STOLL

M1plus FullyFashion + Special + More

CE

H. STOLL AG & Co. KG 3/2019

1 Module Properties

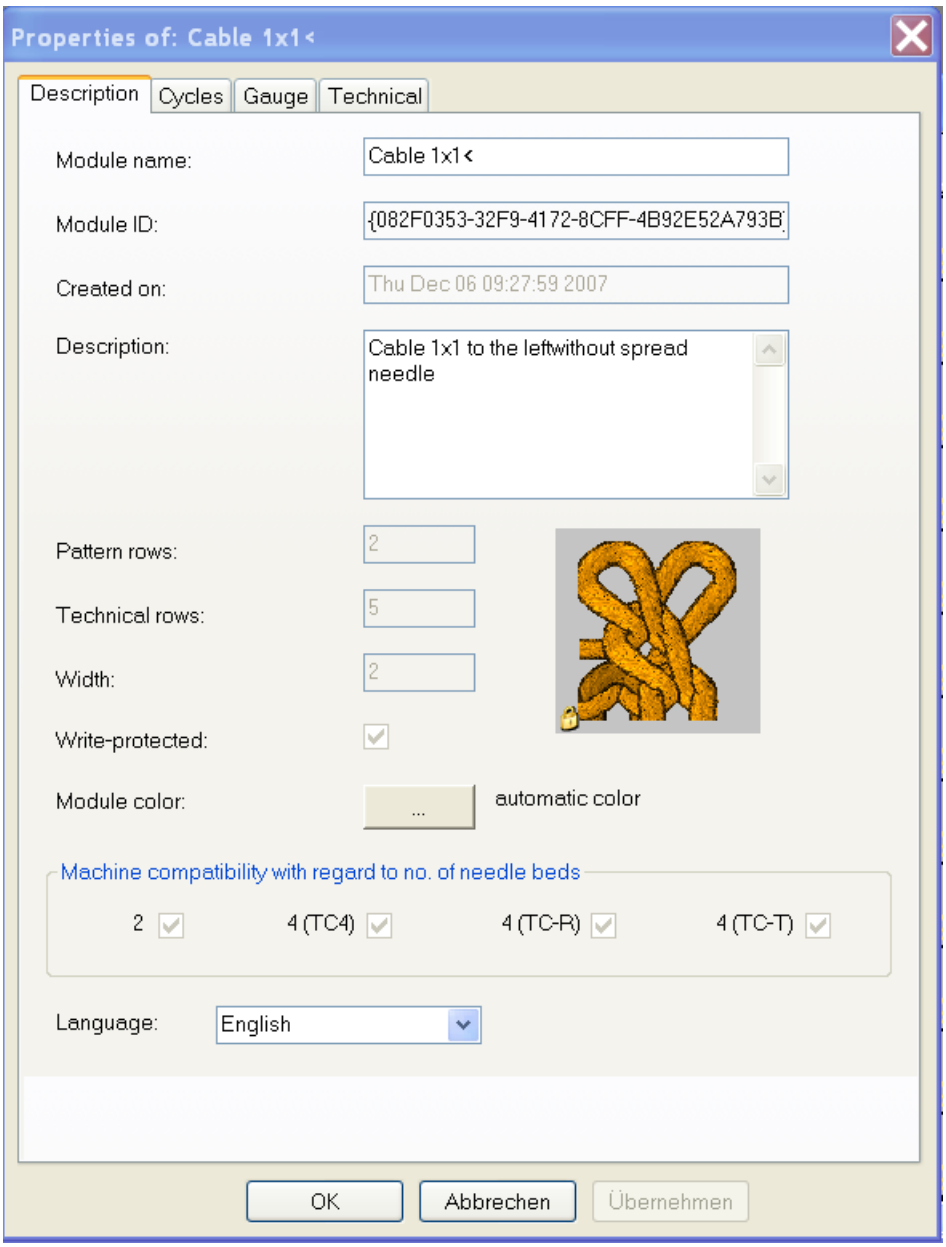
The "Properties of:" dialog box is called up with the "Properties..." function in the context menu of the "Modules" toolbar or the "Module Explorer".

The "Properties of:"<module name> dialog box has the following tabs:

- Description
- Cycles
- Gauge
- Technical
- JAC net type (only with Jacquard modules)

1.1 Module Properties: Description

"Description" tab



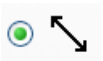
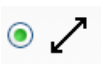
Element	Meaning
Module name	You can enter a name for the module. Even special characters (*,, ?, <, >, \, /, |) are permitted, for example to simplify the entry for a direction (< or >)

Element	Meaning
Module ID	The M1plus assigns each module an identification number so that these can be clearly distinguished from each other. The ID number cannot changed.
Description	You can enter a description of the module.
Write protection	Display for a write-protected module or module group.
Machine compatibility with regard to No. of needle beds	Display the usability regarding machine type. Will be determined automatically.
Language	Select the language for the name of the module or module group and for the description.

1.2 Module Properties: Cycles

"Cycles" tab

Settings (coordinates) to position modules with the  "Multi Copy" drawing tool.

