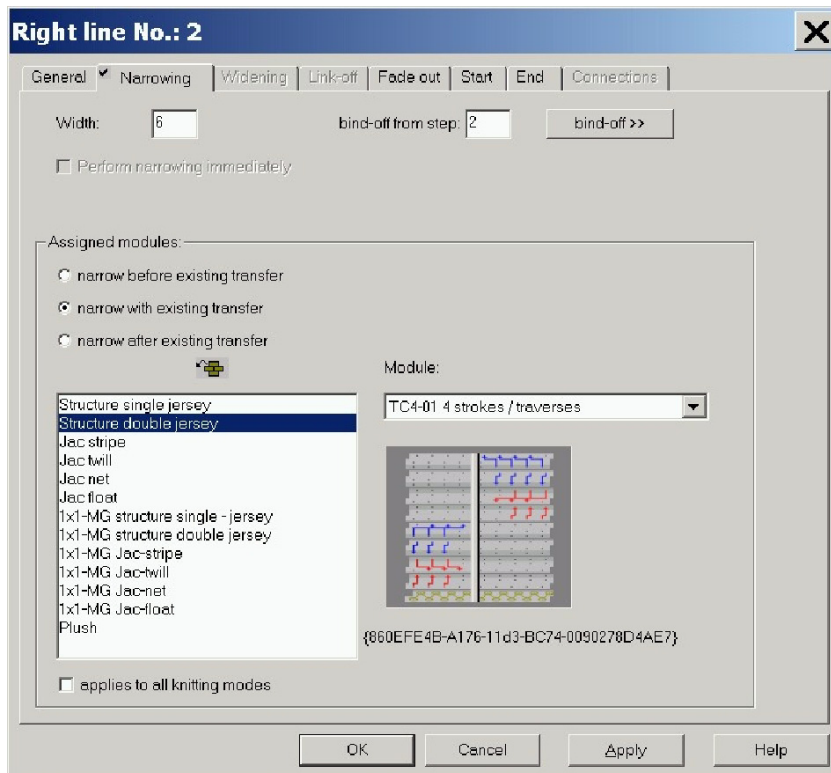
5. Use the fade-out modules from the module explorer.
"Left Rolling Edge"/"Right Rolling Edge"
"RR left edge" / "RR right edge"

- or -

→ Generate a module for fade out:

Fade-out edge left	Fade-out edge right

6. Allocate the narrowing modules in the shape edges of the outer form and of the V-neck.



Narrowing modules for double jersey structure:

Narrowing module	Function
Standard	Narrowing without additional beds
TC-R Shape Outer Edge	Common narrowing at the outer shape edge
TC-R Shape Outer Edge without combination transfer	Separated narrowing at the outer shape edge
TC-R-V	Common narrowing at the V-neck
TC-R-V without combination transfer	Separated narrowing at the V-neck

7. Allocate Start module V from Module explorer "Technical" / "Start V-neck" / "Structure double jersey" / "Structure double jersey V1".
8. Save shape.

IV. Position and apply shape:

1. Load shape with "Open and Position Shape..." .
2. Position shape in pattern
3. "Shape" / "Use shape (cut, fade out, narrow)".



You can select the Normal yarn carrier type in the "Yarn field allocation" dialog box.

You can knit this pattern with normal yarn carriers.

V. Settings in Configuration:

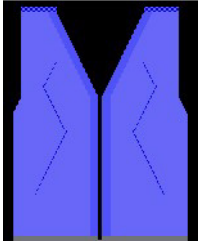
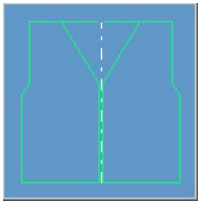
1. Make settings in the Configuration dialog box in "Additional settings" / "Separate rows with separate pattern areas":
 - Standard method
 - Intarsia method

Several colors are knit starting from the V-neck in this example. Therefore the V-neck will be edited according to the "Intarsia Method" automatically. If you still want the editing according to the "Standard Method" then you have to switch to the "Standard Method" during the "Stepwise Technical Editing".

VI. Complete the pattern:

1. Start the automatic technical editing.
2. Start generating Sintral.
3. Start the Sintral-Check.
4. Transfer data to the machine.
5. Knit pattern.

3.15 Fully Fashion-Pattern: Front of a vest with tube edge

Pattern data	Pattern picture
File: Weste VT mit Schlauchblende.mdv Pattern width: 220 Pattern rows: 280	
Machine type	CMS 530
Gauge	8
Start	Tube
Basic pattern:	Front stitch with transfer
Shape:	 Weste VT mit Schlauchblende .shp
Knitting technique	Front with tube edge

Pattern description:
 Front with overlapping tubular border of a Fully Fashion vest.

I. Generate pattern without shape and then position shape:

1. Generate a new pattern via "File / New..." .

2. Activate the standard setting  in the "New Pattern" dialog box.



It is advantageous not to insert a start when generating a vest. The start must consist of two parts and will be inserted after "Applying shape".

3. Confirm the New Pattern dialog box with "OK".

II. Create shape:

Create your own shape for the front and the V-neck.



1. Shape element 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	-340	0	-102	0	-102	1	0	0	0	Basis
2		466	0	140	0	140	0	1	0	0	0	
3		66	33	20	10	2	1	10	0	0	0	Narrowing
4		333	0	100	0	100	0	1	0	0	0	
5		0	306	0	92	0	92	1	0	0	0	

Table for the front

2. Shape element V-neck.

Create a new element for the V-neck in the Shape Editor.
Select "Neck opening" in the selection list below type.

Generate the left and right cut-out edge under  and .
Allocate narrowing with the module for tubular border.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		533	0	160	0	160	0	1	0	0	0	
2		333	-166	100	-50	2	-1	50	0	0	0	Narrowing
3		0	166	0	50	0	50	1	0	0	0	

Table for the V-neck of the front

Settings in the V-neck of the front

Line of the edges	"General" tab	Tab "Fade out"	Tab "Narrowing"	Allocated module
No. 1		left tube or right tube		Structure single jersey
No. 2	Narrowing	left tube or right tube	Standard	Structure double jersey

3. Specify the "Distance to the centre axis" in the "Basic shape" and "Neck cut-out" elements.

III. Generate a module for fade out:

You have to generate a module for fade-out.

1. Generate the knitting cycle in the Module Editor.
2. Allocate the modules to the edge lines of the v-neck in the "Function" column of the "Fade-out" tab.

Fade-out module for the tubular edge

Left edge		Right edge	
4	2	4	2
3	1	3	1
2	1	2	1
1	1	1	1

Adjustments in properties:

Knitting mode:	"Structure double jersey"
----------------	---------------------------

3. Save shape.



Additional variants of the shape generation are described in the next chapter.

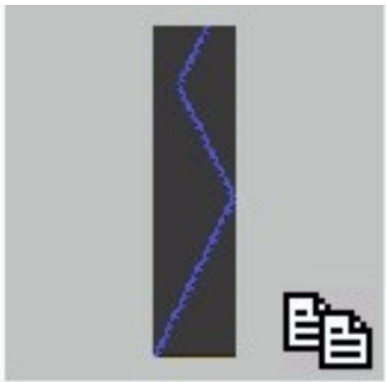
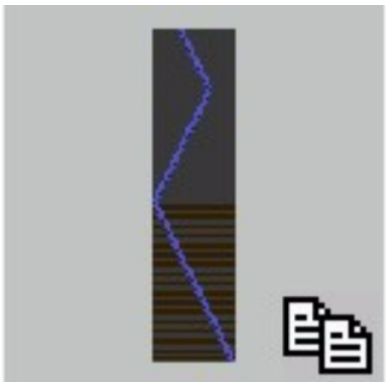
IV. Place the shape onto the pattern and then insert the motif:

1. Open shape via "Shape" / "Open and Position Shape(shv, shp, shr)..."
2. Draw motif.
Using aran modules, draw in the aran structure in the basic motif.
- or -
use pattern elements.



Place the motif in the pattern only after "Position shape".
Then the shape contours are visible.

Modules for the structure

Left part of the vest	Right part of the vest
"Pattern element of the left tubular edge patter"	"Pattern element of the right tubular edge patter"
	

- Complete the Fully Fashion editing after drawing in the motif.
Via "Shape" / "Cut", "Use Fade-out and Narrowing".

V. Correct a start and insert it:

The start of a vest has to consist of two separate parts.


You can modify a Stoll Standard Start and insert it.

To do the technical editing of the start separately no cycle might be present in the start.

1. Select and rename the module for the start "Tube without elastic thread" / "with loose row".
2. Copy and rename the element "Tube_1 Sys_without_G" present in the start.
3. Remove the existing RS1 cycle for length control.
It can be draw in after the technical editing again only.
4. Modify the quantity of knitting rows below and above the draw thread to an even-numbered.
5. Allocate the changed element to the container module "Tube Start" by drag & drop.
Further information for generating starts of your own
6. Select and insert the changed start via "Edit" / "Change Starts".

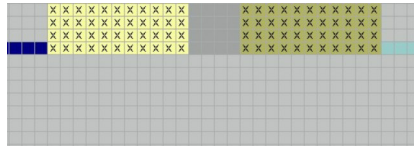


7. Open the "Shape view" via the "Shape" menu or with the symbol

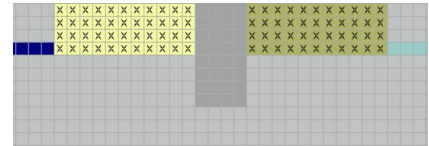
8. Draw in the "Out of Shape" function  below the first edge color.

Corrections in the shape view

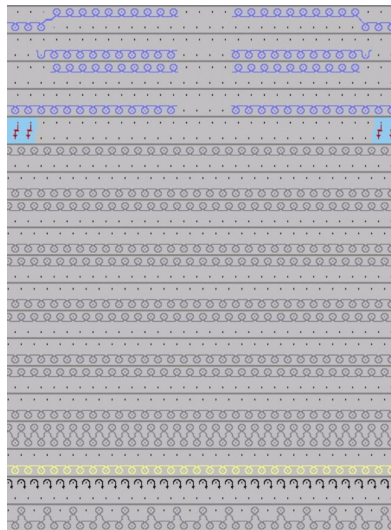
Shape View before the correction



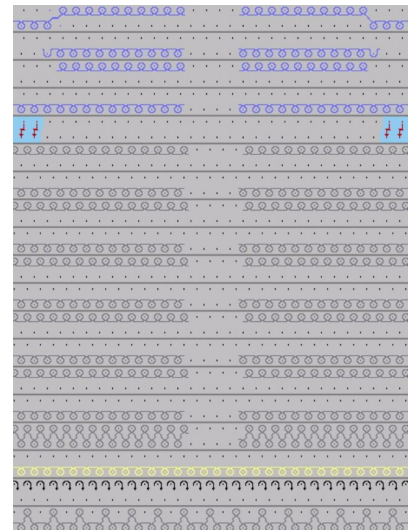
Shape View after the correction



Display in the Technical View before correction




Display in the Technical View after correction



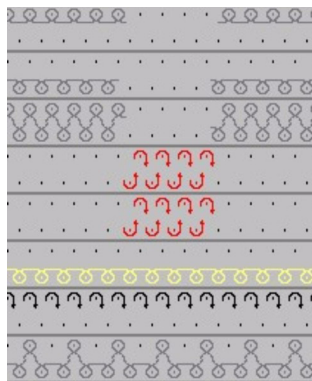
You can observe the changes made in the Shape View in the Fabric and Technical View.

9. Calculate the changed shape again with .

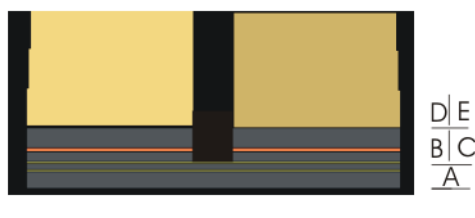
10. Close shape view with mit .

11. Draw in cast-off.

The knit-through stitch rows between the vest parts are cast-off after the draw thread. Therefore insert two rows and cast-off.



VI. Make corrections in the Yarn Field Allocation dialog box:



A	Common start with draw thread
B + C	Separated start from the draw thread on
D + E	Separate parts of the vest

You can use one yarn carrier for the common start upto the draw thread and the right start. (A) together wiht (C)

You must use different yarn carriers for the separte start (A and C) from the draw thread on.

The same yarn carriers can be used for the start and the parts of each part of the vest (motif).

(A+C) together with (E) and (B) together with (D)

12. Call up the "Yarn Field Allocation" dialog box.



13. Allocate (A) and (C) to a common yarn carrier.

14. Confirm settings with "OK".

VII. Complete the pattern:



You have to remove the cycle from the "Tube" start before the technical editing.

15. "Automatic technical editing" or "Step by step technical editing".
16. Insert the cycle for length control (RS1) in the start.
Therefore, select repeatable pattern rows of the start.
17. Carry out repeated "Automatic technical editing (Check)..." - or - "Step-wise technical editing (check)..." .
18. Generate a Sintral.
19. Conduct Sintral Check.
20. Transfer data to the machine.
21. Knit pattern.

3.16 Fully Fashion: Variants of generating shapes.

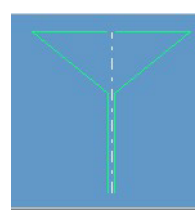
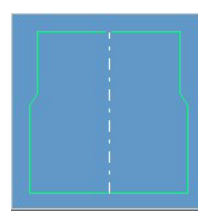
Further possibilities to generate shapes:

There must be a distance between the knitting parts of a vest front to position the yarn carriers.

You can use different methods and edge definitions to generate a shape.

Variant 1

Generating the individual basic elements and V-neck



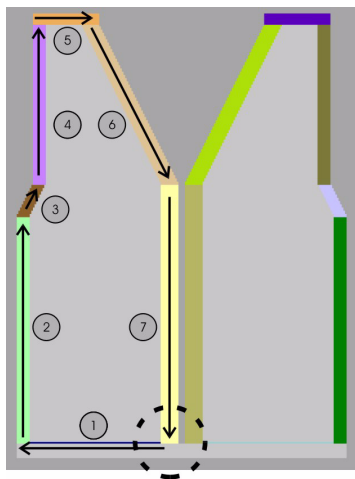
Description

Enter a value at "Distance from center axis" for each elements (Front and V-neck) to achieve the distance between the shape halves.

Variant 2

Generating a basic element with all edges.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-340	0	-102	0	-102	1	0	0	0	Basis
2		466	0	140		140	0	1	0	0	0	
3		66	33	20	10	2	1	10	0	0	0	Narrowing
4		333	0	100	0	100	0	1	0	0	0	
5		0	140	0	42	0	42	1	0	0	0	
6		-333	166	-100	50	-2	1	50	0	0	0	Narrowing
7		-533	0	-160		-160	0	1	0	0	0	
8		0	0	0	0	0	0	0	0	0	0	

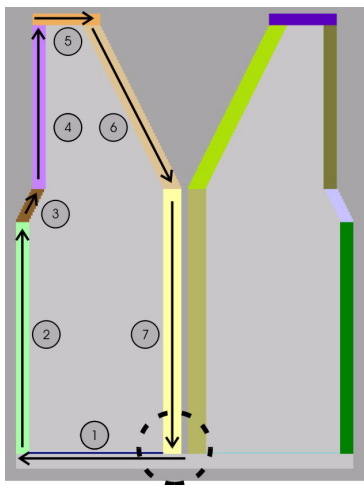


Line of the edges No.	Distance from center axis:	Description
1		
Length 102	2	There is no distance of the shape halves if the value = 0 at the height at the end (end line). Specify the distance of the shape halves via "Distance from the center axis".
Line of the edges No. 8		
Length 0		

Variant 3


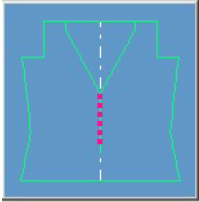
Generating a basic element with all edges - extended start line.

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	-346	0	-104	0	-104	1	0	0	0	Basis	
2		466	0	140	0	140	0	1	0	0	0		
3		66	33	20	10	2	1	10	0	0	0	Narrowing	
4		333	0	100	0	100	0	1	0	0	0		
5		0	140	0	42	0	42	1	0	0	0		
6		-333	166	-100	50	-2	1	50	0	0	0	Narrowing	
7		-533	0	-160	0	-160	0	1	0	0	0		
8		0	6	0	2	0	2	1	0	0	0		



Line of the edges No. 1	Distance from center axis:	Description
Length 104	0	There is a distance of the shape halves if the value $\neq 0$ at the height at the end (end line). The remaining value defines the distance of the left shape element from the center axis. In the example this results in a distance of 4 needles (2x2) of the left and right shape elements.
Line of the edges No. 8		
Length 2		

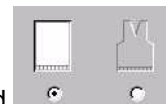
3.17 Fully Fashion-Pattern: Tank top with button loops

Pattern data	Pattern picture
File: Top mit Knopfschlaufen.mdv Pattern width: 200 Pattern rows: 240	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Shape:	 Top mit Knopfschlaufen .shp
Knitting technique	Tank top with button loops

Pattern description:
Fully-Fashion tank top with V-neck, button loops and button marks

I. Generate pattern without shape and then position shape.

1. Generate a new pattern via "File / New..." or .



2. Adjust in the dialog box "New pattern" Standard
3. Confirm the New Pattern dialog box with "OK".

II. Create the shape:

Create your own shape for the front part and the V-neck with button loops.

1. Shape element 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	-266	0	-80	0	-80	1	0	0	0	Basis
2	/	183	33	55	10	0	0	0	0	0	0	Narrowing
3	✓	166	-16	50	-5	0	0	0	0	0	0	Widening
4		106	-13	32	-4	8	-1	4	0	0	0	Widening
5		0	73	0	22	0	22	1	0	0	0	Link-off
6		133	0	40	0	40	0	1	0	0	0	
7		0	190	0	57	0	57	1	0	0	0	

Table for the front

	Factor Grouped	Group	Height Steps	Width Steps	Factor
			55	10	
	5	1	6	1	1
		1	5	1	1



Table for edge line no. 2

	Factor Grouped	Group	Height Steps	Width Steps	Factor
			50	-5	
	5	1	5	-1	1
		1	5	0	1

Table for edge line no. 3

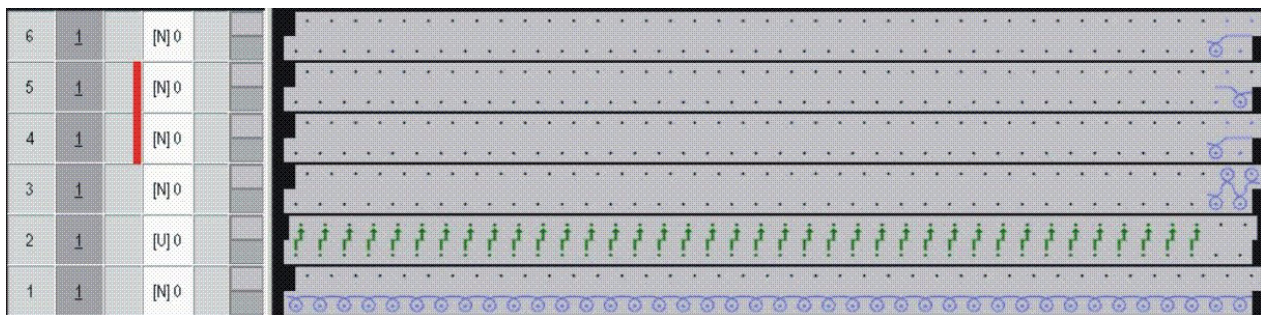
Settings in the table for the front:

Line of the edges	"General" tab	Tab "Narrowing"	Tab "Widening"	Tab "Bind-off"
No. 2	Narrowing	L-R separate transfer		
No. 3	Widening		Darn stitch	
No. 4	Widening		Darn stitch	
No. 5	Bind-off			BO-SJ-01


- Shape element V-neck with button loop and marks.
Create a new element for the V-neck in the Shape Editor.
Select "Neck opening" in the selection list below type.
Generate the left and right cut-out edge under  and . Both edges are equal but will get different attributes.
- Create edge lines at the left and right shape edge at regular distances to which loops for the buttons and marks for the button holes can be allocated.
(Example: Edges lines no. 2, 4, 6, etc. in a distance of 10 rows).

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		33	0	10	0	10	0	1	0	0	0	0	
2		3	0	1	0	1	0	1	0	0	0	0	
3		30	0	9	0	9	0	1	0	0	0	0	
4		3	0	1	0	1	0	1	0	0	0	0	
5		30	0	9	0	9	0	1	0	0	0	0	
6		3	0	1	0	1	0	1	0	0	0	0	
7		30	0	9	0	9	0	1	0	0	0	0	
8		3	0	1	0	1	0	1	0	0	0	0	
9		30	0	9	0	9	0	1	0	0	0	0	
10		3	0	1	0	1	0	1	0	0	0	0	
11		30	0	9	0	9	0	1	0	0	0	0	
12		3	0	1	0	1	0	1	0	0	0	0	
13		16	0	5	0	5	0	1	0	0	0	0	
14	✓	233	-116	70	-35	0	0	0	0	0	0	0	Narrowing
15		33	0	10	0	10	0	1	0	0	0	0	
16		0	116	0	35	0	35	1	0	0	0	0	

4. Generate a fade-out module and allocate it only to the left edge.
You have to generate a module for fade-out with a loop. Generate the stitch line in the Module Editor.
Allocate the module to the left edge line no. 2, 4, 6, 8, 10 and 12 in the function column of the Fade-out tab.



Module for button loops

5. Marks for the button holes on the right edge.
You can set marks to sew on the buttons easily.
Generate a table with  in which you can specify the rows of the button marks.

No.	Height mm	Width mm	Height Stitches	Width Stitches	Group	Function
1	36	20	11	6	0	Normal
2	70	20	21	6	0	Normal
3	103	20	31	6	0	Normal
4	136	20	41	6	0	Normal
5	170	20	51	6	0	Normal
6	203	0	61	6	0	Normal

Marks for button

6. Allocate the marking module to the edge lines of the marks under "Function".
7. Save the shape after the change.



You can insert an additional tuck to show the position of the button more clearly.

8. Generate and allocate modules for the button marks



III. Place shape onto pattern:

1. Open shape via "Shape" / "Open and Position Shape(shv, shp, shr)..."
2. "Shape" / "Use shape (cut, fade out, narrow)".
3. "Automatic technical editing" or "Step by step technical editing".