Element	Meaning
	Direction to the left
	Direction to the right
	Any direction
Row distance	Specification of the row distance used for drawing
Column distance	Specification of the column distance used for drawing

1.3 Module Properties: Gauge

"Gauge" tab

Specify the machine gauge and needle hook gauge:

- For "Comb Thread" module group only
- For "Start" module group only

1.4 Module Properties: Technique

"Technical" tab

- **Settings for racking**
  Settings are necessary for modules of the following module groups:
  – "Technique" / "Widening"
  – "Technique" / "Narrowing"

Max. allowed racking </>	Unlimited	Value
	☑	0
	☐	n (any desired)

> **i** Specifications for both racking directions are always necessary with narrowing and widening modules.

- **Jacquard** section

> **i** The settings for Jacquard are only available for Jacquard modules.

Element	Meaning
Relief jacquard	Activate for the **Relief** knitting mode.
Number of colors	Specify when generating the Jacquard module.
Stitch ratio	The stitch ratio of front to back can be specified. (for information only)
Picture side	Specify picture side at front or back.
Max. floating length	Display the maximum floating length.
Ladder Back	Specify the knitting mode when generating Jacquard modules.

- **General settings**

Element		Meaning
1x1 Transfer allowed	☑	Allow 1x1 transferring for this module.
	☐	Do not allow 1x1 transferring for this module.
Surroundings transfer allowed:	☑	Allow transferring surrounding for this module.

Element		Meaning
	☐	Do not allow transferring surrounding for this module.
Casting-off + Transfer permitted	☑	Allow to combine casting-off and transferring for this module.
	☐	Do not allow to combine casting-off and transferring for this module.
Knitting mode	Define the knitting mode of the module. The selection of further modules is influenced by the knitting mode (Fading-out / Narrowing).	

■ **General module attributes** section

Putting in the direction

Input	Meaning
>	◆ with narrowing and widening modules: Racking direction to the right (VR) ◆ with binding-off modules: Carriage direction of the knitting row with binding-off markings
<	◆ with narrowing and widening modules: Racking direction to the left (VL) ◆ with binding-off modules: Carriage direction of the knitting row with binding-off markings

Entry for Value1:

i The container module is determined by **Value1** and by the **direction**.

■ with technical container modules for narrowing and widening.

Value1	Meaning
0	The module will be inserted side by side several times according to the narrowing width of the shape. **i**: 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 Shape View.

Value1	Meaning
2	Module will be inserted twice in its complete module width. In the shape editor or in the shape view under narrowing width is to be entered "2".
n	Module will be inserted n-times in its complete module width. In the shape editor or in the shape view under narrowing width is to be entered "n".

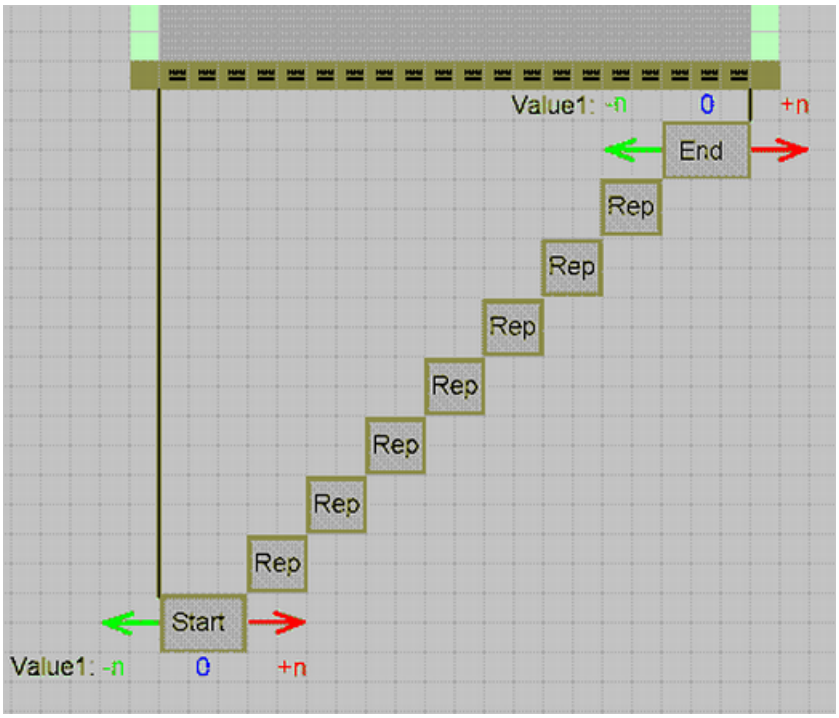
■ with technical container modules for binding-off (stepping module)

Value1	Meaning
0	The technical container module will be used at the outer fabric edge and / or at the neckline. **i**: A technical container module with value1=0 should always be present in this module group.
Value< > 0	The technical container module will be positioned within the fabric (neckline)
- n	The technical container module will be positioned at the left of the neckline on the binding-off markings (**=** symbol). **i**: Carriage direction **>** must be set under **Direction**.
+ n	The technical container module will be positioned at the right of the neckline on the binding-off markings (**=** symbol). **i**: Carriage direction **<** must be set under **Direction**.

i The module, first read by the M1plus, will be inserted in the neckline if there are more one technical container modules with "Value1" = +/- n in the module group.

■ with the elements in use in a technical container module for binding-off (stepping module)

Value1	Meaning
0	Positioning of the start / end module on the binding-off markings (**=** symbol)
- n	Moving the position to the left
+ n	Moving the position to the right
Start and end module within the technical container module (Step module)	

Value1	Meaning
	

Entry for Value 2:

- with technical container modules for narrowing and widening.

Input	Meaning
	In 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. You can get different modules inserted by the definition of value2. i: Values greater than 1000 specify the order of the module insert.
1001	First module, which will be inserted at the edge. i: The insert starts at the beginning of the edge.
1002	Second module, which will be inserted at the edge.
1003	Third module, which will be inserted at the edge.
n	n. Module, which will be inserted at the edge.

- For TC-R machines only: with technical container modules for narrowing and widening.

Input	Meaning
	In general:

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 (opening) by the value - 2.
+ 2	The module is inserted with a distance of 2 or more needles from the shape edge (opening) by the value 2.

1.5 Module Properties: JAC net type

i The "JAC net type" tab appears only for Jacquard modules.

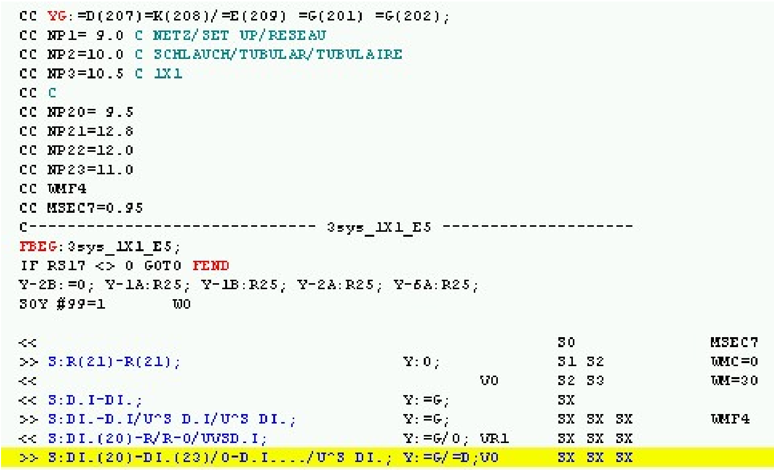
"JAC net type" tab

➔ Allocate the "Start" and "End" modules which shall be used when inserting the new Jacquard module.

Element	Meaning
◉ Table front picture side	Display of the following table with settings if the Jacquard picture side is at the front.
◉ Table back picture side	Display of the following table with settings if the Jacquard picture side is at the front.
Knitting mode	Specifies the knitting mode(s) before (below) the jacquard start.
Start modules	This module is used for the net start. Transition from pattern to the jacquard area.
End modules	This module is used for the net end. Transition from jacquard area to the pattern.

- The knitting mode of the jacquard area controls the setting of the "End module".
- The knitting mode before (below) the jacquard area controls the setting of the "Start module".

2 Sintral Functions



```
CC YG:=D(207)=K(208)/=E(209) =G(201) =G(202);
CC NP1= 9.0 C NETZ/SET UP/RESEAU
CC NP2=10.0 C SCHLAUCH/TUBULAR/TUBULAIRE
CC NP3=10.5 C 1X1
CC C
CC NP20= 9.5
CC NP21=12.8
CC NP22=12.0
CC NP23=11.0
CC WMF4
CC MSEC7=0.95
C------------------------------ 3sys_1X1_E5 --------------------
FBEG:3sys_1X1_E5;
IF R317 <> 0 GOTO FEND
Y-2B:=0; Y-1A:R25; Y-1B:R25; Y-2A:R25; Y-6A:R25;
SOY #99=1       W0

<<                                                   S0          MSEC7
>> S:R(21)-R(21);                    Y:0;            S1 S2       WMC=0
<<                                           V0      S2 S3       WM=30
<< S:D.I-DI.;                        Y:=G;           SX
>> S:DI.-D.I/U^S D.I/U^S DI.;        Y:=G;           SX SX SX    WMF4
<< S:DI.(20)-R/R-0/UVSD.I;           Y:=G/0; VR1     SX SX SX
>> S:DI.(20)-DI.(23)/0-D.I..../U^S DI.; Y:=G/=D;V0   SX SX SX
```

Pattern name	Eigene Sintral-Funktionen erstellen
Machine type:	◆ Machines with comb ◆ Machines without comb
Pattern description	◆ Complete the knitting program from the M1plus with Sintral functions of your own ◆ Insert your own function in the Sintral from the M1plus

i Only the handling and inserting of Sintral functions is described here. You need Sintral knowledge to generate such functions.

2.1 Generate or modify a Sintral function

I. Generate a Sintral function or modify an imported Sintral file:

1. Open the M1plus main program.
2. Open the "UltraEdit-32" editor wihtout content via "Tools" / "Sintral Editor…".
   - or -
   Open an imported Sintral file by double click.
3. Generate your own Sintral function in the "Sintral Editor".
   - or -
   Modify the imported Sintral file.
4. Save the modified Sintral function via "File" / "Save" or by the  icon.

▶ A file with the .sin extension will be save to any desired directory.