IV. Insert cycles:

- ➔ Insert a cycle for length control of the loops into the module.
- or -
- ➔ Insert cycles for length control of the loops in the technical view after the technical editing.

VI. Complete the pattern:

1. Check the cycles after inserting them.
Via "Knitting Technique" / "Automatic technical editing (check)..." or "Stepwise technical editing (check)..."
2. Generate a Sintral.
3. Start the Sintral-Check.
4. Transfer data to the machine.
5. Knit pattern.

3.18 ShapeSizer

The "ShapeSizer" program enables:

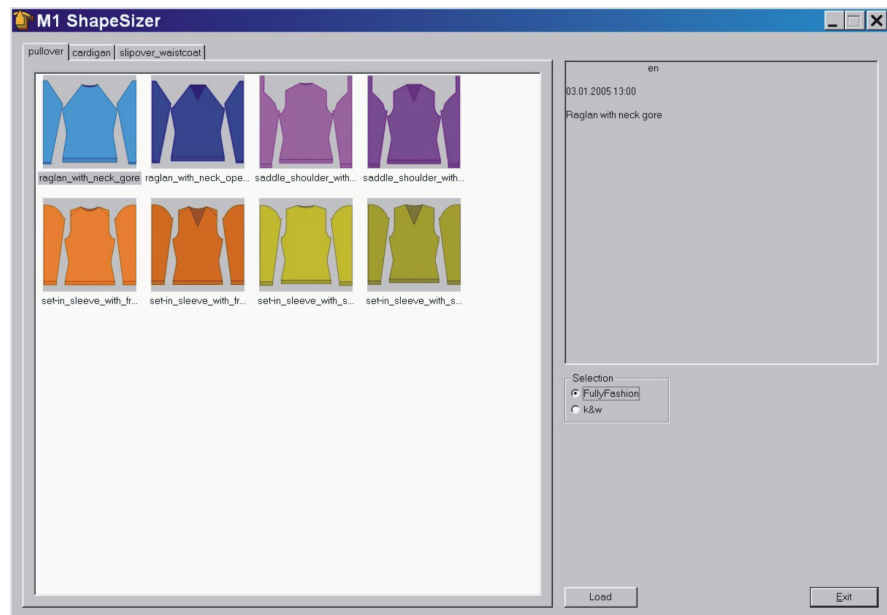
- To generate different sizes
- To edit a Stoll standard shape quickly
- To modify the shape attributes for different sizes quickly and easily



You can not generate shapes of your own in the ShapeSizer.

I. Open and edit shape:

→ Open the "ShapeSizer" program via the "Shape" \ "ShapeSizer…" menu.



	Function
1	Tabs of the different shape directories
2	Overview of the Stoll standard shapes
3	Information window
4	Select the fully fashion or k&w mode
5	Load a .shz file generated in the ShapeSizer
6	Close the ShapeSizer

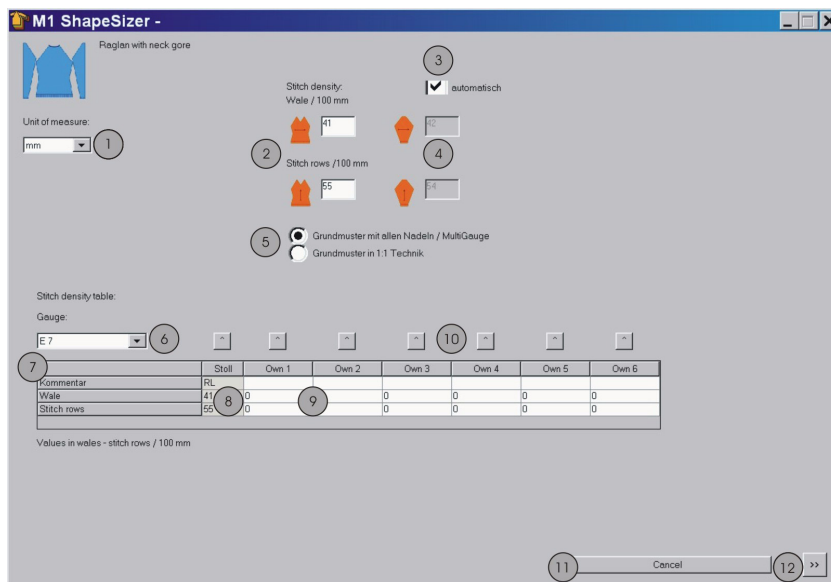
3.18.1 ShapeSizer: Specify the stitch ratio

1. Open the desired shape in the overview window with double click.
-> The next dialog box of the "M1 ShapeSizer" opens.



The selected shape with the Stoll standard attributes gets open.
These data are saved in the "defaultform_shp" files corresponding to the shape elements (VT, ARM).

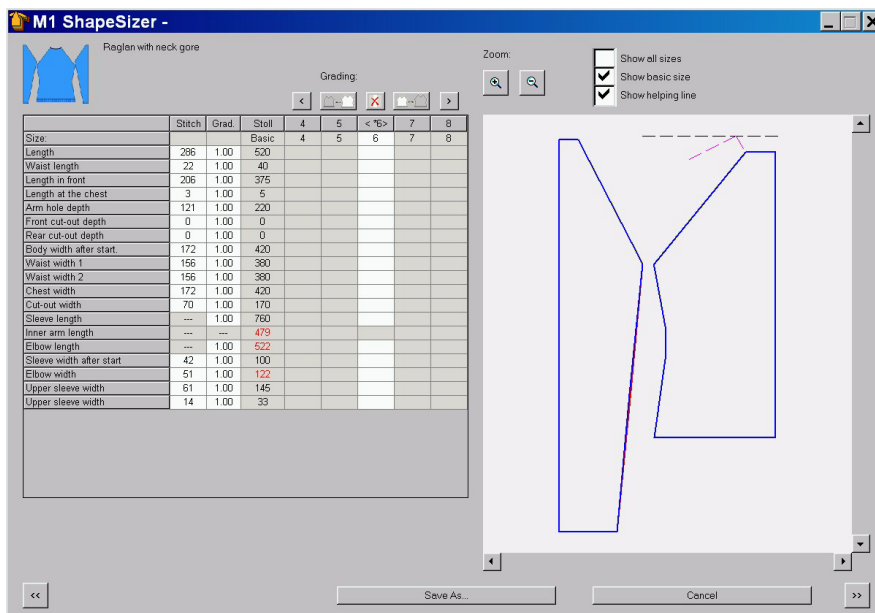
2. Enter the stitch ratio.
The stitch density (2) is used in the further processing.








	Function
1	Select the mm or inch measure unit for the stitch ratio
2	Stitch ratio of the front Number of stitches in the width (wales) and height (rows)
3	Convert the stitch ratio for the sleeve automatically
4	Enter the stitch ratio for the sleeve manually
5	Select basic pattern with all needles or in 1x1 technique
6	Select the gauge for the stitch density table
7	Table of the stitch densities
8	Stoll default stitch ratio for single jersey
9	Define your own stitch ratios for the various knitting modes
10	Transfer the stitch ratios from the table into the "Stitch Density" (2) entry field
11	Close the ShapeSizer
12	Change to the next dialog window of the ShapeSizer

3. Change to the next dialog window with the  button.

3.18.2 ShapeSizer: Generate sizes - Grading




No	Function
.	
1	Graphic presentation of the shape
2	Decrease or increase the graphic display
3	Possibilities of graphical display

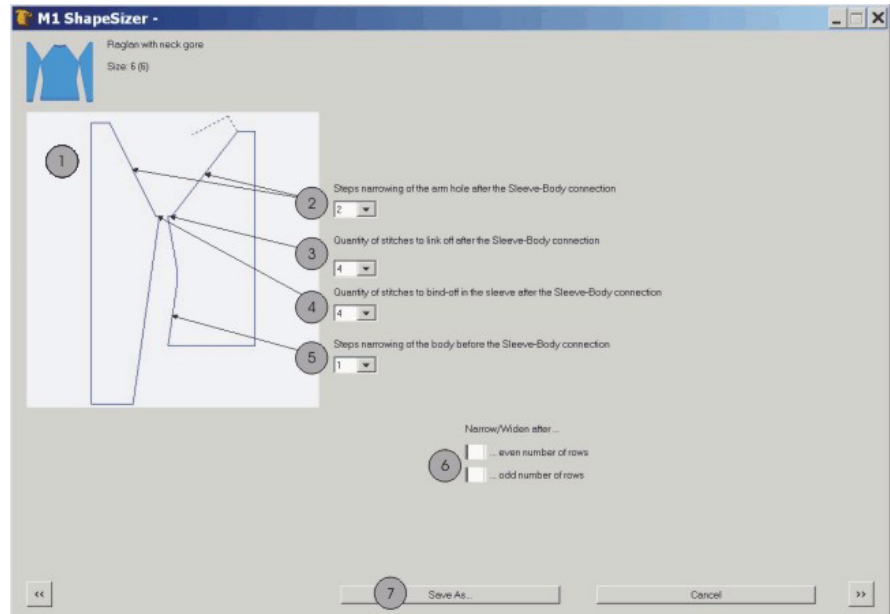
No	Function
4	Calculate sizes according to the grading factor
	 Call-up the previous column of the measure table
	 Calculate the next smaller size
	 Delete the values in the active column
	 Calculate the next larger size
	 Call-up the following column of the measure table
5	List of the shape edge lines and their name
6	Measures of the shape in stitches referring to the selected size. Convert from mm to stitches on base of the specified stitch ratio.
7	Grading factor in %, i.e. the change from one size to the next size in percent. You can calculate the other sizes with the buttons (4).
8	Measures of the shape of the basic size. These values cannot be changed. Keep the measures of the Stoll standard shape in mm. - or - Enter the measures in mm into the < * 6 > column (basic size) manually.
9	Measures of the basic size in the < * 6 > column: Change the values - or - Enter new values directly into the empty column.
10	Back to the last or forward to the next dialog box
11	Save size table as *.shz file
12	Close the ShapeSizer




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

→ Change to the next dialog window with the  button.

3.18.3 ShapeSizer: Specify steppings and binding off



No.	Function
1	Graphic presentation of shape edges
2	Definition of the step width of the narrowings of sleeve and body
3	Number of stitches to be bound-off in the body The number of stitches is subtracted from the original number and the sleeve hole is recalculated.
4	Number of stitches to be bound-off in the sleeve
5	Definition of the step width of the narrowings in the body
6	Narrowing / Widening on even- or odd-numbered rows
7	Save size table as *.shz file

→ Change to the next dialog window with the  button.

3.18.4 ShapeSizer: Saving the size table

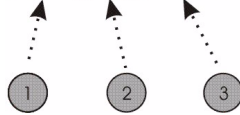


If the size table has not yet been saved as an *.shz file, then a window for saving the data appears automatically.

The selected shape with the Stoll standard attributes (default shape….shp) is saved under the same name in the same directory.

Name example of a file:

Test_B_front.shp



No.	Meaning	
1	Name of shape	
2	B	B = Basic shape (corresponds to basic size <*6>)
	01	Size 1
	02	Size 2
3	Type of shape element	
	front	Front
	rear	Back
	sleeve	Sleeve



When saving, ensure proper directory path!

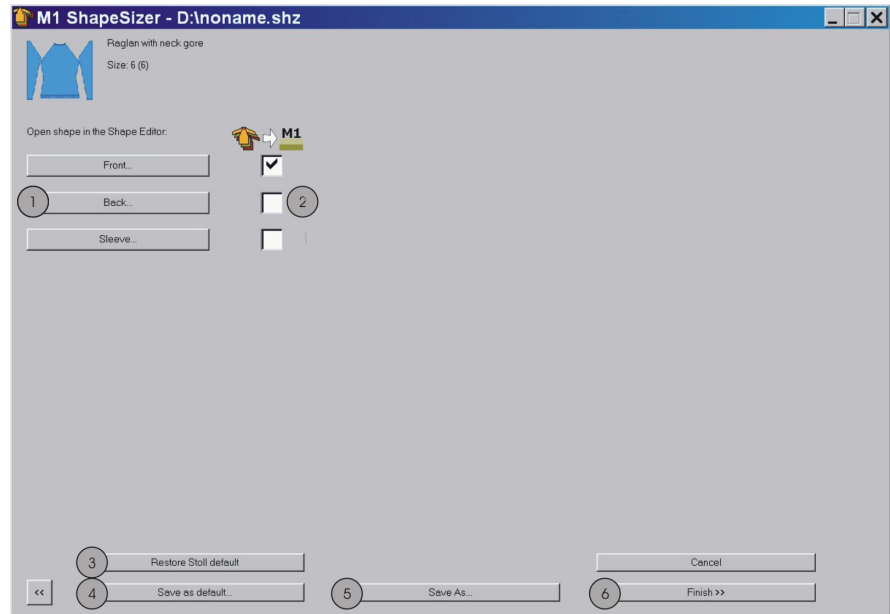
Save all shape elements to one common directory.

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

- or -

→ Change to the next dialog window with the  button.

3.18.5 ShapeSizer: Further settings and Finish



No.	Function
1	Open size elements of the size selected in the size table in the shape editor.
2	Select a shape element front part, back of body or sleeve for the generation of a new pattern.
3	Own defaults (default user files) are deleted from the directory and the default shape file is used.
4	Save attribute changes as own default "defaultuser_... .shp". If a directory contains defaultuser files, then these data are used to open the shape.
5	Save size table as *.shz file
6	Open the "New pattern" dialog box.

- ➔ Press the "Finish >>" button to generate a new pattern.
The "New module" dialog box appears.

3.19 Split pattern

Pattern must be split:

- when the pattern size for the storage of the machine lies in the limit area or is too large.
- if the jacquard and Sintral lines exceed the permissible number of lines of the machine memory.

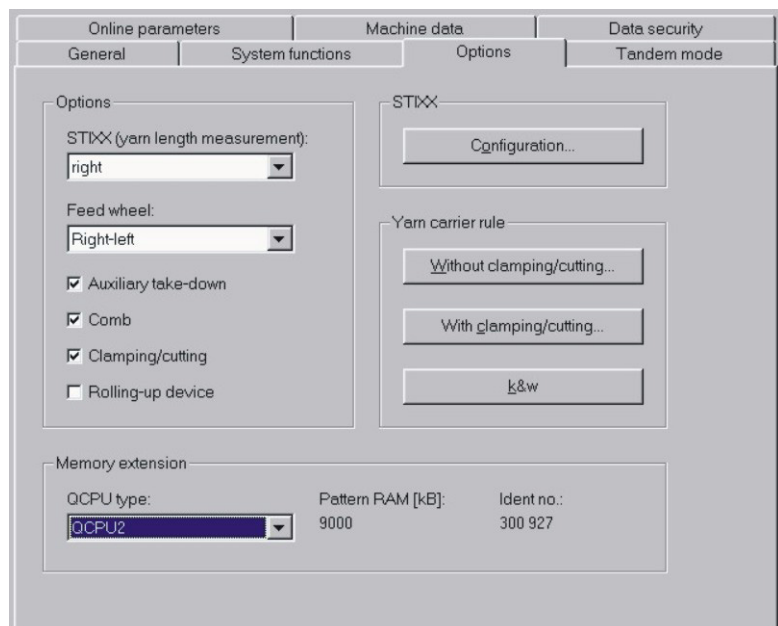
- or -

- ➔ if the setting "Always split pattern" is activated in the "Split Pattern" program (splitsintral.exe) .

I. Set pattern storage in the machine explorer:

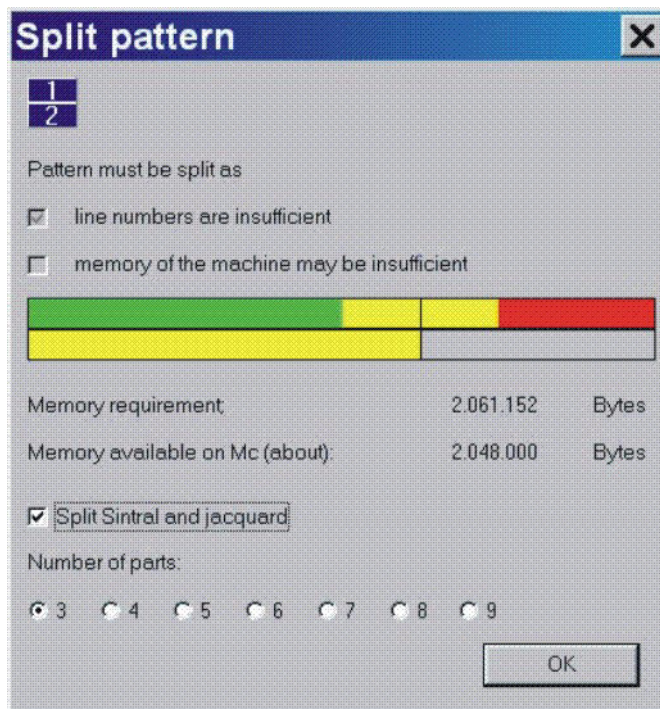
For machines with computer type ST168, ST268 and ST468 the memory available in the machine can be set on the M1.

1. Open the machine explorer via "View" / "Machine explorer".
2. Select the desired machine in "STOLL Machines" / "CMS Generation" and call-up the "Generate own machine" context menu.
3. Under "Own machines" select the newly generated machine and call up the "Properties" context menu.
4. Set the QCPU type in the "Properties of CMS..." dialog box under "Options" / "Memory extension" .
 - QCPU 1: Memory capacity 2000 kB
 - QCPU 2: Memory capacity 9,000 kB



II. Set markings for pattern elements automatically:

1. Following technical editing, generate "Sintral"/"Jacquard"/"Setup". The "Split pattern" message appears.



2. Activate the "Split Sintral and jacquard" setting in the "Split Pattern" dialog box. The "Number of parts" is determined automatically.
3. With "OK" start the process.

In sintral and jacquard the markings on which the pattern will be split are made.

A pattern which contains marks can be recognized in the sintral line 1 from the entry <<M1>>.

III. Pattern elements with new software (ST168.0_30_03.001.001):

1. Read in pattern into the machine.
- or -
- ➔ Extract pattern via menu "Sintral" / "Extract jac/sin/set-files..." and read in into the machine.



If you read-in the pattern on a machine with the computer type x68 and operating system ST168.0_30_03.001.001 or higher, then the pattern can be loaded into the main memory of the machine. The actual process of splitting the pattern takes place in the machine memory.

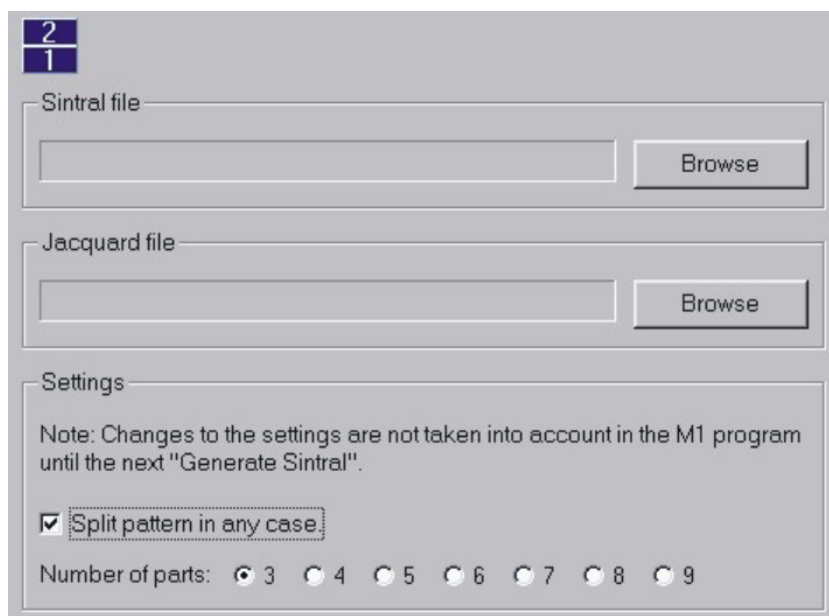
If during loading the pattern the markings are available, then a sequence is automatically generated and is loaded in the sequence mask.

2. Start the sequence editor.

III. Pattern elements with old software (before ST168.0_30_03.001.001):

Should the pattern be read in into a machine with an operating system before ST168.0_30_03.001.001 then you must split the pattern and allocate it to a sequence.

1. Call up "C:/Program Files/Stoll/M1/Bin/splitsintral.exe".



2. With the keys "Find" specify the path to the extracted Sintral and jacquard file.
3. Start the process with the "Split Pattern" button.

Now the directory in which the split pattern is stored contains the following directories:

Pattern name-1.sin / -2.sin / -3.sin etc.
 Pattern name-1.sin / -2.sin / -3.sin etc.
 Pattern name-1.set
 Pattern name-.seq.

The patter split into different parts must now be knit as a sequence. The required sequence is automatically generated and is contained in the file Pattern name-.seq.

No.	Sequence element name	Sin	Jac	Set	Factor
1	-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Direkt 1
2	-2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Direkt 1
3	-3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Direkt 1
4		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Direkt 1
5		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Direkt 1

4. Load the sequence into the machine.
5. Start the sequence editor.

IV. Start program pattern elements manually.

In case of patterns whose sizes do not require any pattern elements can be started manually.

1. Before the technical editing call up the program "splitsintral.exe" under "C:/" "Program Files" "Stoll" "M1" "Bin" "splitsintral.exe"

2. Activate the "Split pattern in any case" checkbox.
3. Close the "Split Patter" program.
4. Carry out technical editing.
5. Further as described II. onwards.

3.19.1 Working with sequences

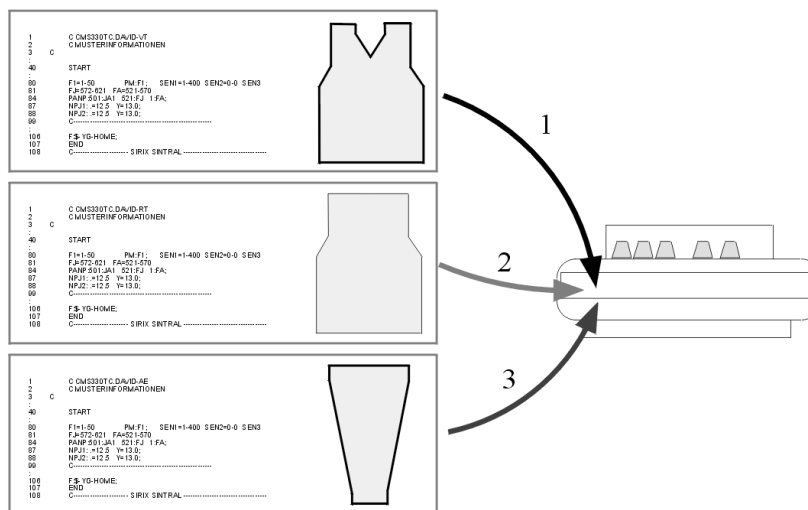
In a sequence various knitting programs are worked through in sequence.