II. Rules to generate or modify a Sintral function:

- Additional row must have **CC** at the start of the line
- No line numbers (e.g. Sirix line numbers)
- Write values for stitch lengths, take down and carriage speed directly into the Sintral
- No IF condition (e.g. stitch length in relation to the machine gauge)
- Allocate the corresponding technical yarn color number to the yarn carriers in the yarn carrier home position

Example:

```
CC YG:=D(207)=K(208)/=E(209) =G(201) =G(202);
CC MP1= 9.0 C NETZ/SET UP/RESEAU
CC MP2=10.0 C SCHLAUCH/TUBULAR/TUBULAIRE
CC MP3=10.5 C 1X1
CC C
CC MP20= 9.5
CC MP21=12.8
CC MP22=12.0
CC MP23=11.0
CC WMF4
CC MSEC7=0.95
C------------------------------ 3sys_1X1_E5 --------------------
FBEG:3sys_1X1_E5;
IF RS17 <> 0 GOTO FEND
Y-2B:=0; Y-1A:R25; Y-1B:R25; Y-2A:R25; Y-6A:R25;
S0Y #99=1       W0

<<                                                  S0              MSEC7
>> S:R(21)-R(21);                        Y:0;      S1 S2           WMC=0
<<                                             V0   S2 S3           WM=30
<< S:D.I-DI.;                             Y:=G;     SX
>> S:DI.-D.I/U^S D.I/U^S DI.;             Y:=G;     SX SX SX        WMF4
<< S:DI.(20)-R/R-0/UUSD.I;                 Y:=G/0; VR1     SX SX SX
>> S:DI.(20)-DI.(23)/0-D.I..../U^S DI.; Y:=G/=D;V0       SX SX SX
```

i	A Sintral function of your own will **not** be cheked by the Technical Processing. The inserted Sintral function will be checked by the "Sintral Check".

2.2 Use Sintral functions

I. Call up Sintral functions:

✓ Sintral functions must be saved in a Sintral file (*.sin).

1. Call up the "Sintral Functions" dialog box via the "MC Program" / "Sintral Functions..." menu.
2. Load the saved Sintral file with "Load..." in the "Sintral Functions" dialog box.
3. Select the Sintral file (*.sin) in the "Open" dialog box and add it to the table with "Open".
4. Specify the "Type" of the inserted Sintral file in the column of the table.
   The "Type" specifies the Sintral function and the position of the function call within the knitting program.
   The types of Sintral functions:

Type	Behavior
Head	The Sintral function is inserted in the knitting program from line 2 on. Use this type to insert comments.

Type	Behavior
Start	The Sintral function will be inserted **before** the F:M1-SINTRAL; function call. The actual knitting program starts from the pattern row due to the M1-Sintral function. **i**: No start may be inserted in the pattern.
FF transition	The Sintral function F:FF-TRANS; for the Fully Fashion transition will be inserted **before and after** the F:M1-SINTRAL; function call. **i**: This function type will be inserted only with machines **without comb** or **without using the comb**.
Comb	No comb thread module will be inserted in the pattern by the Technical Processing. The Sintral function F:COMBTHREAD; will be inserted **before** the F:M1-SINTRAL; function call in the knitting program instead.
Comb 2 parts	No comb thread module for 2 parts will be inserted in the pattern by the Technical Processing 2 parts. The Sintral function F: COMBTHREAD-2P; will be inserted **before** the F:M1-SINTRAL; function call in the knitting program instead.
YLC	Sintral test program (YLC3) for yarn length control.
YLC two pieces	Sintral test program (YLC3) for yarn length control for 2-piece knitting.
i: All types of Sintral functions mentioned above can be inserted only once into the Sintral program.	
Technical Rows	This types of Sintral functions can be allocated to any technical row, with or without function call, before or after the stroke, in the "Technical row data" dialog box.
i: This type of Sintral functions can be used several times within one Sintral program.	

- Default directory for Sintral functions:
  D:\Stoll\M1plus\x.xx.xxx\Database\Sintral\transition\
- Directory for personal Sintral functions:
  D:\Stoll\M1plus\x.xx.xxx\Database\Sintral\transition_private\

5. Activate the checkbox in the "Used" column

▶ The Sintral function and the function call F:xxx will be inserted into the Sintral.

6. Close the dialog box with  .

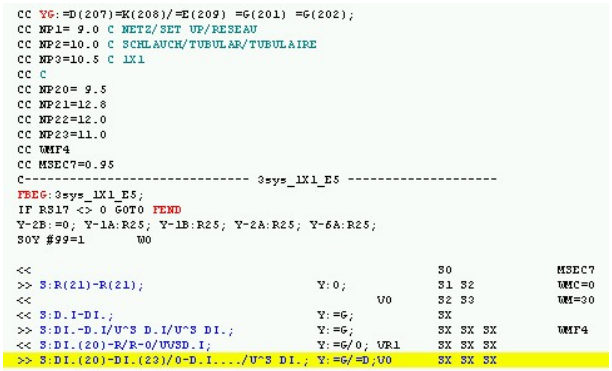
▶ The loaded Sintral functions will be saved within the *.mdv file.

II. Edit Sintral functions:

1. Select the desired Sintral function in the "Sintral Functions" dialog box.
2. Open the "Sintral Editor" with the "Edit..." button.

▶ The Sintral will be displayed as temporary file (Tmp\.....*2.sin).

3. Edit the Sintral.



4. Save the Sintral function.

▶ The Sintral function will be saved as temporary file (Tmp\.....*2.sin).

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i The original Sintral function will not be changed.

---

5. Close the "Sintral Editor".
6. Click the "Update" button of the "Sintral Functions" dialog box.

▶ The Sintral function already loaded in the table will be replaced by the modified function.

III. Delete Sintral functions:

1. Select the Sintral function to be deleted in the "Sintral Functions" dialog box.
2. Click the "Delete" button.

▶ The selected Sintral function will be deleted.

IV. Use a Sintral function of the "Technical Row" type:

1. Load the desired Sintral function in the "Sintral Functions" dialog box.
2. Allocate the **Technical Rows** type to the loaded Sintral function in the "Type" column.
3. Activate the Sintral function with the checkbox in the "Used" column.

▶ The Sintral function will be entered as function (FBEG:…FEND) in the MC-Program.

4. Select a pattern row in the "Symbol View [Basic]".

▶ The Sintral-Function of the **Technical Rows** type will be inserted at this position.

5. Call up the "Technical row data" dialog box via "Pattern Parameters" / "Technical Row Data" / "Function Calls...".
   - or -
   Display the **Function call** F control column and open the "Technical row data" dialog box via the "Function Calls..." context menu.

i	The selected pattern row will be displayed.

6. Open the "Function" section with the "Settings >>" button.
7. Activate the "Function" checkbox.
8. You can enter additional Sintral commands in the "Additional commands" entry fields.

▶ These "Additional commands" will be inserted before the function call (F:;).

9. Select the desired Sintral function in the F: "Function" selection list.
10. Enter a repetition factor for the selected Sintral function in the "Repetition:" entry field if necessary.
    - or -
    Define a cycle counter or counter.
11. Specify whether to insert the function "before stroke" or "after stroke" under "Execute".
12. Confirm the entry with "Apply" or "OK".

▶ The function will be set automatically to "Used" in the **Sintral functions** dialog box.

▶ The Sintral function will be entered as function call (F:;) in the MC-Program.

i	Only Sintral functions specified in the "Technical row data" dialog box will be appear in the MC-Program as function call.

2.3 Parameters of the Sintral functions

Parameters of the Sintral functions in use:

The specifications for the yarn carriers, stitch length, fabric take-down and carriage speed are read out from the Sintral function in this section.

1. Select the Sintral function in the list of the "Sintral Functions" dialog box.

▶ In the "Parameters" sections appears the name of the selected Sintral function under **Function** and the data are displayed in the tabs.

i	The display is not available when no or several Sintral functions is/are selected.

Tabs:

Tab	Table column	Meaning
"YC" (Yarn Carrier)		Exact designation of the yarn carriers regarding yarn and yarn carrier position. If the Sintral function is used then the entries will be applied to the "Yarn Field Allocation" dialog box. i: The values can be edited.
	YC rail	Specification of the yarn carrier rail.
	YC type	Specification of yarn carrier type. i: The entries N (Normal), I (Intarsia) and Empty field (without type) are possible.

Tab	Table column	Meaning
	Yarn No.	Specification of yarn number.
	Yarn type	Specification of the yarn type.
	Position	Specification of the yarn carrier position in the home position YG.
"NP" (Stitch Length)		Contains the specifications on the stitch length. If the Sintral function is used then the entries will be applied to the stitch length table of the pattern. i: The values can not be edited.
	NP index	Specification of the NP index.
	Value	Specification of the stitch length
	mm	Specification of the stitch length in millimeter.
"PNP "(Reclaiming)		Reclaiming (Only with CMS 730 S und CMS 830 S)
	PNP Index	Specification of the PNP index.
	Value	Specification of the PNP value.
"NPS "(Second stitch tension)		Second Stitch Tension (Only with CMS 730 S und CMS 830 S)
	NPS-Index	Specification of the NPS index for the second stitch tension.
	Value	Specification of the NPS value.
"WMF" (Fabric Take-down)		Specifications for fabric take-down. f the Sintral function is used then the entries will be applied to the Fabric Take-down table of the pattern. i: 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".
"W+F "(Auxiliary take-down)		Specifications for the auxiliary take-down function. i: The entries in the tab cannot be edited.
	W+F-Index	Specifications for the W+F function.
"MSEC" (Carriage Speed)		Specifications on the carriage speed. If the Sintral function is used then the entries will be applied to the Carriage Speed table of the pattern. i: The entries in the tab cannot be edited.
	MSEC index	Specification of the MSEC index.
	m/s	Specification of the speed value in meters/second.
"RS "(Cycle counters)		Specifications for cycle counters
	RS	Number of the cycle counter

Tab	Table column	Meaning
	Value	Value of the cycle counter

> **i** For Sintral functions of type **Head**, no information is read out and displayed, as this type is only used for comments.

Buttons:

Buttons	Function
Apply	Apply the modifications in the "Yarn Carrier" tab to the pattern.
Reset	Undo the modifications in the "Yarn Carrier" tab and replace them with the values previously present.
Reload	Reload the parameters from the Sintral function in the display.

2.4 Invalid characters in Sintral

1. Enter only characters of the **ASCII character set** in the knitting program.

▶ Fault message or malfunction on the knitting machine due to invalid characters in the Sintral.

```
  ! " # $ % & ' ( ) * + , - . /
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 { | } ~
```

> **i** Possible cause:
> Characters not found in the ASCII character set were entered with a text editor.
>
> Correct the knitting program.

3 Comb activity with RS17

Pattern name	Kamm mit RS17 Ein- / Ausschalten
Machine type:	◆ Machines with comb
Pattern description	◆ Control the use of the comb in the knitting program with the cycle counter RS17.

i During the production the first fabric is to be started with comb.

All the following pieces are to be produced without comb, connected with the draw thread.