Examples of a sequence:

Knit one after another the front and back of the body and sleeves.

- or -

Knitting sets of sizes, i.e. the same pattern in different sizes.



All knitting programs used in the sequence must have the following settings identical:

- Same type of the machine
- Same SEN areas
- Yarn carrier home position

I. Generate a sequence:

1. Call up the "Sequence Editor" dialog box via the "Tools" / "Sequence Editor..." menu.
2. Enter a sequence name.
3. List the order of the sequence elements under the consecutive numbers in the "sequence element name" column.



A sequence can be generated with or without the sequence name.

Sequence name	Element name	Sequence name	Element name
David	- VT	No name	David-VT
	-RT		David-RT
	-Sleeve		David-sleeve

4. Make settings in the sequence editor


No.	Function	
1	Input field for the sequence name	
2	Input field for comments	
3	Order in which the sequence elements are processed.	
4	Active checkbox	Element will be loaded
	Non active checkbox	Element will not be loaded
5	Direct	Number of a sequence element from column 6
	Cycle switch RS	Number of a sequence element via cycle switch
6	Number of repetitions of a sequence element	
7	Delete program from line XX on when loading the next sequence element	
8	Specification of cycle switches and counters	
9	Input field for comments	
10	Knitting of different sizes	

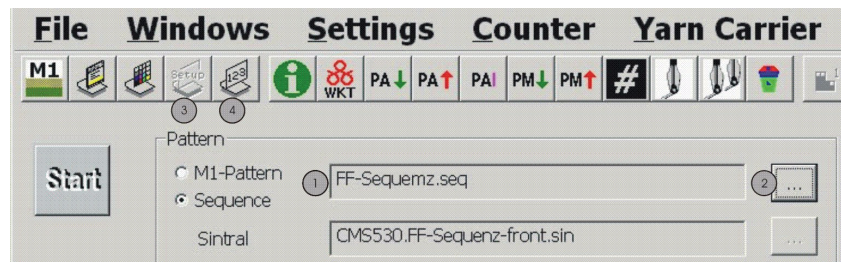
5. Save sequence
 Give the sequence a name.
 Save the sequence in the directory of the sequence element.

A file with the ending .seq is created.

II. Check a sequence:

You can check a sequence in the Sintral Check.
A sequence file (xxx.seq) must be generated for this purpose.

1. Call up the "Sintral Check" program via the "Sintral" / "Sintral-Check" menu.
2. Switch to pattern on the sequence (1).
3. Load the sequence via the button  (2)



Settings in the Sintral Check:

No.	Function
1	Switching between pattern (.mdv) and sequence (.seq).
2	Define path for "Pattern/Load sequence".
3	Display the Setup Editor.
4	Display the Sequence Editor.


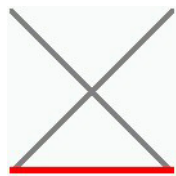

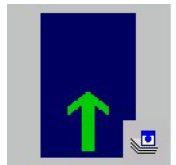
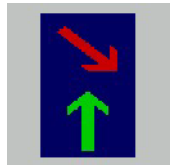


4. Call up the Sintral Check with the "Start" button.





3.20 Working with modules

I. Possibilities for generating modules

- Generate a new module in the module editor
- [from the pattern selection](#) [s. p. 69]
- Generate a copy of an existing module and edit it.

II. Overview about the types of modules and their representation in the module explorer



Module type	Presentation	Use	Special features
Pattern elements		Generate the motif	Not saved in the module data bank
Modules without stitch row		Limit conditions	Does not consist of any knitting and transfer procedure
		Limit module	Consists of transfer procedures only
			
Modules with transfer actions only		Transfer	Consists of transfer procedures only
Module with limit condition(s)		Different knitting situations	During application of the module different situations get checked and are replaced by the limit module
Combination modules with cycles		Generate the motif	Allocation of a max. 9 modules that can be repeated horizontally and vertically.

Module type	Presentation	Use	Special features
Step modules		Bind-off	Comprising of maximum 3 diagonally allocated modules that are inserted in a pattern row.
Technical container module		Is inserted by technique	Cannot be inserted in the pattern.
Module with connection points	 Common processing	Generate the motif	A knitting row is divided in knitting-in/ knitting-out rows with intermediate knitting rows.
	 Separate processing		

3.21 Working with modules - Generation of pattern elements

I. Generating a temporary pattern element:

A temporary pattern element is generated out of a selection which is copied or cut.

1. Select Drawing tools.
2. Select a part of the pattern in the fabric/ symbol or in the technical view.
3. Selection copy with  or cut with .

The temporary pattern element is on the cursor so that it can be drawn.



A temporary pattern element is not displayed in the module bar and is not saved in the module data bank.


II. Generate a pattern element:



A pattern element is generated from a selected pattern area.

Pattern elements have the symbol  in the lower right-hand corner.

1. Select pattern area.
2. Via the "Module" / "Generate pattern element from selection" menu.

The pattern element is stored as "Local pattern element " with the indication L and  in the module bar.

III. Save pattern element in data bank:



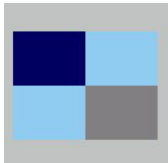
1. Select the local pattern element in the Module bar.
2. Select "Save to database" via the context menu (right mouse button).

The pattern element is stored in the module group "User/<user name>/ Pattern element" in the module explorer. The L symbol is no longer present.

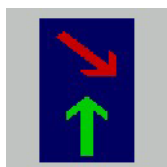
3.22 Working with modules - Module without stitch rows

Module without stitch rows consist of no knitting or transfer procedure. These modules are used for the prompt of needle allocations. Modules without stitch rows can also contain limit conditions.

Examples for module without stitch rows:

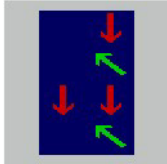

Presentation	Function
	Modules without knitting and transfer information with limit conditions
	Modules without knitting and transfer information with limit module
	Module for narrowing structure single jersey

3.23 Working with modules - Modules with transfer actions only



These modules consist of transfer procedure only and no knitting procedure.

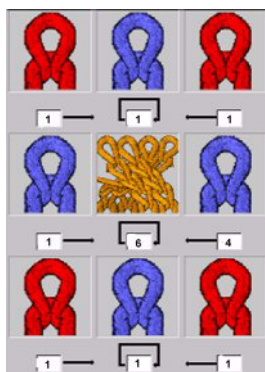
Example for module with transfer actions only:

Presentation	Function
	Transfer of structured double jersey
	Transfer of structured double jersey (transfer optional)

3.24 Working with modules - Combination module with cycles






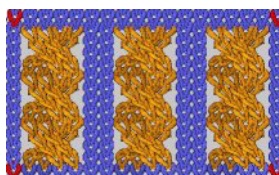
A combination module consists of different modules.
Allocation of a max. 9 modules that can be repeated horizontally and vertically is possible.
A combination module is seen as a drawing tool for the purpose of application.



The width of the modules in use is show automatically as offset value. You can set the horizontal position of the modules in use by changing the offset values.
The offset values are always referred to a reference point in the lower left of the module.

Meaning of the Offset specifications

		
Offset: 1	Offset: 6	Offset: 4
Distance of the module to the module on the right hand side	Horizontal distance to the next placing of the same module	Distance of the module to the module on the left hand side
Due to the Offset specification (1) for the module "Front Stitch with transfer" this modul will be added directly to the cable module.	Due to the Offset specification (6) for the module "Cable 2X2<" this is added in horizontal distance of 6 stitches in the drawing.	Due to the Offset specification (4) for the module "Front Stitch with transfer" this modul will be added directly to the cable module.



Result of the offset specifications:


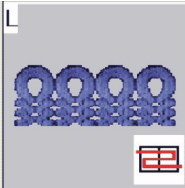
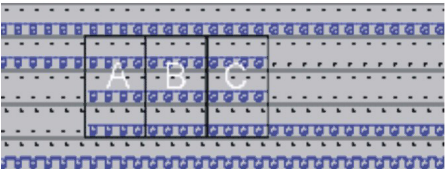

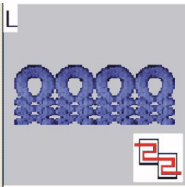
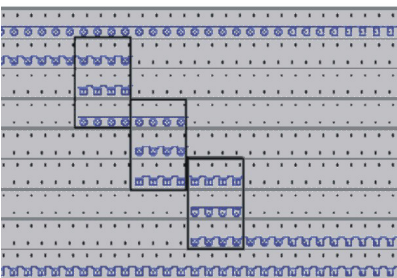


If the offset value is smaller than the module width the modules are inserted overlapping.

3.25 Working with modules - Module with connection point

Use the module with connection points for example during applications, tubular border or trimming.

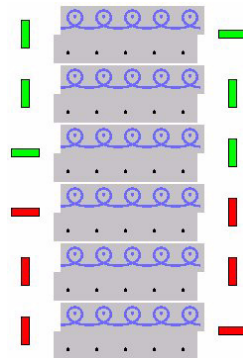
Indication for module with connection points:

	Meaning	Module example	Stitch line
	Common processing		 <p>The modules A, B and C must contain the same connection points.</p>
	Separate processing		

Properties:

- A connection point places one row knitting into and one row knitting out of the module.
Through a connection point the rows of the module get integrated in the motif.
- A module can have multiple connection points.

3 Fully Fashion and Special Training for M1 Pattern Software

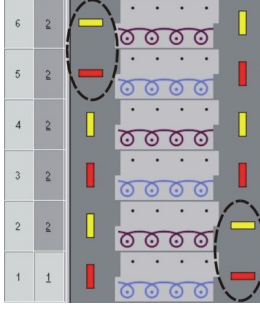
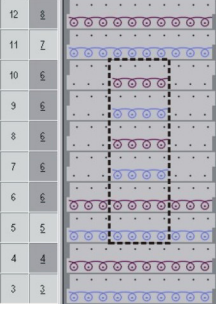
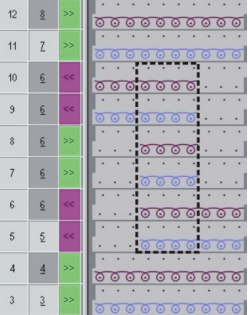
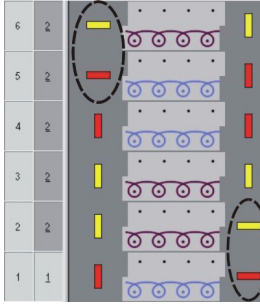
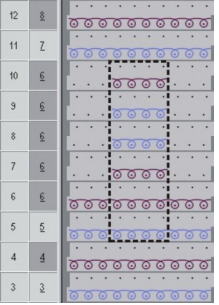
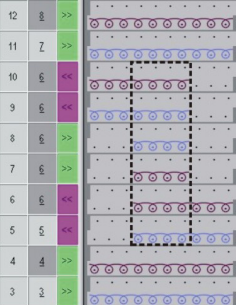


Example: Module with two connection points

- The knitting in or out rows are marked by a horizontal colored bar.
- Vertical colored bars limit the knitting row (= selection end).
- In case of multiple connection points these are represented in different colors.
- The number of knitting rows in the module is dependent on the knit-in/knit-out direction.

Module height	Behavior	Example	Application
Odd number of knitting rows	Knit-in and knit-out direction differ.		Applications Pockets knit with 1 yarn carrier
Even number of knitting rows	Knit-in and knit-out direction are identical.		Pockets knit with 2 yarn carriers Trim pieces with button holes

- Several nested connection points are possible, i.e. several existing pattern rows can be processed.
- With nested connection points, the sequences of the connection points for knitting-in/knitting-out must be the same.

Example	Before technical editing	After technical editing
		
		



For a better overview, the illustrations were produced with different colors. Single-color modules can also be created.

- Modules with nested connection points can also be used in jacquard areas.

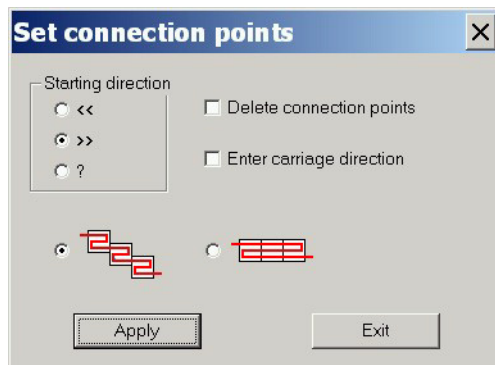




You must separate the jacquard areas into needle actions.

Generate modules with connection points

A module must be opened in a module editor.

- Call up the "Module" / "Set connection points" menu.
The dialog box for specifying the connection points appears.



	Function
<<	Start direction to the left
>>	Start direction to the right
?	Start direction undefined
Delete connection points	Available connection points are deleted
Enter carriage direction	Setting of the carriage direction for technical editing
	Common processing
	Separate processing
Apply	Apply adjustments in the module
Exit	Close the window

1. Select the knitting rows that build the connection points.
2. Specify the connection points.



In case of a module with connection points, you can specify the start direction.

During the technical editing the start direction is eventually changed by the yarn guide calculation.

The start direction is binding only if you also activate the "Enter carriage direction" checkbox.

3. Click on the "Accept" button.

3.26 Combination Module for the pocket

I. Generate the pocket elements as modules and modules with connection points:



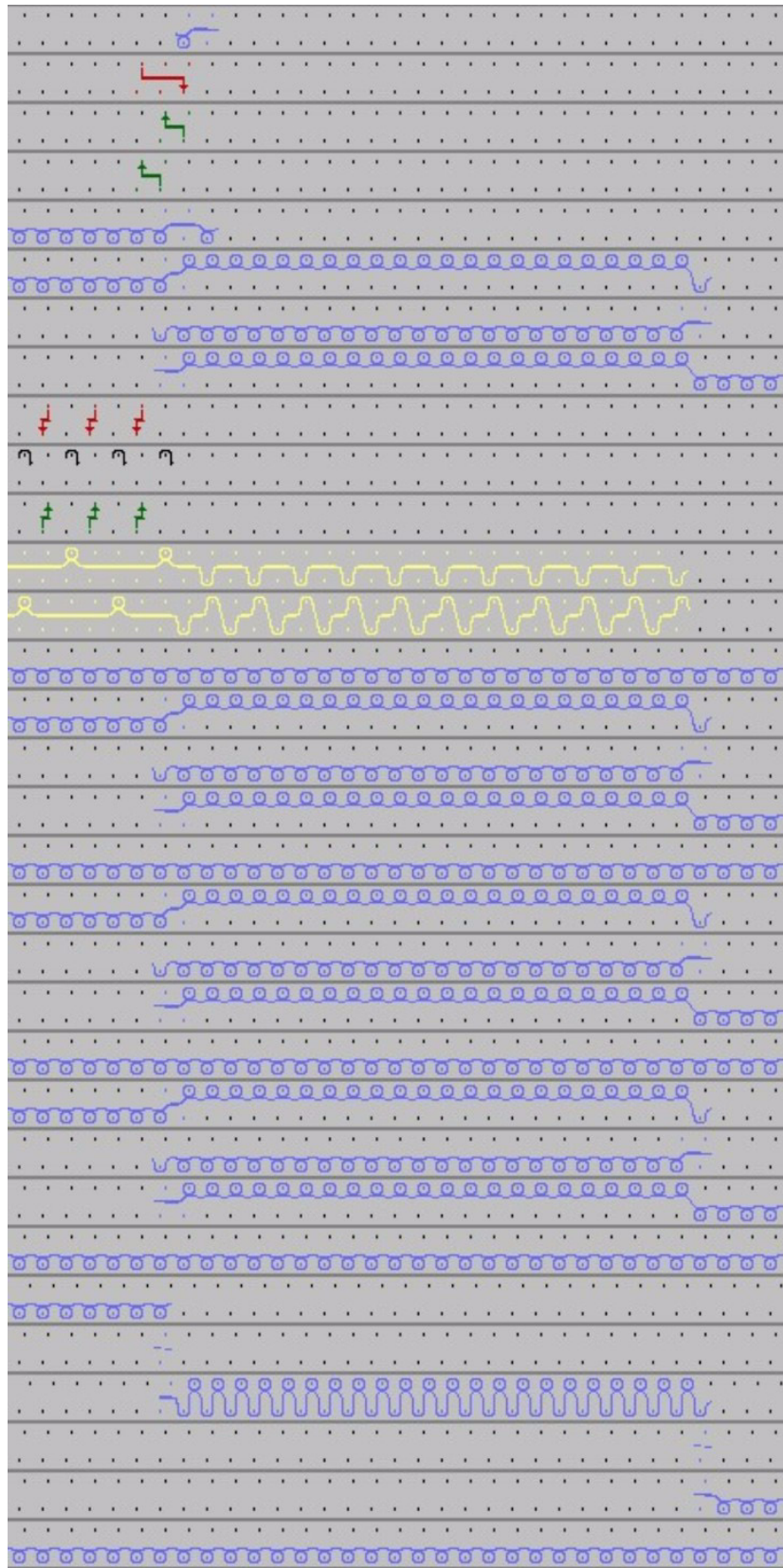
The pocket will not be complete at the end of this paragraph. Further steps are still necessary. The pocket will be completed step by step in the further course of this training.

The pocket will be knitted with a yarn carrier.

To generate the "pocket combinations module" further pocket elements / modules are necessary.


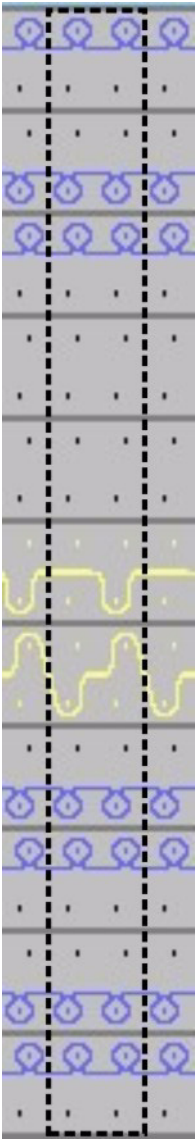
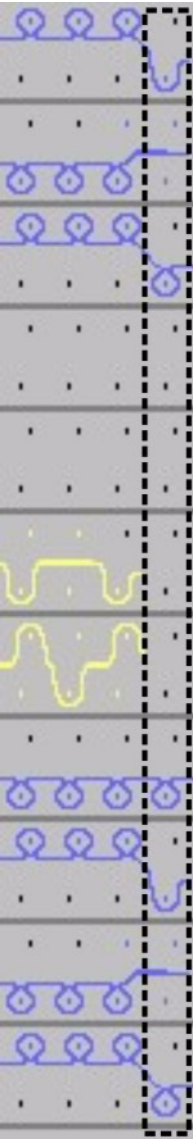
Elements / modules for the "pocket tube" combination module

Left end of pocket (with connection points)	Center end of pocket (with connection points)	Right end of pocket (with connection points)
Left tube of pocket (with connection points)	Center tube of pocket (with connection points)	Right tube of pocket (with connection points)
Left pocket start (with connection points)	Center pocket start	Right pocket start (with connection points)

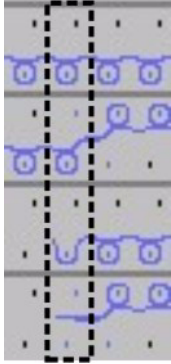
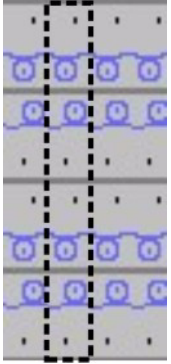
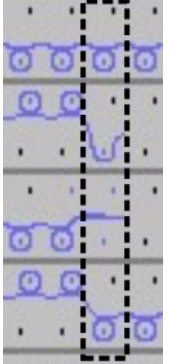
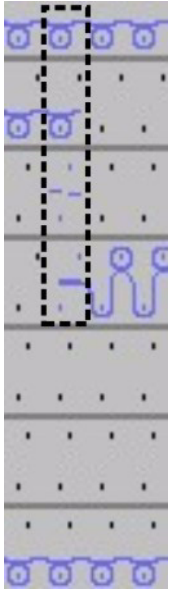
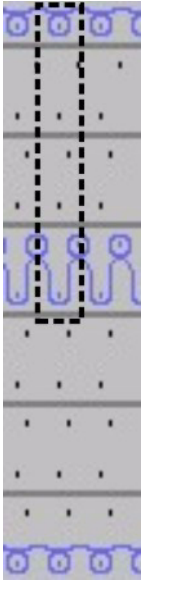
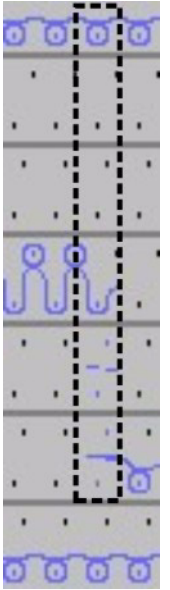


Knitting procedure of the pocket with draw thread

Knitting procedure of the pocket elements / modules:

Tube left end of pocket	Tube center end of pocket	Tube right end of pocket
		

Knitting procedure of the pocket elements / modules:

Left tube of pocket	Center tube of pocket	Right tube of pocket
		
Left pocket start	Center pocket start	Right pocket start
		

1. Generate modules for the pocket element via "Module" / "New module".
2. Generate each knitting sequence as module.
3. Save module.



Here watch the necessary width when generating the pocket elements / modules.

II. Set connection points:

1. Open module and edit it.
2. Group rows:
3. Call up the "Module" / "Set connection points" menu.
The settings dialog box appears for specifying the start and carriage direction.
4. Select the starting direction and activate the "Enter carriage direction" checkbox.
The module is direction-dependent.
- or -
→ Do not specify a starting direction and deactivate the "Enter carriage direction" checkbox.
Then the module is not depending on the direction. The direction of knitting in and out is optional.
5. Click on the "Accept" button.
6. Save module.

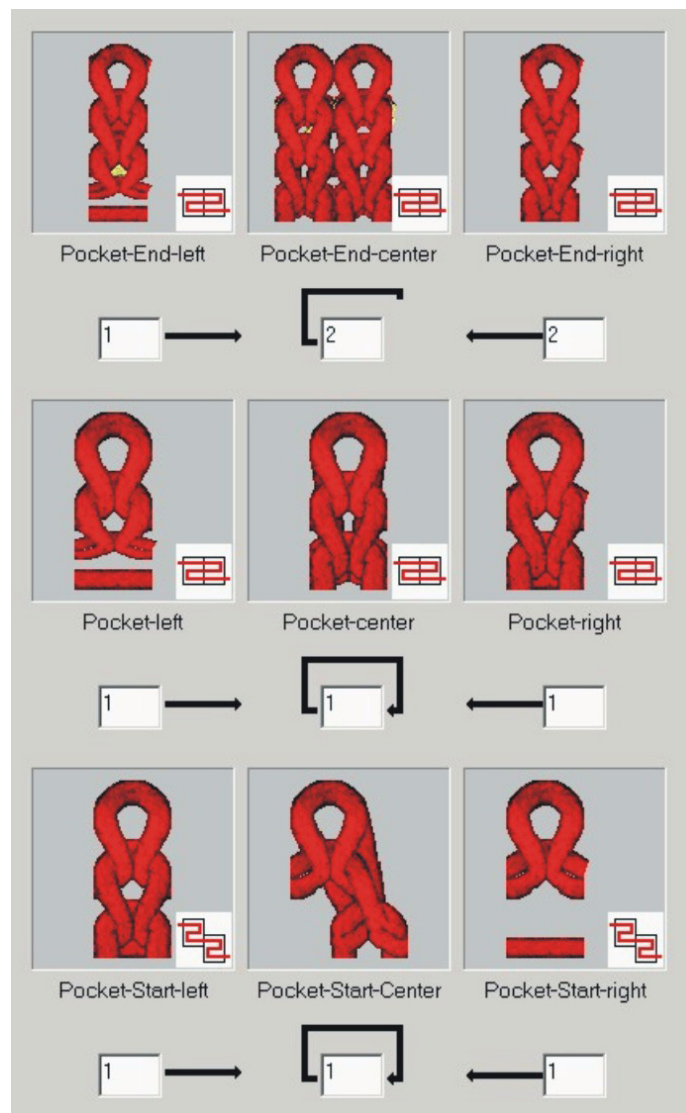


In the module the color bars are entered as symbols for the connection points.


The processing of connection points is carried out only during technical editing.

III. Generation of a combination module:

You have to insert the single elements or modules into the "Combination module". The position of the elements and modules within the combination module corresponds to the allocation in the pattern.



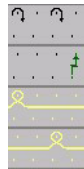
Pocket combination module

1. Open the "New Combination Module" dialog box via "Module"/"Generate Combination Module...".
2. Drag the modules into the "Combination Module" with drag & drop.
3. Confirm with "OK".
4. Save module in the database.
5. Define the module name in the "Properties" dialog box.
6. Insert the combination module into the motif with the drawing tool "Square" .

IV. Generate a pattern element for knitting in and out the draw thread:

A draw thread is knit in at the end of the pocket. This simplifies further processing.

After finishing of the article the draw thread is separated.



Knitting mode for knitting in and out of the draw thread

Draw in the knitting mode manually at the end of the pocket for the draw thread with throw off.

1. Draw in the knitting mode with binding elements or modules in the pattern.
2. Generate selection and place till the end of the pattern edge.

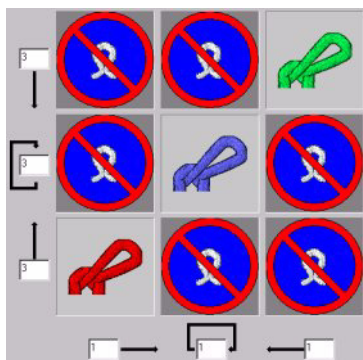


The process for the knitting in and out can also be generated as a module.

3.27 Working with modules - The step module



A Step Module is a combination module which can be used for binding-off
e.g.
It contains 3 diagonally arranged modules at the maximum.

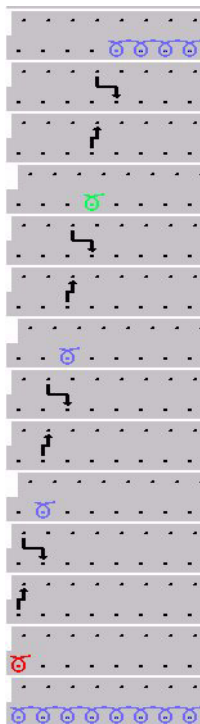


Step module

I. Application:

When inserting this step module all the individual module are inserted horizontally in one pattern row consisting of consecutive technical rows however.

The module is inserted in the direction given by itself never mind the direction of drawing in the module.



Step Module with stitch line for petinet

II. Meaning of the offset value with a step module

Offset values with a step module

	Vertical distance from the first technical row of the most upper repetition module to the first technical row of the end module. The end module is inserted once only.		
	Vertical distance from the first technical row of the repetition modules to each other The repetition module is inserted several times.		
	Vertical distance from the first technical row of the starting module to the first technical row of the first repetition module. The start module is inserted once only.		
Horizontal distance of the module to the module on the right hand side	Horizontal distance to the next placing of the same module	Horizontal distance of the module to the module on the left hand side	

3.28 Step Module for the pocket

I. Generate step module for the binding-off the pocket:

Pockets are mostly bound-off at the end of the knitting mode.



Step module for binding-off

The step module contains single elements:

Knitting mode	Designation	Function
	Pocket binding-off end	Module is placed once at the end of binding-off. Binding direction towards right.
	Binding-off pocket	Module is used again corresponding to the number of stitches for which binding-off should be done.
	Pocket binding-off start	Module is placed once at the start of binding-off. Binding direction towards right.

1. Generate the 3 elements / modules for binding-off.
2. Call up the "New Step Module" dialog box via "Module" / "Generate Step Module".
3. Pull the modules into the "Step Module" with drag & drop.
4. Confirm with "OK".
5. Define the module name in the "Properties" dialog box.
6. Confirm with "OK".
Step module is stored as a local pattern module in the module bar.
7. Save step module finally in the database.



You can achieve overlapping insert of the bind-off modules by changing the offset values.


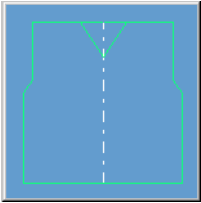
II. Draw in step module for binding-off:

- The step module is inserted horizontally in the desired width at the upper end of the knitting procedure of the pocket.
Rows are inserted automatically and the knitting mode of binding-off is entered.

III. Complete the pattern:

1. Start the automatic technical editing and generate Sintral.
2. Sintral-Check.
3. Transfer data to the machine.
4. Knit pattern.

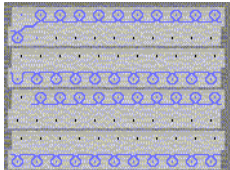
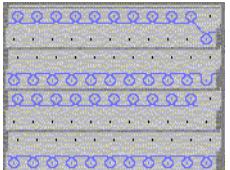
3.29 Fully Fashion-Pattern: V-neck with tube edge

Pattern data	Pattern picture
File: Tube edge-V.mdv Pattern width: automatically Pattern rows: automatically	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Shape: modified	 2_set-in-front-v-neck-38.shv
Description of pattern:	Structure pattern single-jersey with V neck and tube edge.
M1 working techniques	Generate start module-V and fade-out module for V neck. Modify existing shape in shape editor. Generate pattern with stitch in front together with the shape.

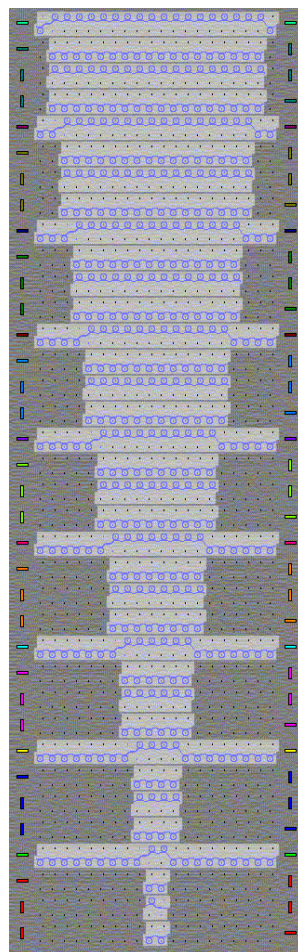
I. Generate fade-out module:

1. Generate fade-out module for left and right edge.

Fade-out module for tube edge V neck

Left edge	Right edge
	

2. Allocate in the fade-out modules as a module property in the "Technical" tab under the knitting mode: Allocate "Structure double jersey".
3. Generate start module for V neck.



V start module with connection points

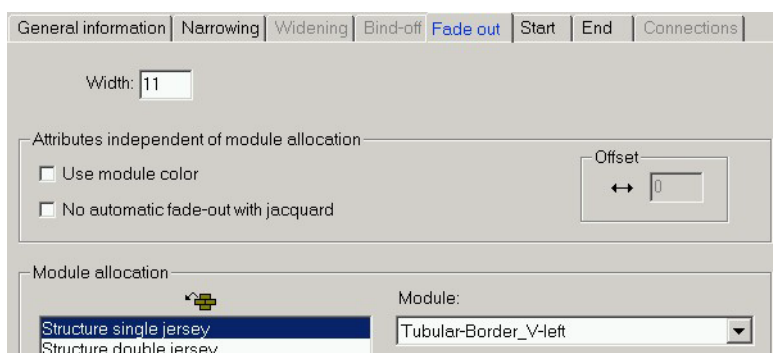
The dark grey surfaces in the module are transparent areas.

Draw in these with the symbol needle actions ☒ "Transparent areas in the module".

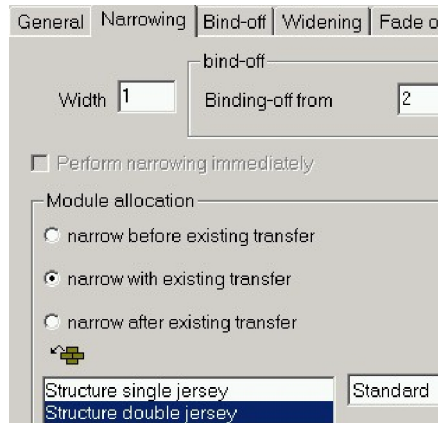
4. In the V start module, group the pattern rows and set the connection points.
Therefore select the rows and call up "Edit" / "Group selection block for a pattern row".
5. Save module.

II. Modify shape:

1. With "Shape" / call up "Generate shape/ edit shape".
2. Open shape: Select shape in the shape directory (D:\Stoll\M1\Form\2-set-in-front-v-neck-38)
3. Modify shape. Take note of the narrowing steps 1.
4. Allocate fade-out.




5. Allocate narrowing attributes.
Fade-out with a tube edge will be inserted into the basic motif (single jersey).
The fade-out module is allocated with the knitting type double jersey.
Therefore during narrowing double jersey structure is used.
6. Narrowing width 1 mentioned. So that it is narrowed as in the case of R-R fabric.

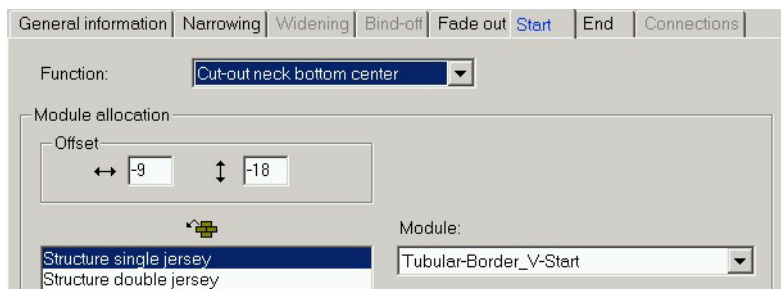


7. Activate the Neck cut-out element.



8. Via key  insert the standard module for the neck.

9. Specify the horizontal and vertical position of the V start module with offset.



10. Save shape.

III. Generate pattern together with the neck:

1. Call up "File / New..." or .

2. Select fully fashion .

3. Use the generated shape and module.

4. "Automatic technical editing" and "Generate Sintral".

5. Sintral-Check.

6. Transfer data to the machine.

7. Knit pattern

3.30 Working with modules - Container module technique



A container module technique is used by the technical editing. These module type cannot be drawn-in in the pattern.

→ Call up the "New container module technique" dialog box via the "Module" / "Generate container module technique" menu.


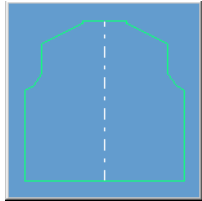
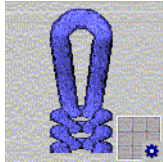
Examples for container module technique:

Presentation	Function
	Net pick up Intarsia
	Start 2X1



First of all copy and rename the original module before you edit this. Store the module in the module group "Container module technique" in the module explorer in each subgroup.

3.31 Fully Fashion-Pattern: Backs for French shoulders

Pattern data	Pattern picture
File: Franz-Schulter.mdv Pattern width: automatically Pattern rows: automatically	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Shape: Modified	 6_franz-ruecken.shv
Narrowing module	
Description of pattern:	Structure RL single jersey, with flat narrowing.
M1 working techniques	Generate module for narrowing. Modify existing shape in shape editor. Generate pattern together with the shape.

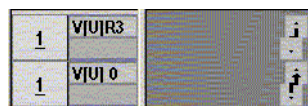
I. Generate module for narrowing:

Knitting and transfer mode		
Left edge		Right edge
<< VUJR3		
>> VUJR3		
>> VUJR3		
<< VUJ10		
<< VUJ10		
<< VUJ10		
>> VUJ10		
<< VUJ10		
>> VUJ10		
<< VUJ13		
>> VUJ13		
<< VUJ13		
<< VUJ13		
>> VUJ10		
>> VUJ10		
>> VUJ10		
<< VUJ10		
>> VUJ10		

1. Draw the knitting cycle as module.
Set direction of the carriage.
Group knitting rows to a pattern row.



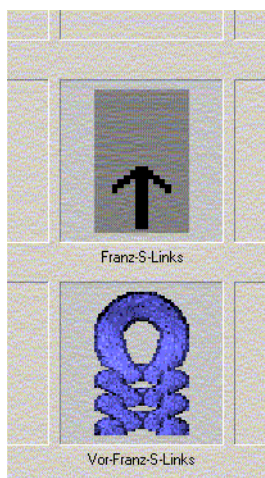
2. Draw the transfer cycle as module.
Group transfer rows to a pattern row.





Take care of the racking stage while specifying the module width.
 After the drawing-in of transfers with racking delete the columns that are not needed.

3. Save module.
4. Generate a "Container Module technique" for a variable narrowing width from the elements knitting cycle and transfer cycle.



5. Save container module.
6. Make the following settings in the "Technique " tab under "Properties of:"
 - "Maximum permissible racking <:" Setting 3.
 - "Maximum permissible racking >:" Setting 3.
 - "Knitting mode:Select " knitting type that should be used for the module.
7. Create your own module group in the Module Explorer under "User / XY / Folder Own modules / French Shoulder" as well as for "Elements".
8. Carry out this cycle for the left and the right fabric edge.

II. Modify shape:

1. Open the shape editor via "Shape"/"Shape Editor (Generate or Edit Shapes)...".
2. Generate shape according to table.
 - The narrowings should be offset left and right in the height.
 - Lay the narrowing right on even number of row.

1		0	296	0	80	0	80
2		315	0	120	0	120	0
3		21	-29	8	-8	2	-2
4		42	-29	16	-8	4	-2
5		100	0	38	0	38	0
6		73	-155	28	-42	2	-3
7		10	0	4	0	4	0
8		0	-81	0	-22	0	-22

- Lay the narrowing on odd number of row (depending on direction).

1		0	-296	0	-80	0	-80
2		315	0	120	0	120	0
3		21	29	8	8	2	2
4		42	29	16	8	4	2
5		102	0	39	0	39	0
6		73	155	28	42	2	3
7		7	0	3	0	3	0
8		0	81	0	22	0	22





The total height of the shape must have an even number on the rows.

The stepping of shape and narrowing module must be aligned to each other.


If a racking step of three is available in the narrowing module, then you must correct the shape in the stepping to three.

3. Allocate the edges to the generated narrowing module.
4. Save shape.

III. Generate pattern together with the neck:


1. Call up "File / New..." or .
2. Select fully fashion .
3. "Automatic technical editing" and "Generate Sintral".
4. Sintral-Check.
5. Transfer data to the machine.
6. Knit pattern.

3.32 Working with modules - Generation of a limit module





As limit conditions the limit modules contain a situational transferring cycle. They are indicated with the symbol  in the lower right edge.

I. Generate limit module:

Generate a limit module for the knitting situation "All needles in front allocated" and transfers on 1X1 (one needle knits / one needle does not knit). This process serves as an example and can be used for multi-gauge.

1. Generate a new module via "Module" / "New module".
2. Give the module name, width and height of the module to be generated.
3. Set "Not" in the basic pattern section and confirm with "OK".
4. Additional information can be entered under "Properties of:xx". Also see module properties.
5. Draw in transferring cycle and group rows to a pattern row.
6. Via "Edit" / "Insert rows for limit conditions". 

7. Draw in needle allocation with needle actions. 

Needle Actions	Meaning
	Needle allocated
	Do not check the needle allocation
	Needle not allocated
	Transparent

8. Save module.


The module is saved to the "Module Explorer" in the "New Module" module group.

II. Generate module with limit condition(s)

Modules with limit condition(s) check the knitting situation during selection and usage of the required limit module.

They are indicated with  (red bar on the lower edge).

1. Generate a new module via "Module" / "New module".
2. Give the module name, width and height of the module to be generated.
3. Set "Not" in the basic pattern section and confirm with "OK".
4. Under "Properties of: xx" additional information can be entered. Also see module properties.
5. Insert line for limit module.

Via "Edit" / "Insert rows for limit modul". 

6. Link the limit module with the needle allocations of the module with the limit conditions.

Thereby select the limit module and click with the cursor on the red area of the limit module. Here a green echo is displayed in the "Line for limit module".

7. Draw in knitting procedure for "multi gauge". Switch to "1:2M gauge" in the "Yarn colors" in this case.



8. Save generated module.

The module is saved to the "Module Explorer" in the "New module" module group.

3.33 Reference row

Define reference row:

Should a specific knitting row of a module be placed on a specific knitting row in the pattern, then a knitting row in the module has to be defined as a reference row.

A reference row can be defined also in the fabric view.

- Modules with multiple knitting rows
- Knitting rows are grouped to one pattern row

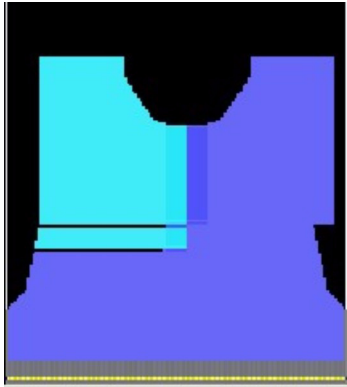
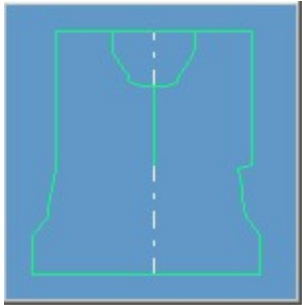
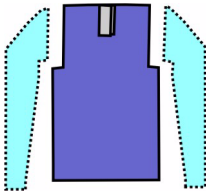
1. Select knitting rows that have to be used as reference rows.
2. Allocate this knitting row with the reference via "Edit" / "Define reference rows".

You will recognize a reference row by the ! symbol in the technical control column.

Reference row	Module with reference rows	Inserted in the pattern									
Top	<table border="1"> <tr> <td>3!</td> <td><u>1</u></td> <td></td> </tr> <tr> <td>2</td> <td><u>1</u></td> <td></td> </tr> <tr> <td>1</td> <td><u>1</u></td> <td></td> </tr> </table>	3!	<u>1</u>		2	<u>1</u>		1	<u>1</u>		
3!	<u>1</u>										
2	<u>1</u>										
1	<u>1</u>										
Center	<table border="1"> <tr> <td>3</td> <td><u>1</u></td> <td></td> </tr> <tr> <td>2!</td> <td><u>1</u></td> <td></td> </tr> <tr> <td>1</td> <td><u>1</u></td> <td></td> </tr> </table>	3	<u>1</u>		2!	<u>1</u>		1	<u>1</u>		
3	<u>1</u>										
2!	<u>1</u>										
1	<u>1</u>										
Bottom	<table border="1"> <tr> <td>3</td> <td><u>1</u></td> <td></td> </tr> <tr> <td>2</td> <td><u>1</u></td> <td></td> </tr> <tr> <td>1!</td> <td><u>1</u></td> <td></td> </tr> </table>	3	<u>1</u>		2	<u>1</u>		1!	<u>1</u>		
3	<u>1</u>										
2	<u>1</u>										
1!	<u>1</u>										

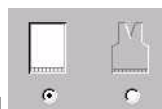
Modules with different reference rows are inserted in the pattern.

3.34 Fully Fashion-Pattern: Front with overlapping tubular border

Pattern data	Pattern picture
File: Weste VT mit Schlauchblende. mdv Pattern width: 130 Pattern rows: 150	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Shape:	 <p>VT mit Schlauchblende überlappend .shp</p>
Knitting technique	Front with tubular border
Description of pattern:	Front with overlapping tubular border of a Fully Fashion vest. 

I. Generate pattern without shape and then position shape:

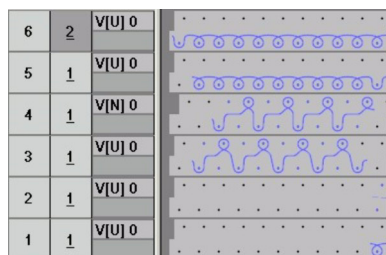
1. Generate a new pattern via "File / New..." 