Application of this production variant:

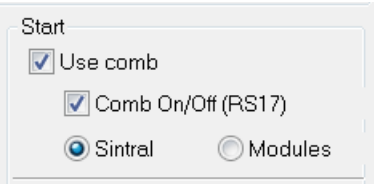
- With the production of fabrics with reduced weight, e.g. collar, trimmings, etc., which do not fall into the fabric container.
- Further processing like washing, ironing, etc. of contiguous fabrics may be easier.

3.1 Create Pattern

Create a new pattern:

1. Select "File" / "New" from the menu bar.
2. Enter a Pattern name.
3. Select the machine type and the desired setup type.
4. Select **Basic pattern (pattern without shape)** and "Design Pattern".

5. Define the pattern size and the basic knitting mode.
6. Select the settings for the start.



- Use Comb

- Comb On/Off (RS17)
- Sintral or module

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

▶ The "Symbol view [Basic]" will be opened.

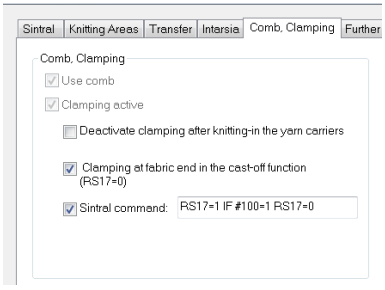
8. Draw a basic pattern as desired.

3.2 Settings for the use of the comb

Settings in Configuration

✓ A knitting program with settings for the start is created and stored in the basic pattern.

1. In the "Pattern Parameters" menu call up the "Configuration" dialog box.
2. Select the "Comb, Clamping" tab.
3. The following functions must be enabled in the "Comb, clamping" section.



- Clamping at Fabric End in the Cast-off Function (RS17=0)
- Sintral command

4. Confirm the settings with the "OK" button.

3.3 Complete the Pattern

Complete the pattern:

1. Expand the pattern with the  button of the "Steps of Processing" toolbar.
2. Start the technical processing with the  button.

▶ The query "Generate MC Program" appears.

3. Confirm the query with "OK".

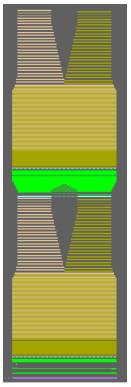
▶ The Sintral MC program contains the functions Combthread and FF-Trans and thus the possibility of activating / deactivating the comb during the production.

3.4 Function sequence Comb with RS17

Function sequence for changing use of the comb

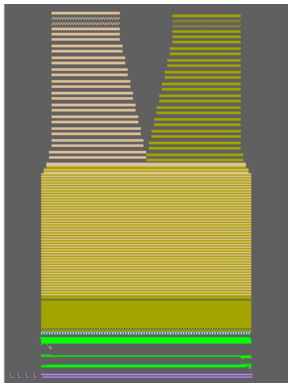
✓ If the Sintral MC program contains the functions Combthread and FF-Trans, the comb can be activated / deactivated during the production.

1. When beginning to knit the first piece, the setting is RS17=0, thus this piece starts using the comb.
2. If the other fabrics are to be processed without using the comb, the setting must be RS17=1, however, not earlier than after the machine has moved the yarn carrier with the comb thread to the clamping position in the first piece.
3. With RS17=1 the comb is deactivated and the other pieces will be produced connected by the draw thread as one. The yarn carriers remain at the fabric selvedge without clamping and cutting.
4. In case of different start width and end width the cast-off or knitting to the following start width will be carried out by the FF-Trans function.



5. When the piece number set is processed and the piece counter reached the value 1, the machine stops with MS in the last pattern row.

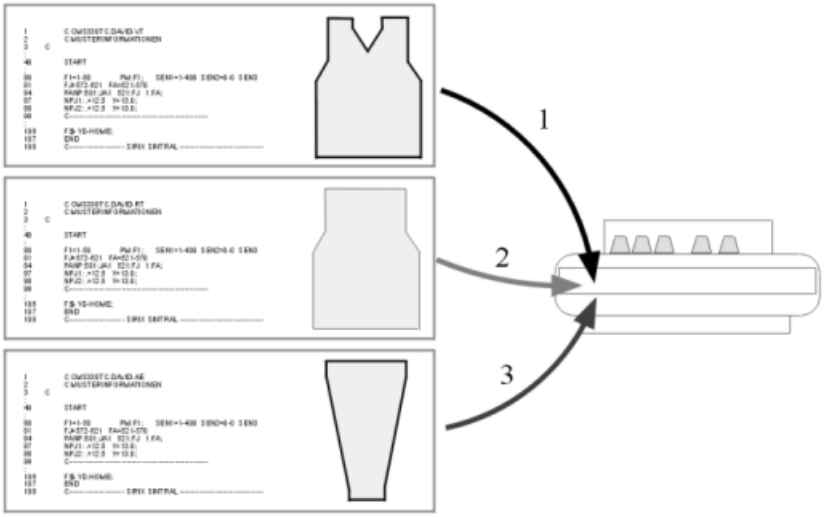
   ▷ The PRINT message appears in the display. "for cast-off set RS17=0".
6. Enter the value for RS17. Currently it is =1
7. If the setting remains RS17=1 it will be processed as before.
8. If it is set RS17=0, the yarn carrier is moved to the clamping and cutting position, the fabric is cast-off and the comb is activated.
9. The production can be continued using the comb.