2. Activate the Standard setting in the "New Pattern" dialog box.
3. Confirm the New Pattern dialog box with "OK".

II. Generate the motif:

1. Generate the basic pattern with the stitch in front module.
2. Generate a module for the start of the border.



3. Place module for the start of border in the centre of pattern.

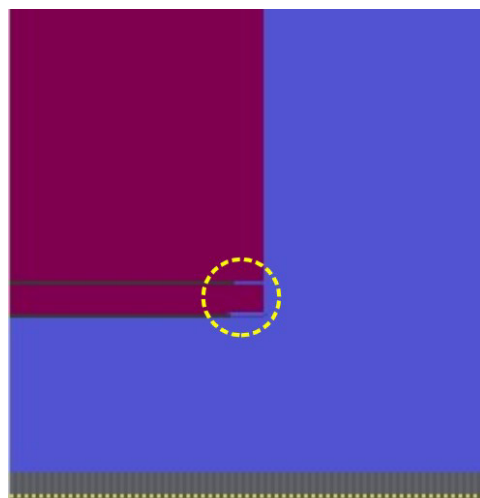


Without inserted start on row 43

- or -

place with inserted start on row 52.

4. Use a different color in the left shoulder area, from the start of the tubular border. This serves to simplify things when calculating the yarn fields.



5. Draw in the knitting sequence of the tubular border after the beginning of the border manually into the motif.
6. You have to group knitting rows which form a complete pattern row.

97	<u>64</u>	
96	<u>63</u>	
95	<u>63</u>	
94	<u>62</u>	
93	<u>61</u>	
92	<u>60</u>	
91	<u>60</u>	
90	<u>59</u>	
89	<u>59</u>	
88	<u>58</u>	
87	<u>58</u>	
86	<u>57</u>	
85	<u>57</u>	
84	<u>56</u>	
83	<u>56</u>	
82	<u>55</u>	
81	<u>55</u>	
80	<u>54</u>	
79	<u>54</u>	
78	<u>53</u>	
77	<u>53</u>	
76	<u>52</u>	
75	<u>52</u>	
74	<u>52</u>	
73	<u>52</u>	
72	<u>52</u>	
71	<u>51</u>	
70	<u>50</u>	

Knitting cycle for beginning of border
Grouped pattern rows

III. Generate a module for fade out:

Generate fade-out modules for the tubular edges and allocate it.

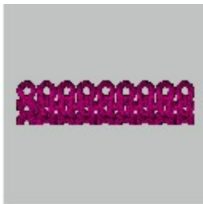
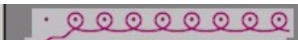
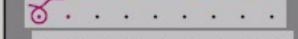

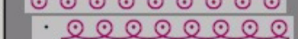
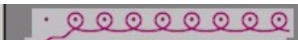
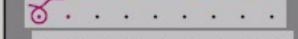

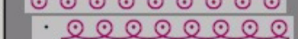
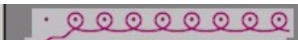
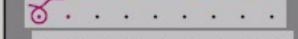

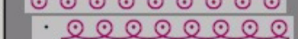
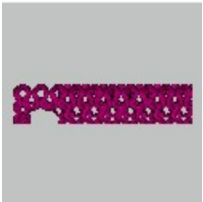

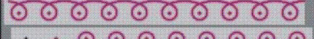
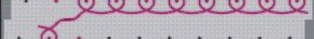
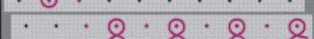
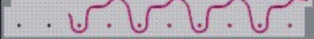
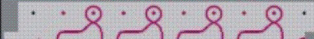

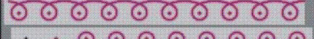
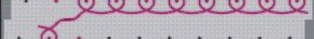
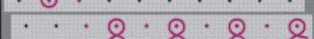
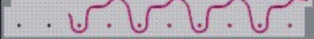
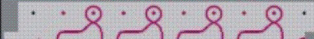

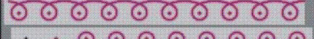
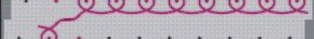
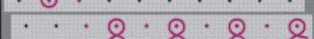
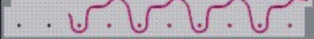
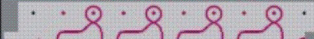


The border start in use and the fade-out modules to be generated have to be adjusted to one another.

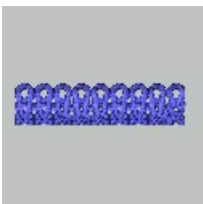



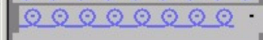



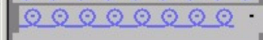



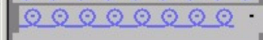
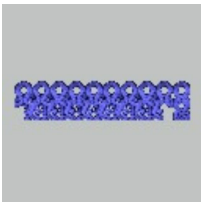


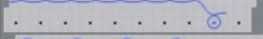

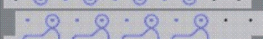
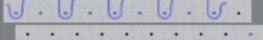


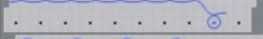

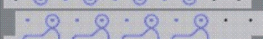
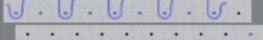


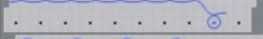

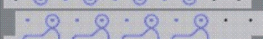
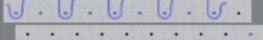
1. Generate the knitting cycle in the Module Editor.
2. You have to define the first row of the "left border start" and of the "right border start" modules as reference row.
3. Allocate the modules to the edge lines of the cut-out under "Function" in the "Fade-out" tab.

Modules for overlapping tubular border

Left edge

Module name	Presentation	Stitch line																		
Left border		<table border="1"> <tr><td>4</td><td><u>2</u></td><td></td></tr> <tr><td>3</td><td><u>1</u></td><td></td></tr> <tr><td>2</td><td><u>1</u></td><td></td></tr> <tr><td>1</td><td><u>1</u></td><td></td></tr> </table>	4	<u>2</u>		3	<u>1</u>		2	<u>1</u>		1	<u>1</u>							
4	<u>2</u>																			
3	<u>1</u>																			
2	<u>1</u>																			
1	<u>1</u>																			
Start of left border		<table border="1"> <tr><td>6</td><td><u>2</u></td><td></td></tr> <tr><td>5</td><td><u>1</u></td><td></td></tr> <tr><td>4</td><td><u>1</u></td><td></td></tr> <tr><td>3</td><td><u>1</u></td><td></td></tr> <tr><td>2</td><td><u>1</u></td><td></td></tr> <tr><td>1</td><td><u>1</u></td><td></td></tr> </table>	6	<u>2</u>		5	<u>1</u>		4	<u>1</u>		3	<u>1</u>		2	<u>1</u>		1	<u>1</u>	
6	<u>2</u>																			
5	<u>1</u>																			
4	<u>1</u>																			
3	<u>1</u>																			
2	<u>1</u>																			
1	<u>1</u>																			

Right edge

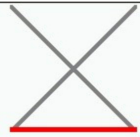


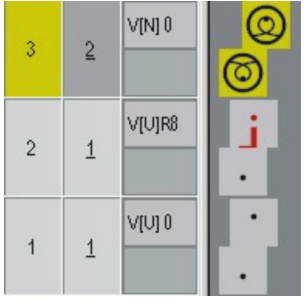
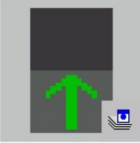
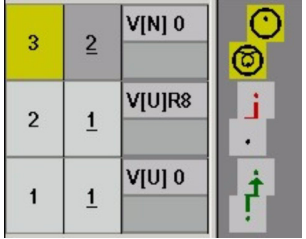
Module name	Presentation	Stitch line																		
Right border		<table border="1"> <tr><td>4</td><td><u>2</u></td><td></td></tr> <tr><td>3</td><td><u>1</u></td><td></td></tr> <tr><td>2</td><td><u>1</u></td><td></td></tr> <tr><td>1</td><td><u>1</u></td><td></td></tr> </table>	4	<u>2</u>		3	<u>1</u>		2	<u>1</u>		1	<u>1</u>							
4	<u>2</u>																			
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1	<u>1</u>																			
Start of right border		<table border="1"> <tr><td>6</td><td><u>2</u></td><td></td></tr> <tr><td>5</td><td><u>1</u></td><td></td></tr> <tr><td>4</td><td><u>1</u></td><td></td></tr> <tr><td>3</td><td><u>1</u></td><td></td></tr> <tr><td>2</td><td><u>1</u></td><td></td></tr> <tr><td>1</td><td><u>1</u></td><td></td></tr> </table>	6	<u>2</u>		5	<u>1</u>		4	<u>1</u>		3	<u>1</u>		2	<u>1</u>		1	<u>1</u>	
6	<u>2</u>																			
5	<u>1</u>																			
4	<u>1</u>																			
3	<u>1</u>																			
2	<u>1</u>																			
1	<u>1</u>																			

IV. Generate a module for laterally transfer:

The stitches at the start of the tubular border are contiguous.
 The borders are transferred side by side (laterally) in order to enable to knit a tube with all needles.
 In the example below a module with limit conditions and the corresponding limit modules is shown. With it any desired structure can be transferred laterally.

1. Generate modules for laterally transfer of the tubular border.

Modules for transfer laterally a tubular border

Module name	Presentation	Module type	Transfer procedure
8 needles off		Limit condition	
Loop rear		Limit module Loop rear	
Front stitch		Limit module Front stitch	

V. Generate shape:

Generate an own shape for the front with tubular border.

1. Generate the shape element for the front.

Nr.	Linien Editor	Höhe mm	Breite mm	Höhe Maschen	Breite Maschen	Höhe Stufen	Breite Stufen	Faktor	Höhe Rest	Breite Rest	Gruppe	Funktion
1		0	-255	0	-69	0	-69	1	0	0	0	Basis
2		50	0	19	0	19	0	1	0	0	0	
3	/	21	29	8	8	1	1	8	0	0	0	Mindern
4	/	63	18	24	5	0	0	0	0	0	0	Mindern
5		7	0	3	0	3	0	1	0	0	0	
6		163	0	62	0	62	0	1	0	0	0	
7		0	207	0	56	0	56	1	0	0	0	

Table for left basic shape

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	225	0	61	0	61	1	0	0	0	Basis
2		50	0	19	0	19	0	1	0	0	0	
3	/	21	-29	8	-8	1	-1	8	0	0	0	Narrowing
4	/	63	-18	24	-5	0	0	0	0	0	0	Narrowing
5		2	29	1	8	1	8	1	0	0	0	Widening
6		158	0	64	0	64	0	1	0	0	0	
7		0	-207	0	-56	0	-56	1	0	0	0	

Table for right basic shape



Settings in left basic shape

Line of the edges	"General" tab	Tab "Fade out"	Tab "Narrowing"	Allocated module
No. 1-6		As desired	As desired	As desired

Settings in right basic shape

Line of the edges	"General" tab	Tab "Fade out"	Tab "Widening"	Allocated module
No. 1-4 +6		As desired	As desired	As desired
No. 5	Widening		Width 56	8 needles off

2. Generate shape element for cut-out.

- ➔ Create a new element for the cut-out in the Shape Editor.
- ➔ Select "Neck opening" in the selection list below type.
- ➔ Generate the left and right cut-out edge under  and .

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		6	0	2	0	2	0	1	0	0	0	
2		120	0	36	0	36	0	1	0	0	0	
3		0	-26	0	-8	0	-8	1	0	0	0	Link-off
4	/	6	-20	2	-6	0	0	0	0	0	0	Narrowing
5	/	26	-20	8	-6	0	0	0	0	0	0	Narrowing
6	/	26	-13	8	-4	0	0	0	0	0	0	Narrowing
7		26	0	8	0	8	0	1	0	0	0	
8		0	80	0	24	0	24	1	0	0	0	

Table for the left and right cut-out of the front

Settings in the cut-out neck left lines

Line of the edges	"General" tab	Tab "Fade out"	Tab "Narrowing"	Fade-out width
No.1	No entry	Start of left border	No entry	10
No. 2	No entry	Left border	No entry	9

Line of the edges	"General" tab	Tab "Bind-off"	Tab "Narrowing"	Fade-out width
No. 3	Bind-off	BO-SJ-01 or BO-SJ-02	No entry	No entry
No. 4-6	Narrowing	As desired	L-R separate transfer or L-R combined transfer	As desired

Settings in the cut-out neck right lines

Line of the edges	"General" tab	Tab "Fade out"	Tab "Narrowing"	Fade-out width
No.1	No entry	Start of right border	No entry	10
No. 2	No entry	Right border	No entry	9

Line of the edges	"General" tab	Tab "Bind-off"	Tab "Narrowing"	Fade-out width
No. 3	Bind-off	BO-SJ-01 or BO-SJ-02	No entry	No entry
No. 4-6	Narrowing	As desired	L-R separate transfer or L-R combined transfer	As desired

3. Allocate the narrowing and fade-out modules to the edge lines.
4. Save shape.

VI. Place shape onto pattern:

1. Open shape via "Shape" / "Open and Position Shape(shv, shp, shr)..."
.
Watch out to position the shape correctly in order to position the fade-out above the beginning of the border.
2. "Shape" / "Cut", "Use Fade-out and Narrowing".

VII. Complete the pattern:

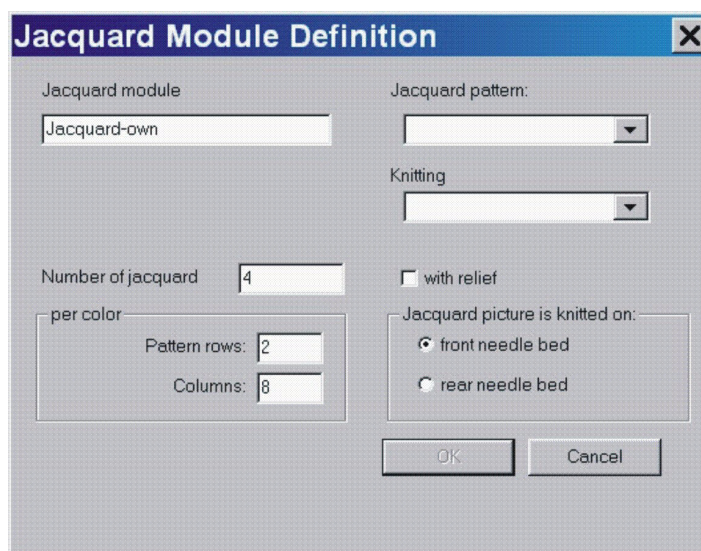
1. Start the automatical or stepwise technical editing.
2. Generate a Sintral.
3. Start the Sintral-Check.

3.35 New Jacquard Module

You can generate an own jacquard module.
These Jacquard modules generate the back.

I. Generate a jacquard module:

1. Call up the module editor via "Module"/"New jacquard module".
2. Parameters that must be adjusted:
 - Number of jacquard colors
 - Pattern rows of the color
 - Columns per color
 - Picture side of jacquard

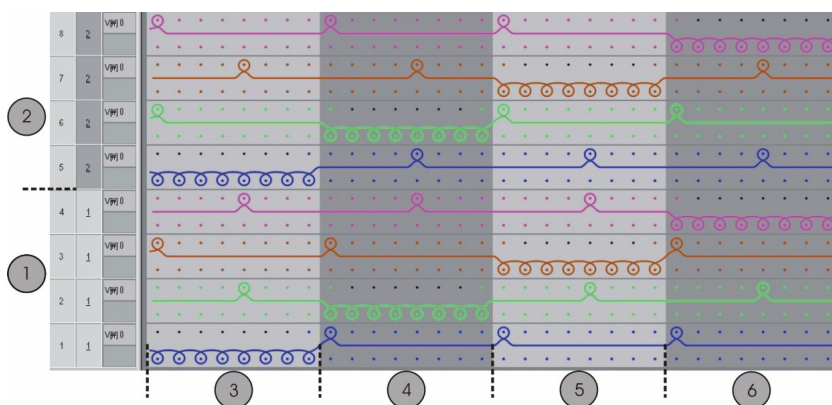


Element	Meaning
Number of jacquard colors	Number of colors within the pattern row. For every color a block is inserted.
Pattern rows per color	Number of pattern rows per color
Columns per color	Number of columns per color in the block.
Jacquard picture knits on	Select front and back needlebed.
Jacquard module name	Enter a own name for the Jacquard module.
Jacquard template	Display existing Jacquards which can be used as template.
Knitting mode	Select a knitting mode for the module properties.
With relief	Input possibility for jacquard relief. An additional block is shown in which the process for relief can be drawn in.

3. Draw the stitch line with the Needle action drawing symbols.
- or -
Call-up a Jacquard template, set the number of Jacquard colors and confirm with "OK".
A template appears that can be changed as per individual requirements.



You can use all needle actions.
For rows with transfers, a racking specification can also be made.



	Meaning
1	Pattern row 1
2	Pattern row 2
3	Color 1
4	Color 2
5	Color 3
6	Color 4

4. Save module.
The module is saved to the "New Modules" module group of the module explorer.
5. Should the module be used for Fully-Fashion, then set up "Binding" under Knitting mode in the "Technical" tab of the "Properties of: " dialog box.
6. Specify the "Start" and "End modules" that shall be used for the new module in the "JAC net type" tab of the "Properties of:" dialog box.

Column	Meaning
End modules	This module is used for the net end. Transition from jacquard area to the pattern.
Knitting mode:	Specify the knitting type(s) before (during) the jacquard start.
Start modules	This module is used for the net start. Transition from pattern to the jacquard area.



The knitting mode of the jacquard area controls the setting of the "End module".

Normally only one parameter is required.

The knitting mode before (below) the jacquard area controls the setting of the "Start module".

More parameters could be necessary.



The own jacquard module must be saved in the module explorer under "Jacquard" / "Own " / "Noname X-colored".

II. Allocate recognition picture:

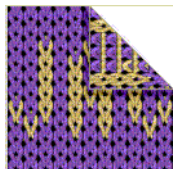
A recognition picture can be allocated to a jacquard module.

The recognition picture is displayed in the "Module Properties".

So that the jacquard module can be differentiated from the Stoll modules, this can be exchanged.

Only pictures in the Bitmap format (bmp) and of the size 128x128 pixel can be used.

→ You can select another picture via "Properties" / "Jacquard picture".

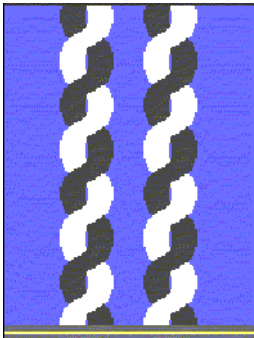


III. Apply own jacquard module:

During allocation of the jacquard generators apply your own jacquard module.

1. Select the generated jacquard via "Edit / Jacquard" under "Jacquard properties" in the "Own" module group .
2. Insert the jacquard generator by "Apply".

3.36 Pattern with own jacquard modules

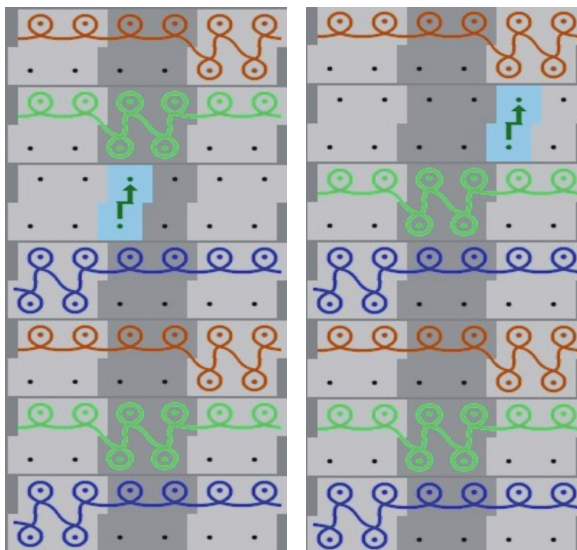
Pattern data	Pattern picture
File: 3-color transfer.mdv Pattern width: 200 Pattern rows: 400	
Machine type	CMS 530
Gauge	8
Start	2x1
Basic pattern:	Front stitch with transfer

Pattern description:

3-color structure pattern with own jacquard modules

I. Generate an own jacquard module:

1. Generate pattern field.
2. Draw motif with the pattern element from the module explorer:
 "Stoll " / "Pattern elements" / "MT- Jacquard" / "Jacq pattern element 40"
3. Match base color for motif and module.
4. Call up "Module / New jacquard module".
 - Number of jacquard colors: 3 without relief
 - Pattern rows: 2
 - Columns: 2
5. Draw the stitch line with the binding element "Front Stitch" or "Rear Stitch" (without transfers) in the module editor.
 For relief stitches use "Front Stitch - Rear Stitch with transfers to the rear".



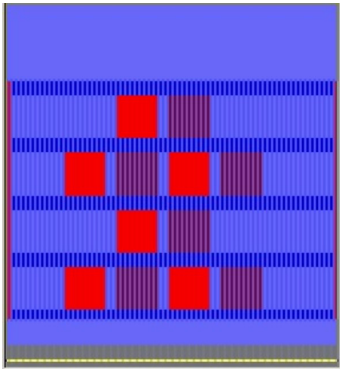
Modules for 3-colored background

6. Save jacquard module and in the module explorer store under: "Jacquard" / "Noname 1"/"X-colored". (motif is 3-colored).
7. Open the "Jacquards..." dialog box and insert both the jacquard generators:
 - Select from the pattern centre towards left and insert the first jacquard module.
 - Select from the pattern centre towards right and insert the second jacquard module.
8. Change the color sequence if required under "Color sequence and stitch length" .

II. Complete the pattern:


1. Start the automatic technical editing.
2. Start generating Sintral.
3. Start the Sintral-Check.
4. Transfer data to the machine.
5. Knit pattern.

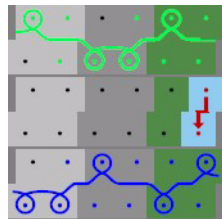
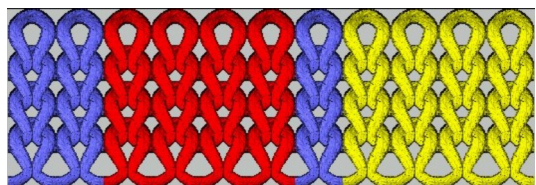
3.37 2 color relief jacquard with 1x1 net back


Pattern data	Pattern picture
File: 2-farb-Reliefjac.mdv Pattern width: 140 Pattern rows: 144	
Machine type	CMS 530
Gauge	8
Start	2x1
Basic pattern	Front stitch with transfer

Pattern description:
 2 color relief jacquard with 1x1 net back

I. Generate a relief jacquard module:

1. Generate it via the "Module / New jacquard module" menu.
 - Number of jacquard colors: 2
 - Pattern rows: 1
 - Columns: 2
 - The "Relief" checkbox activated.
2. Draw the stitch line in the module editor with the  drawing tool and the different needle actions.

Module for jacquard with relief	Generating the motif
	

3. Allocate stitch lengths to the jacquard module.
4. Change racking position if necessary (default: VN).
5. Close the jacquard module editor with .

The module is saved to the "New Modules" module group of the module explorer.
6. Open the "Properties of:..." dialog box and apply the pattern related settings in the "Description", "Technique" and "JAC net type" tabs.
7. Save module to: "Jacquard"/"Own"/"Noname 1"/"X -colored".

Pattern example: 2 (Jacquard colors) + 1 (relief color) = 3,
i.e. allocate the module under "Jacquard" / "Own" / "noname1" / "3-color"

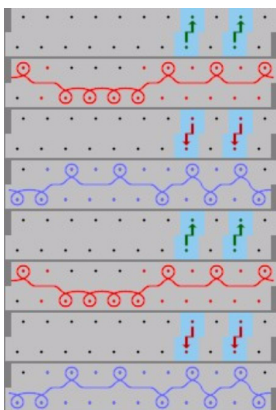
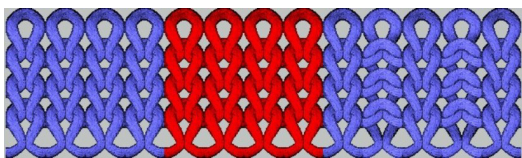


With jacquard modules with relief one color is always the relief color, i.e. one color of the motif is used for transfer and disappears from the motif after positioning the jacquard module.

Total number of colors of the module = number of jacquard colors + relief color

II. Draw the motif:

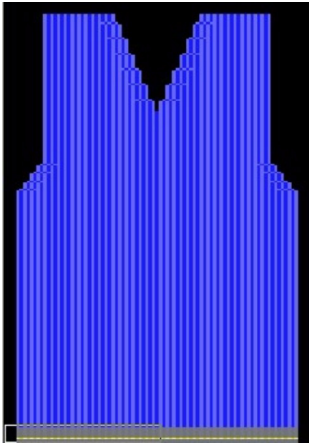
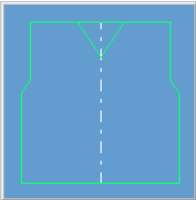
1. Generate a new pattern via "File"/"New...".
2. Draw a 3-color motif with "Front Stitch with transfer".
3. Select jacquard area.
4. Call up the "Jacquards" dialog box via "Edit" / "Jacquards..." and insert the jacquard module into the selection.
5. Exchange the "Color Sequence" and the color of the "Transition Modules".
6. Confirm with "OK".

Stitch line with 2-color relief jacquard	Fabric View
	

III. Complete the pattern:

1. Start the automatic technical editing.
2. Start generating Sintral.
3. Start the Sintral-Check.
4. Transfer data to the machine.
5. Knit pattern.

3.38 Fully Fashion-Pattern: 2x2 Rib with V-neck


Pattern data	Pattern picture
File: 2x2-Rib-Modul-Stoll-Loop-^ .mdv Pattern width: 300 Pattern rows: 260	
Machine type	CMS 530
Gauge	8
Start	2x2
Basic pattern:	Front stitch with transfer
Shape:	 <p>2_set-in-front-v-neck-38.shv</p>
Description of pattern:	2X2 rib with newly generated module or with a module from the module explorer

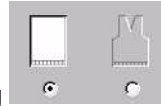
I. Rules for generating a shape for front with inserted sleeve:



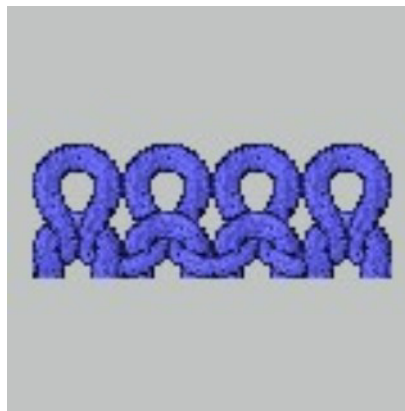
Shape attributes	Rules
Knitting mode:	2x2 Rib
Widening width:	No
Widening height:	No
Narrowing	4 stitches (2x2)
Narrowing width:	as desired
Narrowing height:	as desired
Start of the V-neck	2 needles

II. Generate pattern without shape:

1. Generate a new pattern via "File / New..." or with 




2. Activate the standard setting in the "New Pattern" dialog box.
3. Confirm dialog box with "OK".
4. Draw pattern with module "2x2 - Rib" from the module group "Modules"/"Stoll"/"Default"/"Ribs"/"2x2 RL-Rib".



Watch out the 2x2 Rib of the start when drawing the pattern!

III. Generate a new shape or open an existing shape:

1. Open the shape editor via "Shape" / "Generate/ Edit Form...". .
2. Load an existing shape via "File" / "Open" or with .
3. Call up "File" / "Convert and Save As..." to convert the the shv format of the shape to the shp format. .
4. Change the shape elements or insert them directly as shp format:

Basic element Front left

The total width of the shape should be divisible by 4 (module with of the 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	-413	0	-124	0	-124	1	0	0	0	Basis
2		446	0	134	0	134	0	1	0	0	0	
3	✓	66	53	20	16	0	0	0	0	0	0	Narrowing
4		293	0	88	0	88	0	1	0	0	0	
5		0	360	0	108	0	108	1	0	0	0	

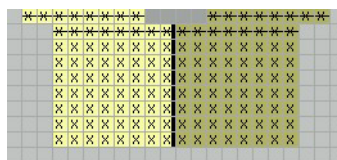
	Factor Grouped	Group	Height Steps	Width Steps	Factor
			20	16	
	4	1	4	2	1
		1	1	2	1

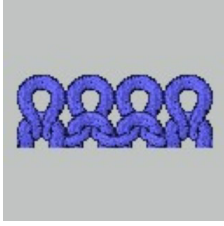


V-neck element

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1	✓	180	-80	54	-24	0	0	0	0	0	0	Narrowing
2		26	0	8	0	8	0	1	0	0	0	
3		0	80	0	24	0	24	1	0	0	0	


	Factor Grouped	Group	Height Steps	Width Steps	Factor
			54	-24	
	6	1	8	-2	1
		1	1	-2	1



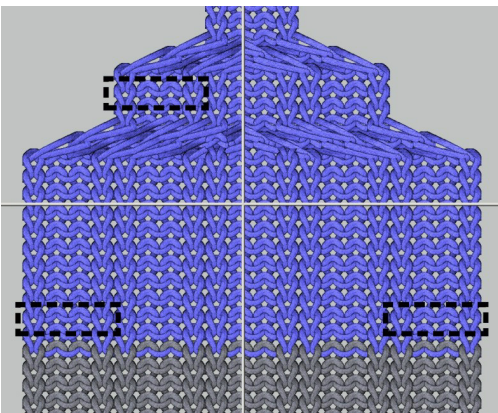
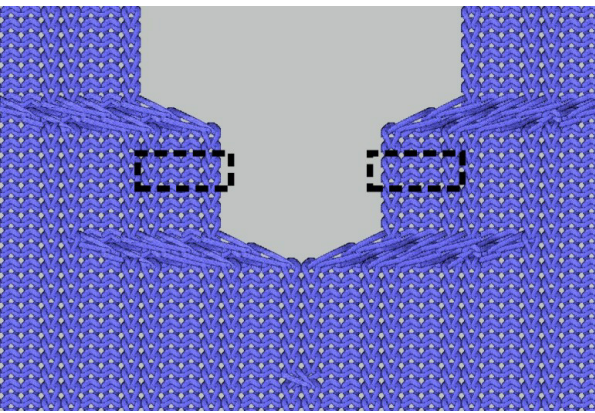
Attributes	
Fade out	
Fade-out width	As desired
Type of narrowing	L-R combined transfer Separate transfer single jersey
Narrowing width	Equal to the fade-out width

5. Save shape.
6. Close the Shape Editor.

IV. Position shape on the pattern:

1. Position the shape on the pattern via "Shape" / "Open and Position Shape(shv, shp, shr)..." .
2. Position the shape with the  icon activated and the left mouse button
 - or -
 → that position the shape with the arrow keys.

Positioning the shape

	
Left and right border of the shape	Left and right border of the V-neck

3. Edit the shape via "Shape" / "Use shape (cut, fade out, narrow)".

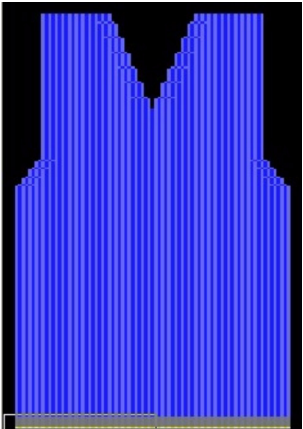
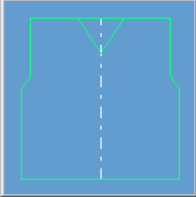


The attributes that were allocated to the shape are automatically applied to the pattern.

V. Complete the pattern:

1. Start the automatic technical editing.
2. Generate a Sintral.
3. Start the Sintral-Check.

3.39 Fully Fashion-Pattern: 2x2 Rib with V-neck

Pattern data	Pattern picture
File: 2x2-Rib-eigenModule-Loop-^ .mdv Pattern width: 300 Pattern rows: 260	
Machine type	CMS 530
Gauge	8
Start	2X2
Basic pattern:	2x2 Rib
Shape:	 2_set-in-front-v-neck-38.shv


Pattern description:
 Basic pattern 2x2 Rib with newly generated module or with a module from the Module Explorer.

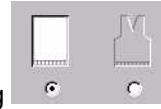
I. Rules for generating a shape for front with inserted sleeve:



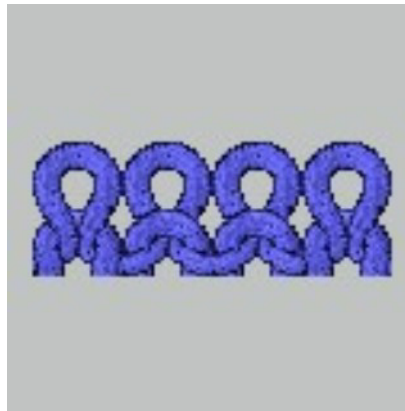
Shape attributes	Rules
Knitting mode:	2x2 Rib
Widening width:	No
Widening height:	No
Narrowing	4 stitches (2x2)
Narrowing width:	as desired
Narrowing height:	as desired
Start of the V-neck	2 needles

II. Generate pattern without shape:

1. Generate a new pattern via "File / New..." or with 



2. Activate the standard setting in the "New Pattern" dialog box.
3. Confirm the New Pattern dialog box with "OK".
4. Draw the pattern with the "2x2 - rib" from the "Modules" / "Stoll" / "Standard" / "Ribs" / "2x2 RL-Rib" module group.

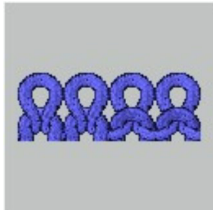



Watch out the 2x2 Rib of the start when drawing the pattern!

III. Generate the fade-out modules:


1. Call up "Module" / "New Module...".
2. Enter width, height and knitting mode in the "New Module" dialog box.
3. Confirm with "OK". The "Properties" dialog box appears.
4. Complete the description and technique tab in the "Properties" dialog box.
5. Confirm with "OK".
6. Draw the desired stitch line with the pattern parameters in the Module Editor.

Modules for fade-out

Fade out	Left edge / right side of the V-neck	Right edge / left side of the V-neck
		

7. Close the dialog box with the button.
8. Reply the "Save Module to Database?" prompt with "YES".
The module is saved to the "New Modules" module group of the module explorer.
9. Move the generated module from "New Modules" to an individual folder.

IV. Generate a new shape or open an existing shape:

1. Open the shape editor via "Shape" / "Generate/ Edit Form...".
2. Load an existing shape via "File" / "Open" or with .
3. Call up "File" / "Convert and Save As..." to convert the the shv format of the shape to the shp format.
4. Change the shape elements or insert them directly as shp format:

Basic element Front left

The total width of the shape should be divisible by 4. Two stitches are to be added to this total width. (Module width of the 2x2 Rib + 2 stitches so that the left and right border are equal).

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-423	0	-127	0	-127	1	0	0	0	Basis
2		446	0	134	0	134	0	1	0	0	0	
3	✓	66	53	20	16	0	0	0	0	0	0	Narrowing
4		293	0	88	0	88	0	1	0	0	0	
5		0	370	0	111	0	111	1	0	0	0	

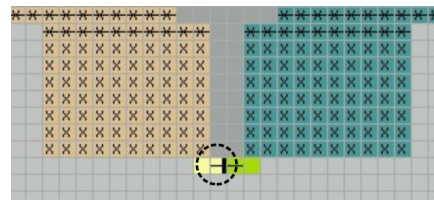
	Factor Grouped	Group	Height Steps	Width Steps	Factor
			20	16	
	4	1	4	2	1
		1	1	2	1

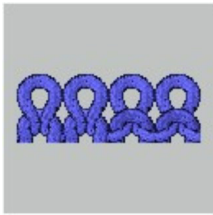
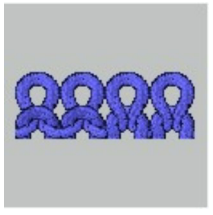


V-neck element

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		3	-3	1	-1	1	-1	1	0	0	0	Narrowing
2	✓	180	-80	54	-24	0	0	0	0	0	0	Narrowing
3		26	0	8	0	8	0	1	0	0	0	
4		0	83	0	25	0	25	1	0	0	0	


	Factor Grouped	Group	Height Steps	Width Steps	Factor
			54	-24	
	6	1	8	-2	1
		1	1	-2	1



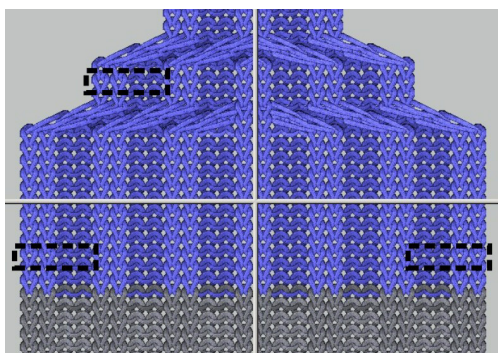
Attributes		
Fade out	Left edge / right side of the V-neck	Right edge / left side of the V-neck
		
Fade-out width	As desired	
Type of narrowing	L-R combined transfer Separate transfer single jersey	
Narrowing width	Equal to the fade-out width	

5. Save shape.
6. Close the Shape Editor.

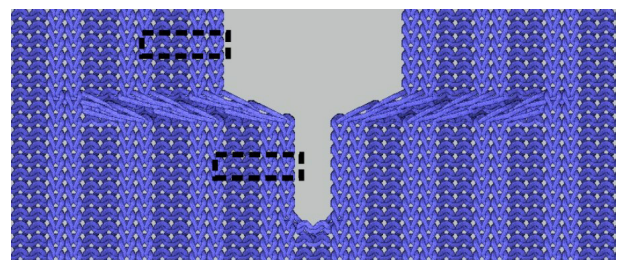
V. Position shape on the pattern:

1. Position the shape on the pattern via "Shape" / "Open and Position Shape(shv, shp, shr)...".
2. Position the shape with the  icon activated and the left mouse button
 - or -
 → with the arrow keys.

Positioning the shape



Left and right border of the shape



Left and right border of the V-neck



In this example, always be sure during positioning to start with a stitch in front at the border of the shape.
The positioning depends on the knitting cycle of the both fade-out modules.

3. Edit the shape via "Shape" / "Use shape (cut, fade out, narrow)".



The default attributes of the shape are automatically applied to the pattern.

VI. Further Possibility: Narrowing edge above.

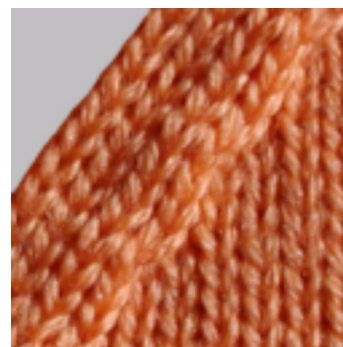
You can use a narrowing edge from above.
For that you can modify the container module technique.

Different narrowing edges

Narrowing edge underneath (default)



Narrowing edge above

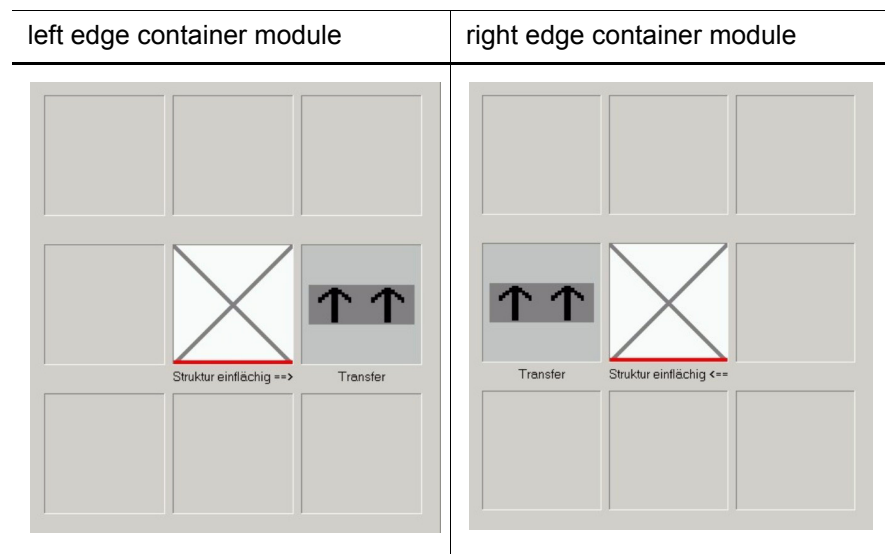


VI a. Generate module for narrowing edge above:

1. Open module explorer.
2. Copy the both "Single Jersey Structure ==>" and "Single Jersey Structure <==" modules of the "Modules" / "Technique" / "Narrowing" / "Single Jersey Structure" / "Separate transfer single jersey" or "Common transfer single jersey" module group.
3. Rename copy and save it to a module group of your own.
4. Store your own folder under the path "Module" / "Technique" / "Narrowing" / "Structure single jersey".
- or -
Allocate the folder directly to the attribute "Narrowing".
5. Generate a "New module" for the narrowing of the border stitches.



6. Allocate the new module to both of the technical container modules.



7. Allocate the modules to the narrowing edges in the Shape Editor or in the Shape View.

VI b. Use STOLL module for narrowing edge above:

- Select a narrowing cycle under the path "Module" / "Technique" / "Narrowing" / "Structure single jersey".
- "Stitch v separate transfer overlying"
 - "Stitch ^ separate transfer overlying"

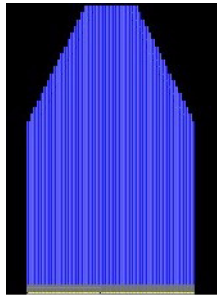
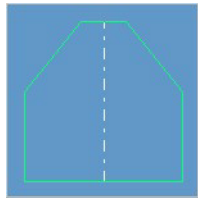


Take care of the fade-out and narrowing width.

VII. Complete the pattern:

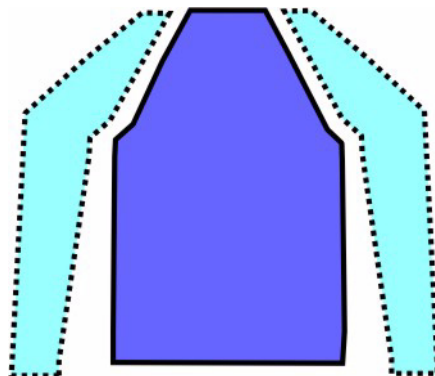
1. Automatic technical editing.
2. Generate a Sintral.
3. Sintral-Check.

3.40 Fully Fashion-Pattern: 2x1 Rib

Pattern data	Pattern picture
File: 2x1 rib.mdv Pattern width: 198 Pattern rows: 250	
Machine type	CMS 530
Gauge	8
Start	2x1
Basic pattern:	2X1 Rib
Shape:	 <p>1_raglan-front-38</p>

Pattern description:
Basic pattern with 2X1 rib with newly generated module.

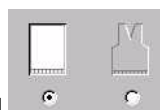
I. Rules for generating a shape for front with raglan:



Shape attributes	Rules
Knitting mode:	2x1 Rib
Widening:	No
Narrowing:	3 stitches
Narrowing width:	Minimum width: 5 stitches Widths: 5, 8, 11, 14 and so on
Narrowing height:	as desired

II. Generate pattern without shape:

1. Generate a new pattern via "File / New..." or with 



2. Activate the Standard setting in the "New Pattern" dialog box.
3. Open the module explorer via the "Explorer" button.
4. Select the module "2x1 Rib double jersey" under "Stoll" / "Standard" / "Ribs" and drag it with drag & drop into the selection bar for "Basic pattern".



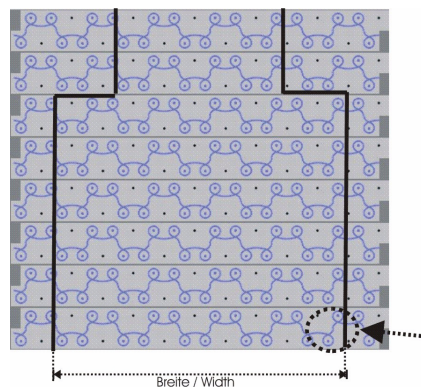
5. Select as start "2x1 start".
6. Confirm the "New Pattern" dialog box with "OK".

III. Rules for generating a shape



Note that the total width matches the rib of the 2x1 start and that there are two right stitches at the shape edges.

Shape generation



Without V-neck:

Total width divisible by 3 + two stitches

Fading-out one stitch at the right edge to get both edges equal.

Fading-out with "Stitch in front with transfer".

With V-neck:

Total width divisible by 3 + one right stitch


+ distance of the shape halves: 1

Add the distance of the shape halves to the total width.