4 Working with Sequences

Examples for the use of a sequence:

- **Fully fashion:**
  The knitting of parts in the sequence of front, back and sleeve.
- **Knitting sets of sizes**
  The same pattern in different sizes.



Requirements:

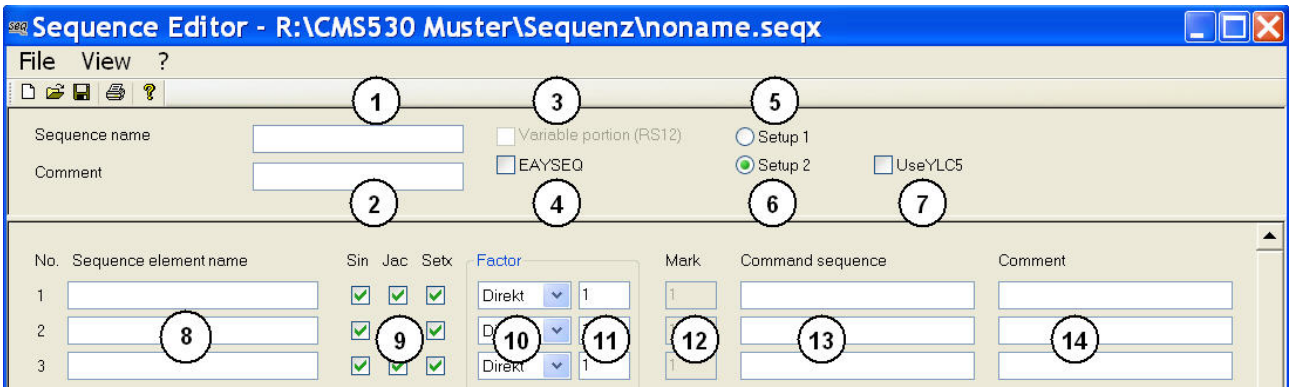
The following settings must be identical for all knitting programs used in the sequence:

- Same type of the machine
- Same SEN areas
- **With TC machines:**
  Same yarn carrier home position
- **With OKC machines:**
  Different yarn carrier home position possible with active "Seq EAY" button at the machine.
  i: Recommended for the programing with comb.

I. Generate a sequence:

1. Call up the "Sequence Editor" dialog box via the "Tools" / "Sequence Editor..." menu.

▶ The Sequence editor is displayed.



No.	Function	
1	Input field for the sequence name	
2	Input field for comments	
3	Knitting of different sizes	
4	☑	The EAY command will be called up between the sequences.
	☐	The S0Y command will be called up between the sequences.
5	Generate a sequence with Setup1 (.seq)	
6	Generate a sequence with Setup2 (.seqx)	
7	☑	Yarn length control with original piece (Masterpiece)
	☐	Deactivated yarn length control
8	Edit box for the sequence elements and the order in which the elements are knitted.	
9	☑	Element will be loaded
	☐	Element will not be loaded
10	Direct	Number of a sequence element from column 6
	RS Cycle Counters	Number of a sequence element via cycle counter
11	Number of repetitions of a sequence element	
12	Delete program from line XX on when loading the next sequence element	
13	Specification of cycle counters and counters.	

No.	Function
14	Input field for comments

2. Name the sequence under **Sequence Name** in the dialog box.
3. List the order of the sequence elements under the consecutive numbers in the **Sequence Element Name** column.

▶ This list determines the order of production.

With Sequence name	Element name	None Sequence name	Element name
David	-VT	**No name**	David-VT
	-RT		David-RT
	-Sleeve		David-sleeve

i A sequence can be generated with or without sequence name.

4. Make further settings in the "Sequence Editor".
5. Save sequence:

■ Name the sequence.

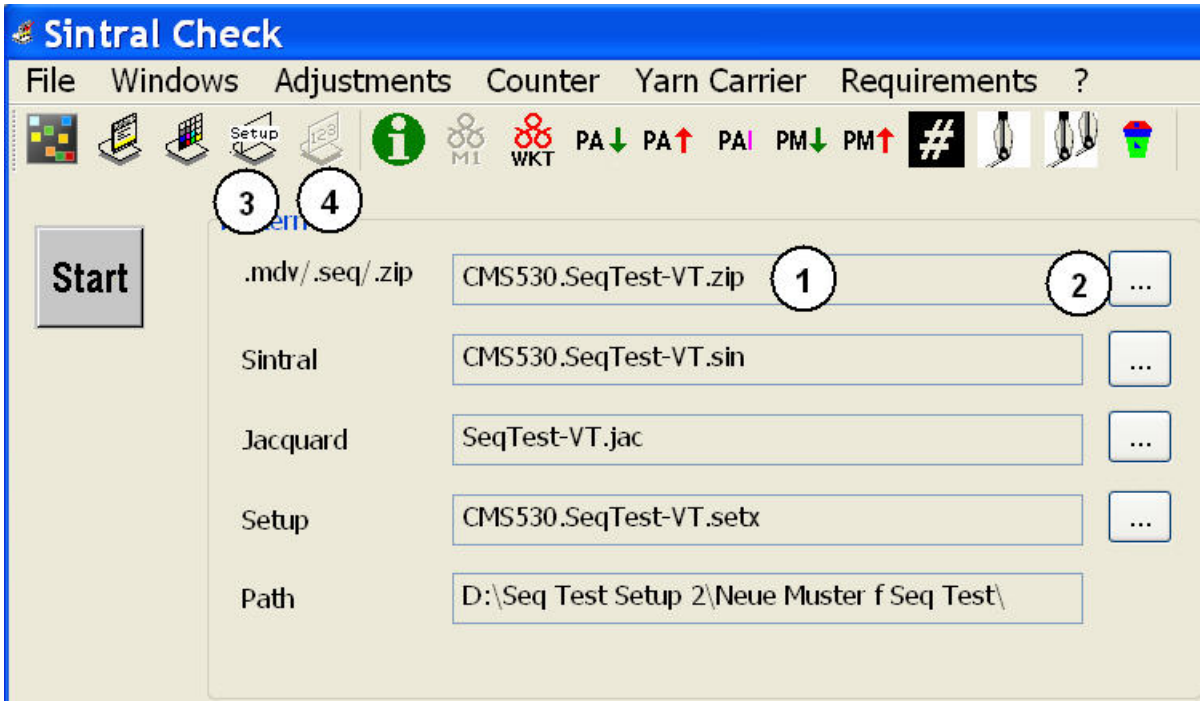
■ Select the directory of the sequence elements.