Fading-out of one stitch at the right outer edge and at the left edge of the V-neck.

Fading-out with "Stitch in front with transfer".

V. Generate a new shape or open an existing shape.

1. Open the shape editor via "Shape" / "Generate/ Edit Form...".
2. Load an existing shape via "File" / "Open" or with .
3. Call up "File" / "Convert and Save As..." to convert the the shv format of the shape to the shp format. .
4. Change the shape elements or insert them directly as shp format:

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-288	0	-75	0	-75	1	0	0	0	Basis
2		311	0	140	0	140	0	1	0	0	0	
3		240	207	108	54	6	3	18	0	0	0	Narrowing
4		0	80	0	21	0	21	1	0	0	0	

Left basic element

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	253	0	76	0	76	1	0	0			Basis
2		466	0	140	0	140	0	1	0	0			
3		360	-180	108	-54	6	-3	18	0	0			Narrowing
4		0	-83	0	-25	0	-25	1	0	0			

Right basic element


- Allocate the narrowing and fade-out modules.

Attributes

	Left basic element	Right basic element
Fade out	Not necessary	Front stitch with transfer + activate "applies to all knitting modes"
Fade-out width		1 Stitch
Type of narrowing	2x1- Rib (vv^.....^vv) + activate "applies to all knitting modes"	2x1- Rib (vv^.....^vv) + activate "applies to all knitting modes"
Narrowing width	8 stitches	8 stitches

- Save shape.
- Close the Shape Editor.

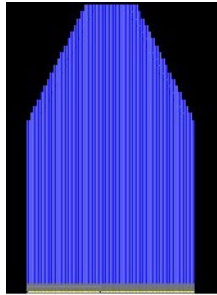
VI. Position shape on the pattern:

- Position the shape on the pattern via "Shape" / "Open and Position Shape(shv, shp, shr)..." .
- With active symbol  and the left mouse button.
- or -
➔ Position the shape with the arrow key in such a way that the left edge begins with Front stitch and on the right edge with Stitch R-R .
- Via "Shape" / "Use shape (cut, fade out, narrow)" carry out the editing steps cutting, fading-out and narrowing.

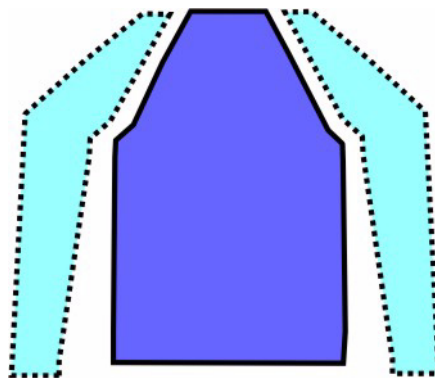
VII. Complete the pattern:

- Start the automatic technical editing.
- Generate a Sintral.
- Start the Sintral-Check.

3.41 Fully Fashion-Pattern: 2X1 Rib variants

Pattern data	Pattern picture
File: 2x1 rib.mdv Pattern width: 198 Pattern rows: 250	
Version	Changed narrowing cycle on the outer edge

I. Rules for generating a shape for front with raglan.



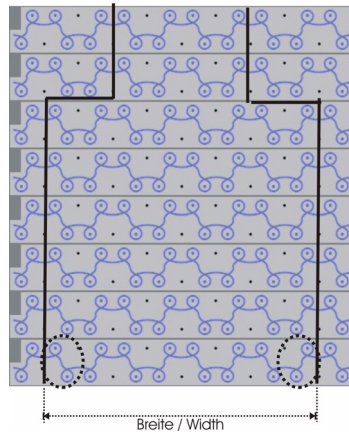
Shape attributes	Rules
Knitting mode:	2x1 Rib
Widening:	no
Narrowing:	3 stitches
Narrowing width:	Minimum width: 6 stitches Widths: 6, 9, 12, 15 and so on
Narrowing height:	as desired

II. Rules for generating a shape.



Note that there are two left stitches on the shape edges.

Shape generation



Without V-neck:

Total width divisible by 6
No hiding is necessary on the edges.

With V-neck:

Total width divisible by 6
Distance of the shape halves: 0

III. Generate a new shape or open an existing shape.

1. Open shape editor and generate shape.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-288	0	-75	0	-75	1	0	0	0	Basis
2		311	0	140	0	140	0	1	0	0	0	
3		240	207	108	54	6	3	18	0	0	0	Narrowing
4		0	80	0	21	0	21	1	0	0	0	

Basic element left /right

2. Allocate the narrowing and fade-out modules.

	Basic element left /right
Fade out	Not necessary
Fade-out width	No
Type of narrowing	2x1- Rib (^vv.....vv^)
Narrowing width	9 stitches

3. Save shape.

4. Close the Shape Editor.

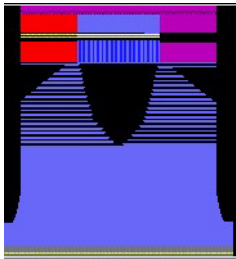
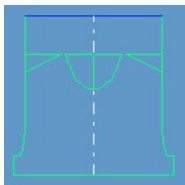
IV. Position shape on the pattern:

1. Lay the shape on the pattern and position it in such a manner that it begins on the left edge with Rear Stitch and on the right edge with Stitch R-R
2. "Shape" / "Use shape (cut, fade out, narrow)".

V. Complete the pattern:

1. Start the automatic technical editing.
2. Generate a Sintral.
3. Start the Sintral-Check.

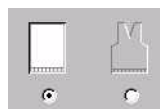
3.42 Round neck with knit on collar

Pattern data	Pattern picture
File: Rundhals mit Kragen .mdv Pattern width: 220 Pattern rows: 200	
Machine type	CMS 530
Gauge	8
Start	1x1
Basic pattern:	Front stitch with transfer
Shape:	 Rundhals mit angestricktem Kragen .shp
Knitting technique	Front with round neck and knit on collar

Pattern description:
Fully Fashion front with round neck and knit on collar

I. Generate pattern without shape

1. Generate a new pattern via "File / New..." or .



2. Activate the standard setting  in the "New Pattern" dialog box.
3. Confirm the "New Pattern" dialog box with "OK".

II. Creating shape

Create your own shape for the front and the round neck.

You must prolong the element basic shape by the number of pattern rows which are required for the collar.

1. Shape element for the front:

Create a new "Basic Shape" element in the Shape Editor and insert the shape into the table.


No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-333	0	-100	0	-100	1	0	0	0	Basis
2		66	0	20	0	20	0	1	0	0	0	
3		0	26	0	8	0	8	1	0	0	0	Link-off
4	J	80	20	24	6	0	0	0	0	0	0	Narrowing
5		266	0	80	0	80	0	1	0	0	0	
6		133	0	40	0	40	0	1	0	0	0	
7		0	286	0	86	0	86	1	0	0	0	

Table for the front

2. Allocate fade-out with 2X2 rib to the edge line No. 6. For this purpose, drag the "2X2 RL-Rib" module with drag and drop from the module explorer in the "Fade-out" tab under "Allocated modules" onto the "Structure single jersey" knitting mode. Specify the entire width of the collar under fade-out width.
3. Create a new element for the neck in the Shape Editor. Set Gore under "Type". With a gore, a tuck connection is automatically generated.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		0	-16	0	-5	0	-5	1	0	0	0	
2		6	-13	2	-4	2	-4	1	0	0	0	
3		13	-20	4	-6	2	-3	2	0	0	0	
4		13	-26	4	-8	2	-4	2	0	0	0	
5		86	-43	26	-13	2	-1	13	0	0	0	Narrowing
6		0	120	0	36	0	36	1	0	0	0	

Table for front element gore neck

4. Allocate narrowing to the edge line no. 5.
5. Specify the "Distance to end line" for the element gore neck.
6. Create a new element for the shoulder gore in the Shape Editor. Set Gore under "Type".
7. Generate the left gore element with the  button
Generate the right gore element by mirroring.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		60	150	18	45	2	5	9	0	0	0	
2		0	-150	0	-45	0	-45	1	0	0	0	
3		-60	0	-18	0	-18	0	1	0	0	0	
4		0	0	0	0	0	0	1	0	0	0	

Table for gore element shoulder

8. Specify the position for the gore element with:
Distance from center axis: 86
Distance to the end line: 40 (dependent on the starting point of the gore)
Further settings for the gore element are not necessary.
9. Generate separating element.

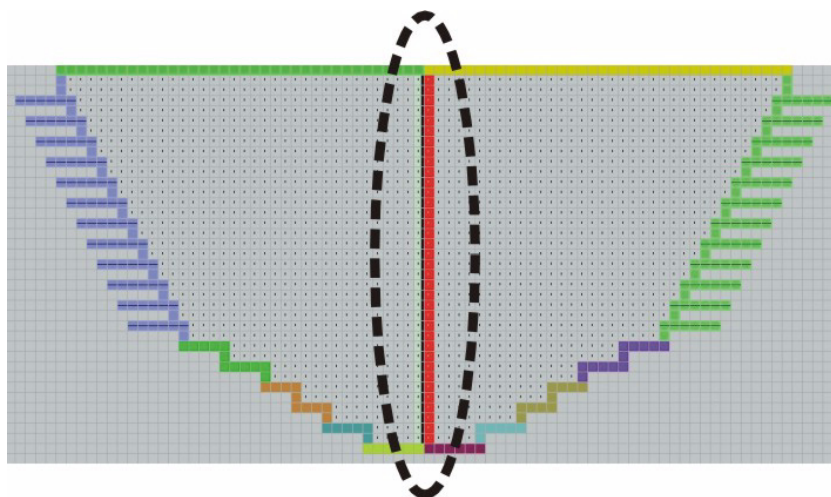


If a neck opening is defined as gore element, then the technical function inserts a corresponding knitting cycle. In this example the gore is to be narrowed. During narrowing, the yarn carriers may not be located in the narrowing area. If a separation is inserted in the gore, then this influences the knitting cycle and the yarn carriers are located at the outer fabric edge during narrowing.

10. Set "Opening" under "Type".
11. Set the height of the separation identical to the height of the gore.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Group	Function
1		120	0	36	0	36	0	1	0	0	0	
2		0	0	0	0	0	0	1	0	0	0	

Table for separation



Neck gore with separation

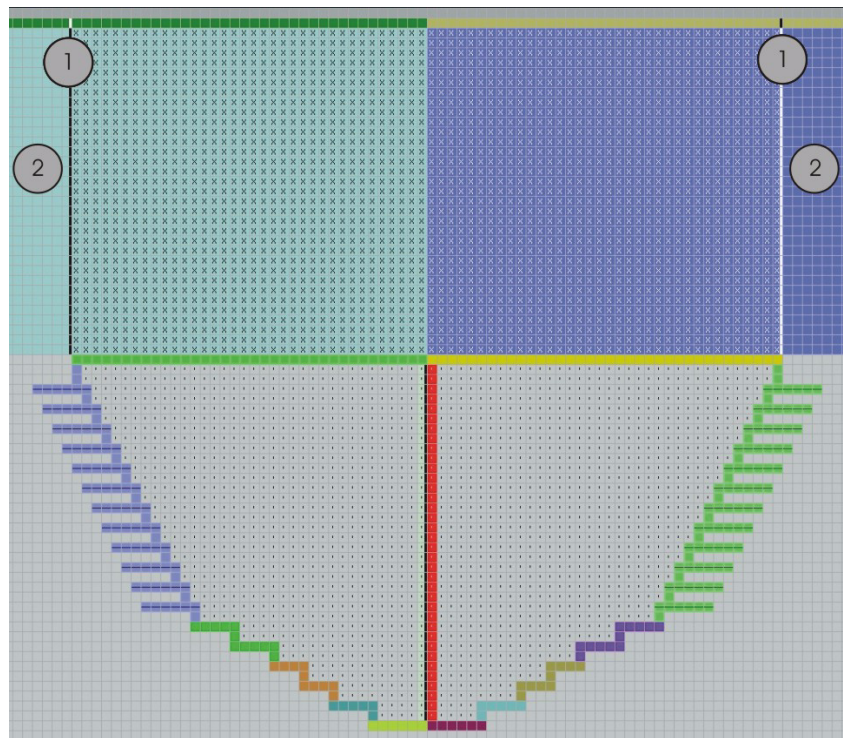
III. Place shape onto pattern:

1. Open shape via "Shape" / "Open and Position Shape(shv, shp, shr)..."
2. "Use Shape (Cut, Fade-out, Narrow)..."

IV. Editing in the shape view



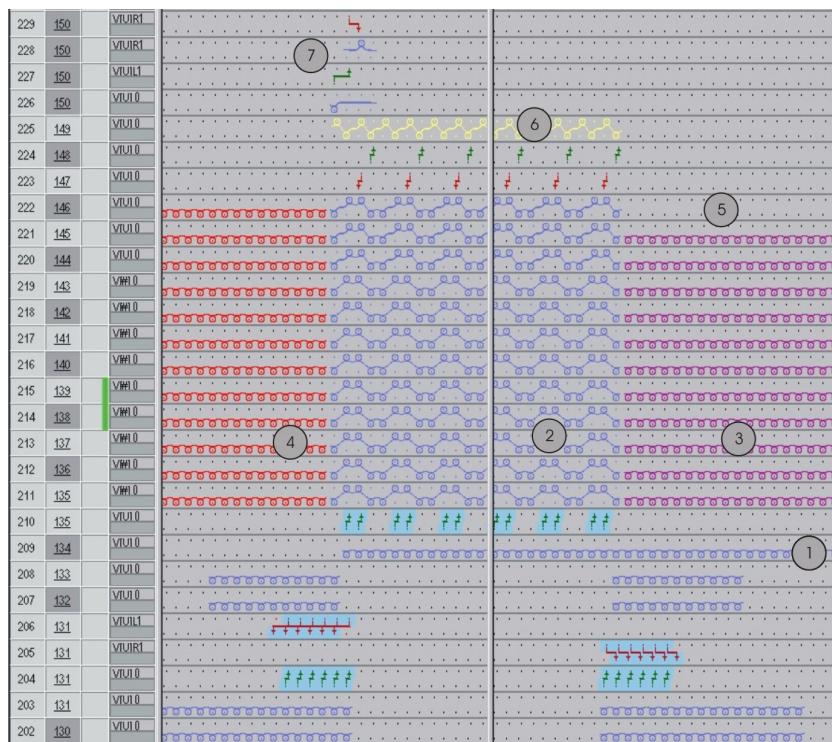
1. Call up the Shape View with
2. In the shape view, draw in a separation at the collar edge in question at the left and right (1).
3. Remove fade-out outside the collar in the protection rows (2).



4. Close shape with **x** and recalculate.

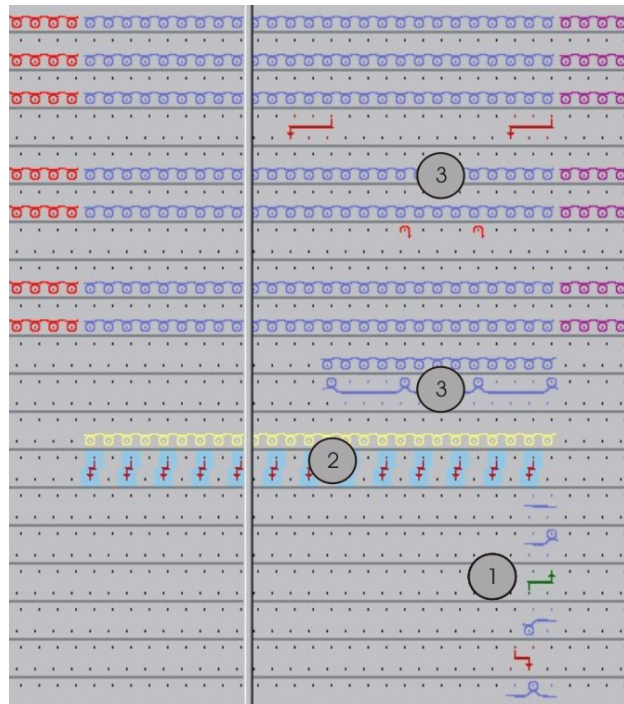
V. Corrections after application of shape

1. Draw in different knitting procedures manually following to the cut-out.



No.	Knitting sequence
1	Knitting in collar
2	Collar
3	Protection rows at the right
4	Protection rows at the left
5	End of protection rows on right
6	Draw thread
7	Binding-off start of collar

2. Correct the protection rows left and right of the collar and enter different colors.
3. Draw in draw thread with transfers. (with yarn color # 207)
4. Draw in binding-off for the collar. You can use the "Stoll"/"Binding-Off"/"without draw thread"/"Abk-1X1-01>" module from the module explorer.



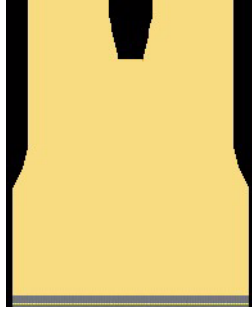
No.	Knitting sequence
1	Binding-off end of collar
2	Knit out draw thread
3	Thread securing an the collar end

5. Adjust binding-off at collar end
6. Draw in the draw thread.
7. Draw in a thread securing an the collar end.
8. Insert cycle for length control in collar and protection rows if necessary.

VI. Complete the pattern:

1. Before technical editing drag the "Tuck v with transfer" module into the selection box in "Configuration" in the "Intarsia" tab under "Binding" "Intarsia/Gore" with drag and drop.
2. Start the automatical or stepwise technical editing.
3. Start generating Sintral.
4. Start the Sintral-Check.

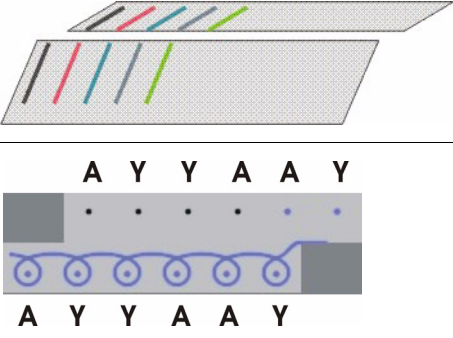
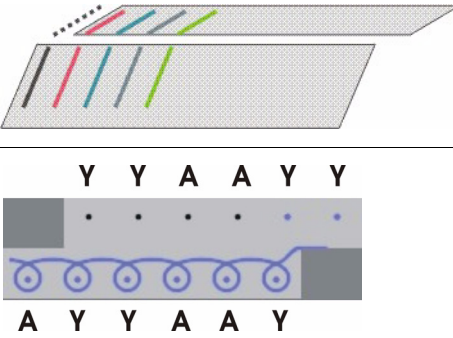
3.43 Fully-Fashion with Knitting in Racking

Pattern data	Pattern picture
File: Petinet pattern Pattern width: 200 Pattern rows: 250	
Machine type	CMS 530
Gauge	8
Start	1X1
Description of pattern:	Fully-Fashion with Petinet without empty rows

I. Behavior of the jacquard selection with the back needle bed racked.

The jacquard selection on the back needle bed defers due to the VJA^1 and VJA^0 commands.

You can use it for production increase with petinet and split pattern.

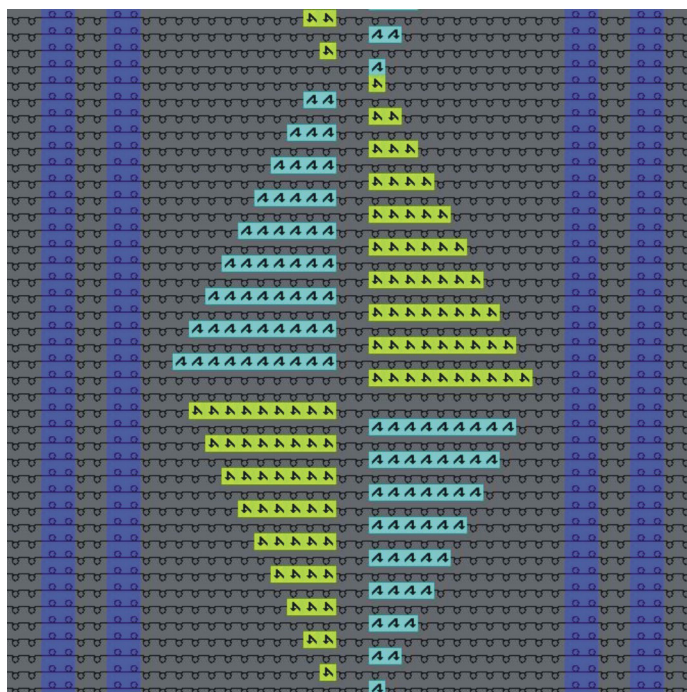
Presentation	Command	Function
	VJA^1 (Default)	The jacquard selection on the back is moved in relation to the front needle bed accordingly to the racking In other words, if the needle bed is racked the selection is moved as well.
	VJA^0	Even with racking, the jacquard selection on the rear is kept unchanged in relation to the front needle bed. In other words, if the needle bed is racked the selection is kept oppositely.

II. Generate Petinet pattern.

1. Generate new pattern without shape.
2. Define the racking for the knitting rows in alternation over the height of the motif (e.g. V0 - VR1 - V0 - VR1).
Insert the VR1 racking position into the even-numbered knitting rows.
Keep the V0 racking position into the odd-numbered knitting rows.
3. Activate the "VJA" control column in the technical view and insert the VJA^0 command over the height of the motif.

		VJA	
9	9	*0	[V] 0
8	8	*0	[VR] 1
7	7	*0	[V] 0
6	6	*0	[VR] 1
5	5	*0	[V] 0
4	4	*0	[VR] 1
3	3	*0	[V] 0
2	2	*0	[VR] 1
1	1	*0	[V] 0

4. Select the "Pointelle Loop_v_<" and "Pointelle Loop_v_>" under "Modul Explorer" / "Module / Stoll / Standard / Petinet" and draw the motif.
 - ➔ Petinet to the right on an odd row (1,3,5) with V0 racking.
 - ➔ Petinet to the left on an even row (2,4,6) with VR1 racking.



Example: Petinet leave motif with ribs



Switch to the "Symbol View".

III. Create shape:

Create your own shape for the front and the V-neck.

1. Open the shape editor via "Shape"/"Shape Editor (Generate or Edit Shapes)...".
2. Generate the shape element for the left front.



The narrowing stepping by one needle only corresponds the racking with petinet.

With it you can combine the narrowings with the petinet.



The narrowings at the left and right should be offset in the height in all elements.

Nr.	Linien Editor	Höhe mm	Breite mm	Höhe Maschen	Breite Maschen	Höhe Stufen	Breite Stufen	Faktor	Höhe Rest	Breite Rest	Breite ---	Breite xxx	Funktion
1		0	-316	0	-95	0	-95	1	0	0			Basis
2		376	0	113	0	113	0	1	0	0		8	
3		133	66	40	20	2	1	20	0	0	6	8	Mindern
4		296	0	89	0	89	0	1	0	0		8	
5		0	250	0	75	0	75	1	0	0			

- Set the narrowings on the left to an odd row number as the narrowing shall be done together with the "Pointelle _>".

3. Generate the shape element for the right front:

Nr.	Linien Editor	Höhe mm	Breite mm	Höhe Maschen	Breite Maschen	Höhe Stufen	Breite Stufen	Faktor	Höhe Rest	Breite Rest	Breite ---	Breite xxx	Funktion
1		0	316	0	95	0	95	1	0	0			Basis
2		373	0	112	0	112	0	1	0	0		8	
3		133	-66	40	-20	2	-1	20	0	0	6	8	Mindern
4		300	0	90	0	90	0	1	0	0		8	
5		0	-250	0	-75	0	-75	1	0	0			

- Set the narrowings on the right to an even row number as the narrowing shall be done together with the "Pointelle _>".

4. Generate the shape element for the left neckline:

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Nr.	Linien Editor	Höhe mm	Breite mm	Höhe Maschen	Breite Maschen	Höhe Stufen	Breite Stufen	Faktor	Höhe Rest	Breite Rest	Breite ---	Breite xxx	Funktion
1		0	-33	0	-10	0	-10	1	0	0		0	Abketteln
2		6	0	2	0	2	0	1	0	0		8	
3		160	-20	48	-6	8	-1	6	0	0	6	8	Mindern
4		33	0	10	0	10	0	1	0	0		8	
5		0	53	0	16	0	16	1	0	0			

→ Set the narrowings on the left to an even row number as the narrowing shall be done together with the "Pointelle _<".

5. Generate the shape element for the right neckline:

Nr.	Linien Editor	Höhe mm	Breite mm	Höhe Maschen	Breite Maschen	Höhe Stufen	Breite Stufen	Faktor	Höhe Rest	Breite Rest	Breite ---	Breite xxx	Funktion
1		0	33	0	10	0	10	1	0	0		0	Abketteln
2		3	0	1	0	1	0	1	0	0		8	
3		160	20	48	6	8	1	6	0	0	6	8	Mindern
4		36	0	11	0	11	0	1	0	0		8	
5		0	-53	0	-16	0	-16	1	0	0			

→ Set the narrowings on the right to an odd row number as the narrowing shall be done together with the "Pointelle _>".

6. Allocate attributes to the edges in the front and neckline.

Attributes	Allocation
Fade out	Front stitch
Fade-out width	Stitch quantity depends on the racking of the pattern as the knitting rows will be knit in the racking (V0 / VR1).
Type of narrowing	L-R combined transfer Separate transfer single jersey
Narrowing width	Depending on the fade-out width
Start module at the start of the neckline	Structure single jersey V2




At the border of a pattern the stitches over the width of the performed racking must be on the front needle bed.



Due to the racking movement and JA^0 the edge stitches will get outside the knitting area and therefore they will not be knitted or transferred.

7. Save shape.

8. Close the Shape Editor.

IV. Position shape on the pattern:

1. Position the shape on the pattern via "Shape" / "Open and Position Shape(shv, shp, shr)..." .
2. Position the shape with the  icon activated and the left mouse button pressed.
- or -
- ➔ Position the form with the arrow keys.
3. Call up the "Configuration" dialog box via the "Knitting Technique" / "Configuration" menu.
4. Activate the "Intarsia Method" option field in "Configuration" / "Further settings" / "Separate rows with separate pattern areas".

Standard method	or	Intarsia method
		
The Standard Method is not advantageous regarding the production time in this case.		The Intarsia Method is advantageous regarding the production time in this case. In addition you can combine the yarn carriers.

5. Activate the "Combining yarn carriers" checkbox in "Configuration" / "Further settings".
6. Call-up "Shape" / "Use shape (cut, fade out, narrow)".

V. Complete the pattern:

1. Start the technical editing via "Knitting Technique" / "Automatic Technical Editing..." menu.

The "Generate Sintral?" prompt appears after the technical editing.

2. Activate the checkbox in the "Generate Sintral?" prompt and confirm with "OK".
3. Call up the Sintral Check program via the "Sintral" / "Sintral-Check" menu.




3.44 Module properties

I. Tab Description:

Element	Meaning
Module name	Here a name for the module can be given. Even special characters (*, :, ?, <, >, \, /,) are permitted, in order to simplify for e.g. the entry for the direction (< or >).
Module ID	The M1 gives every module an identification number so that the modules can be clearly differentiated from one another. The ID number cannot be changed.
Description	A module description can be inserted.
Write protection	Set a write-protection to a module or a module group.
Machine compatibility ref. Number of needle beds	Display for usability with regard to the type of machine. Is calculated automatically.
Language	Specify the language for the name and description of module or module group.

II. Cycles tab:

Give the row distance and column distance with which the module is repeated during drawing.

Element	Meaning
Row spacing	Parameters for row distance that is used during drawing
Column spacing	Parameters for column distance that is used during drawing
	Direction towards left
	Direction towards right
	Direction as desired

These specifications effect the drawing function "Module repetitions" 

III. Gauge tab:

Specify the machine gauges and needle head gauge for which the module shall be usable.

IV. Technical tab:

- Setting possibilities for racking



Entry is necessary only in case of module for the module groups: "Technical/Widening" and "Technical/Narrowing".

Setting of the "Max. allowed racking": In case of narrowing modules specifications are required for both directions.

"Maximum permissible racking </>"	"Unlimited"	Value
	On	0
	Off	n (as desired)

- "Jacquard" section

The setting possibilities for jacquard are active only during generation of a jacquard module.

Element	Meaning
Relief jacquard	Is activated during the jacquard module generation by using the knitting type relief.
Number of colors	Is specified during jacquard module generation.
Stitch ratio	The stitch ratio from the front to back can be given. The input is only informative.
Picture side	Ascertaining the picture side front / rear.
Maximum float length	The maximum float length is displayed.
Net back	Parameter of knitting type for the jacquard module generation

- General setting possibilities

Element	Input	Meaning
knit and wear module	activated	When the module knit & wear is suitable. (only informative)
	deactivated	When the module knit & wear is not suitable. (only informative)
	Selection list	Parameter for using the module layer front /rear.
Knitting layer	front/back	Specify module usage for knitting layer for k&w.
1X1 transfers	activated	Permission for 1X1 transfer for this module.
	deactivated	No permission for 1X1 transfer for this module.
Transfer of surroundings permitted	activated	Permission for transfer of surroundings for this module.
	deactivated	No permission for transfer of surroundings for this module.
Casting off + Transfer permitted	activated	Permission to combine casting-off and transferring for this module.
	deactivated	No permission to combine casting-off and transferring for this module.
Knitting mode		Allocation of knitting type for module so that the technical editing in case of Fully fashion pattern additional modules (fade-out/narrowing) can be properly used.

- "General module attributes" section

Element	Input	Meaning
Direction:	>	Module is used on the left fabric edge.
	<	Module is used on the right fabric edge.

Value 1

Narrowing and widening modules

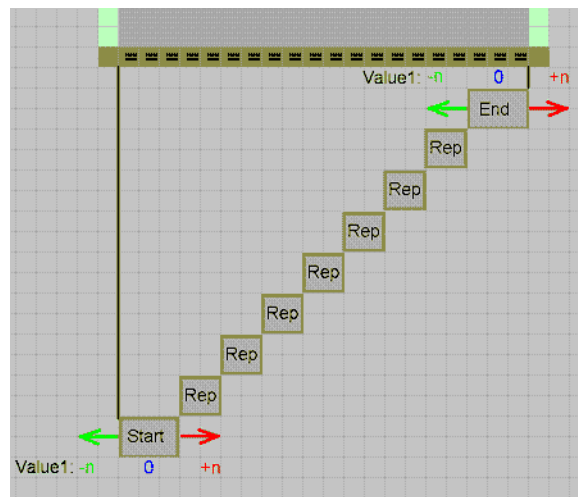
Input:	Meaning
0	The module will be inserted side by side several times according to the narrowing width of the shape. If the module is wider than the narrowing width, then the module will be inserted independently of its own module width only partly.
1	Module will be inserted only once in its complete module width. The width of narrowing "1" has to be set within the shape editor or the form view.
2	Module will be inserted twice in its complete module width. The width of narrowing "2" has to be set within the shape editor or the form view.
n	Module will be inserted n-times in its complete module width. The width of narrowing "n" has to be set within the shape editor or the form view.

Binding off module (Step module)

Input:	Meaning
0	The modules are positioned at the outer fabric edge. If there are no modules with other settings for the value 1, then the module will be used at the cut-out as well. There should always be a module with the value 0.
Values less than 0	Modules will be inserted within the fabric (cut-out).
- 1	The starting module from the step module (binding-off) will be set on position -1 at the start of the mark for binding-off (equivalent to the symbol =). The module will be moved by one needle to the left in the process. This value corresponds to the offset of the module.
- 2	The starting module from the step module (binding-off) will be set on position -2 at the start of the mark for binding-off (equivalent to the symbol ' = '). The module will be moved by two needles to the left.

Value 1	
- n	The starting module from the step module (binding-off) will be set on position -n at the start of the mark for binding-off (equivalent to the symbol =). The module will be moved by n needles to the left.
Values greater than 0	Modules will be inserted within the fabric (cut-out).
1	The starting module from the step module (binding-off) will be set on position 1 at the start of the mark for binding-off (equivalent to the symbol =). The module will be moved by one needle to the right. This value corresponds to the offset of the module.
2	The starting module from the step module (binding-off) will be set on position 2 at the start of the mark for binding-off (equivalent to the symbol =). The module will be moved by two needles to the right.
n	The starting module from the step module (binding-off) will be set on position -n at the start of the mark for binding-off (equivalent to the symbol =). The module will be moved by n needles to the right.

Start- and end module within the step module



+ n	Positioning / Moving the start- / end module to the right
- n	Positioning / Moving the start- / end module to the left

Value 2

Narrowing and widening modules

Input:	Meaning
General	If you want to use different narrowing modules at one fabric edge then you have to define different edges in the shape editor or different edge colors in the shape view. As an other possibility you can insert different modules by the definition of the value 2. Values greater than 1000 specify the order of the module insert.
1001	1. Module which will be inserted at the edge. The insert starts at the beginning of the edge.
1002	2. Module which will be inserted at the edge.
1003	3. Module which will be inserted at the edge.
n	n. Module which will be inserted at the edge.

Modules for narrowing and widening with TC-R machine

Input:	Meaning
	The distance between left and right shape edge within the cut-out is checked according to this value. There have to be two module with different values.
Example:	
- 2	The module is inserted with a distance of less than 2 needles from the shape edge (cut-out) by the value -2.
2	The module is inserted with a distance of 2 or more needles from the shape edge (cut-out) by the value 2.

JAC net type tab:

The "JAC Net type" tab is available only when generating jacquard modules.

The "Start-" and "End modules", that should be used for the new module, will be allocated.

Element	Meaning
End modules	This module is used for the net end. Transition from jacquard area to the pattern.
Knitting mode	Specify the knitting type(s) before (during) the jacquard start.
Start modules	This module is used for the net start. Transition from pattern to the jacquard area.



The knitting mode of the jacquard area controls the setting of the "End module".

Normally only one parameter is required.

The knitting mode before (below) the jacquard area controls the setting of the "Start module".

More parameters could be necessary.

3.45 Sintral functions

Pattern data	M1 working techniques
File: Generate your own sintral functions: Machine type: CMS with comb CMS without comb	In order to supplement a knitting program to M1 own sintral functions can be generated. Different functions that have were adapted to individual needs can be inserted in the sintral.



At this point only the handling instructions and the insertion of sintral functions has been explained.
 Knowledge of sintral is a pre-requisite for the generation of functions.

I. Call up sintral functions:

- Sintral functions must lie in a saved sintral file.
- Sintral program knowledge.



Sintral functions can be generated in the sintral editor.

1. Via "Sintral" / "Sintral functions..." Call up sintral functions and insert sintral functions.
2. Call up the path under which the functions have been stored with the "Load..." button in the "Sintal function table".
3. Select sintral function (*.sin) and load it by "Open" in the "Sintral function table".
4. Specify the "Type" of the function.



The "Type" characterizes the Sintral function and specifies at which position in the knitting program the function call is to be inserted.

5. Click on "Used".



If a sintral function "Start" is inserted then this can be set as "Used" only if there is no start in the knitting program.

→ Different sintral function types that can be inserted:

Sintral function type	Behavior
Head	The Sintral function is inserted in the knitting program from line 2. Note: Use this type to insert comments.
Start	The sintral function is from the line F: M1 sintral is called up. Note: The actual knitting program starts from pattern row 1 in the M1-Sintral function.
FF transition	The Sintral function is called up for the Fully Fashion transition before and after the F: M1 sintral is called up. Note: The function call is only inserted for a fully fashion pattern.
Transition comb	No comb thread module is used in the pattern by technical editing. Instead, the sintral function is called before the line F:M1 sintral in the knitting program.
Technical rows	The sintral function can be allocated with any technical row via technical rows data.

6. Further Possibilities:

- Delete sintral functions.
Select the desired sintral element under the column "Function" and remove with "Delete".
- Edit sintral functions.
Select the desired sintral element under the column "Function" and call up for editing with "Edit".

II. Edit sintral functions:

1. Call up sintral function via "Edit...".
2. Edit sintral.



Specifications for yarn carriers, for stitch length, take-down and carriage speed that are read-out automatically for the pattern are to be placed in the comment lines that begin with CC.

These lines are located in the Header of the Sintral function.


In the sintral function no line numbers are used.

```

CC YG:=D(207)=K(208)/=E(209) =G(201) =G(202);
CC MP1= 9.0 C METZ/SET UP/RESEAU
CC MP2=10.0 C SCHLAUCH/TUBULAR/TUBULAIRE
CC MP3=10.5 C LX1
CC C
CC MP20= 9.5
CC MP21=12.8
CC MP22=12.0
CC MP23=11.0
CC WIP4
CC MSEC7=0.95
C----- 3sys_LX1_E5 -----
FIBG:3sys_LX1_E5;
IF R$17 <> 0 GOTO FEND
Y-2B:=0; Y-1A:R25; Y-1B:R25; Y-2A:R25; Y-6A:R25;
$0Y #99=1 DO

<<
>> S:R(21)-R(21); Y:0; S0 MSEC7
<< S2 S3 WMC=0
<< S:D.I-D.I.; Y:=G; S2 S3 WMC=30
<> S:D.I.-D.I./U^S D.I./U^S D.I.; Y:=G; SX SX SX WIP4
<< S:D.I.(20)-R/R-0/UVSD.I; Y:=G/0; VR1 SX SX SX
>> S:D.I.(20)-D.I.(22)/0-D.I..../U^S D.I.; Y:=G/=D,00 SX SX SX
    
```

Example without concrete procedure.

3. Save the sintral function after the editing via "File" / "Save" or by the  icon.
The function is saved as temporary file.
4. Press "Actualise" button in the sintral function table.
Thereby the sintral function already loaded in the function table is replaced by the changed function.

III. Insert a sintral function on a specific technical row:

1. Load the Sintral function into the "Sintral function table".
2. Select the technical view in the knitting row on which the sintral function is to be attached.
3. Display via context menu "Display technical rows data" / "Function calls ..." the dialog box "Technical rows data"
4. Open the "Function" section with the "Settings>>" button.
5. Activate the function checkbox.
6. Input a name for the function in the "Addl. commands" selection list.
7. Select the function name in the "Function" F: selection list.
8. Input the number of repetitions in the "Repetitions" *: selection list.
9. Specify whether the function "before stroke" or "after stroke" should be used under "Run" .
10. Confirm the selection with "OK".
The function is automatically set to Used in the Sintral functions table.

IV. Use of sintral functions:

If Sintral functions with a knitting cycle are inserted in the Sintral functions table then the table of contents of the function is listed under parameters. Parameters of sintral functions:



Only values on the light background can be changed.

Tab	Table column	Meaning
Yarn carrier (Yarn carrier)		Contains the relationships of the yarn carriers to the yarn and to the yarn carrier position. When the sintral function is used, then entries in the yarn field allocation are applied. The entries in the Fdf tab can be edited.
	YC rail	Specification of yarn carrier rail.
	YC type	Specification of yarn carrier type. Note: These are the entries N (Normal), I (Intarsia) and Empty field (no type).
	Yarn No.	Specification of yarn number.
	Yarn type	Specification of yarn type.
	Position	Specification of yarn carrier position. Left and right.

Tab	Table column	Meaning
NP (Stitch length)		Contains the specifications on the stitch length. When the Sintral function is "Used", then the entries are applied to the machine-specific stitch length table. Note: No application of Sintral function type Header.
	NP index	Specification of the NP index.
	Value	Specification of the NP value.
	mm	Specification of the mm value.
PNP		Reclaiming (only for S machine)
	NP index	Specification of the NP index.
	Value	Specification of the NP value.
NPS		2. Tension (only for S machine)
	NP index	Specification of the NP value for second tension
WMF (Fabric take-down)		Contains the specifications for fabric take-down. When the sintral function is "Used", then the entries are applied to the take-down table. Note: No acceptance, when the sintral function contains the type header. The entries in the tab cannot be edited.
	WMF Index	Specification of the WMF index. The fabric take-down values must be defined in the "Fabric take-down table".
MSEC (Machine speed)		Contains the specifications on the carriage speed. If the Sintral function with the "Used" checkbox is switched on, then the entries are adopted in the machine-specific carriage speed table. Note: No acceptance, for sintral function type header.
	MSEC index	Specification of the MSEC index.
	m/s	Specification of the speed value in meters/second.

More functional keys:

Function	Meaning
Apply	Changes in the tab are applied for the pattern.
Reset	Changes in the tab are undone and replaced with the value previously present.
Reload	The parameters are reloaded in the display from the Sintral function.



Own sintral functions that are inserted are not checked during the technical editing.

The "Sintral check" checks the inserted Sintral functions.

3.45.1 Invalid characters in Sintral



Invalid characters in Sintral

Fault message or malfunction on the knitting machine due to invalid characters in the Sintral.

Possible cause:

Characters not found in the ASCII character set were entered with a text editor.

The computer of the knitting machine does not understand them.

→ Enter only characters of the ASCII character set in the knitting program.

```

! " # $ % & ' ( ) * + , - . /
0 1 2 3 4 5 6 7 8 9 : ; < = > ?
@ A B C D E F G H I J K L M N O
P Q R S T U V W X Y Z [ \ ] ^ _
` a b c d e f g h i j k l m n o
p q r s t u v w x y z { | } ~
    
```

ASCII character set

3.46 Technical row data

Should any knitting technique related parameters be made when generating the program, then these can be made before or after the technical editing via "Technical rows data".

→ The "Technical rows data" dialog box can be called up with it's tabs via "Knitting Technique" / "Technical rows data".

R...	Name	Action	HL	HR	Correction left	Correction right
234	-		0	0	0	0
233	-		0	0	0	0
232	-		0	0	0	0
231	-		0	0	0	0
230	-		0	0	0	0
229	-		0	0	0	0
228	-		0	0	0	0
227	-		0	0	0	0
226	-		0	0	0	0
225	-		0	0	0	0
224	-		0	0	0	0
223	-		0	0	0	0
222	-		0	0	0	0

Tabs in the "Technical rows data" dialog box:

- Yarn carrier
- Racking
- PRINT
- Knitting sequence
- Function calls

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Tabs with "Extension"	Under tab / section	Specification:	Meaning:
Yarn carrier			
	Parking Position/ correction	Stop position and correction of the yarn carrier left/right.	
	Action/path	Actions of the yarn carrier like e.g. lay-in, swiveling, clamping.	
	Add	Allocate another yarn carrier to a knitting row that has been chosen in the tab.	
Racking			
	rear / front	V V	Racking front
		V	Racking rear
		V V+/- V+/-	OVERRACKING OF FRONT NEEDLE BED. OVERRACKING OF REAR NEEDLE BED.
		V V Km V Km	Racking correction of front needle bed. Racking correction of rear needle bed.
		V V V = n V V V = n	Racking speed of front needle bed. Racking speed of rear needle bed.
PRINT			
	PRINT	Input of instruction, language and SINTRAL command.	
Knitting sequence			
	Rules for acceptance of knitting sequence	Specify the knitting sequence in a pattern.	
Function calls			
	Function	Addl. commands	Name of function
		Functions	Create the sintral file
		Repetitions	Number of repetitions
		Execute	Execute functions before/after the carriage stroke

The setting is taken into account during technical editing.

3.47 Layer Manager








During generation of a pattern more overlapping layers are used. Each of these layers have their special meaning.



Symbol bar "Layer Manager"

The different layers can be displayed or hidden in the fabric and technical view with the symbol bar "Layer Manager".

The symbols and functions of the level manager:

	Function
 Pattern Layer	Level for the generation of the basic motif. The modules for start, basic pattern and structure are saved here. In case of fully-fashion pattern the hide function is inserted.
 Shape Module Layer	Becomes active by using the function: "Use narrowing". The narrowing module and the V-start module will be inserted. This level is active only in case of fully-fashion patterns.
 Shape Layer	Becomes active with "Use shape". Contains the area empty needles (Not) apart from the shape. This level is active only in case of fully-fashion patterns.
 Start condition layer	Here the automatic transfer is entered by the structure change. This level cannot be edited and is always active.
 Technical Layer	All modules and pattern parameters that use the technique are set here.
 Modification layer	This layer gets available during "Stepwise technical editing". The technical editing can be corrected after every step. Entries in this level are required only when the modules set by the technique are overwritten. Not changeable during "Automatic Technical editing"
 Activating the level	Should there be some editing in the pattern, shape or modification levels, then this symbol is to be activated. All subsequent changes are entered on the corresponding layer. A layer is always active as an editing layer. During opening of a pattern the pattern layer is automatically activated as the editing layer.

The different layers are displayed corresponding to the progress of the pattern generation and can mostly be edited.