II. Check a sequence:

i You can check a sequence in the Sintral Check.

✓ A sequence file (xxx .seqx) must exist.

1. Call up the Sintral Check program via the "Tools" / "Sintral Check…" menu.
2. Load the sequence (xxx .seqx) using the  (2) button.



No.	Function
1	Display of the loaded sequence
2	Define path for "Pattern/Load sequence".
3	Display the "Setup Editor".
4	Display the "Sequence Editor".

3. Press the "Start" button.

▶ The "Sintral Check" tests the sequence.

5 Split up the Knitting Program

> **i** Not necessary with OKC machines.

A pattern must be split:

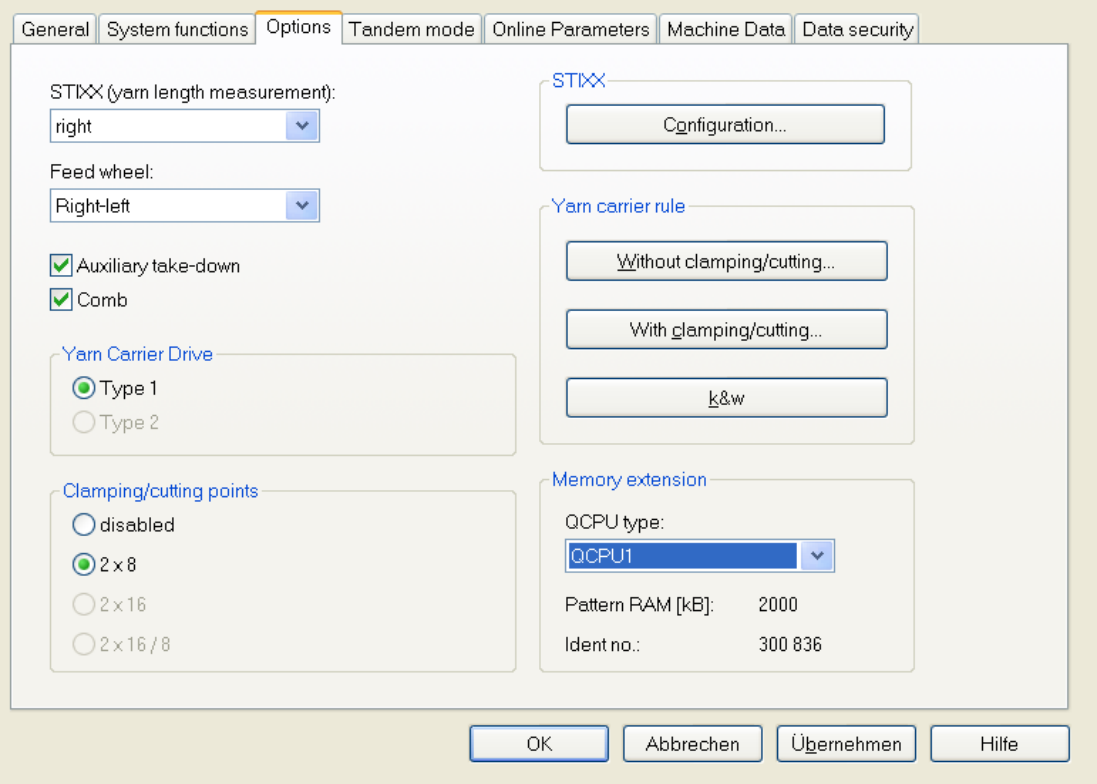
- if the pattern size is in the limit area or too large for the machine memory .
- if the jacquard and Sintral lines exceed the permissible number of lines of the machine memory.
- if the setting "Split pattern in any case" is activated in the "Split pattern" (splitsintral.exe) dialog box.

I. Set the pattern memory in the Machine Explorer:

> **i** For machines with the computer type ST168, ST268 and ST468, the storage existing in the machine can be set on the M1plus.

1. Open the "Machine Explorer" dialog box in the "Tools" / "Machine Explorer" menu.
2. Choose the desired machine in "STOLL machines" / "CMS generation" and select "Create My Machine" in the context menu.
3. Select the newly generated machine under "My Machines".
4. Run the "Properties" function in the context menu.
5. Set the QCPU type in the "Properties of CMS…" dialog box under "Options" / "Memory extension".

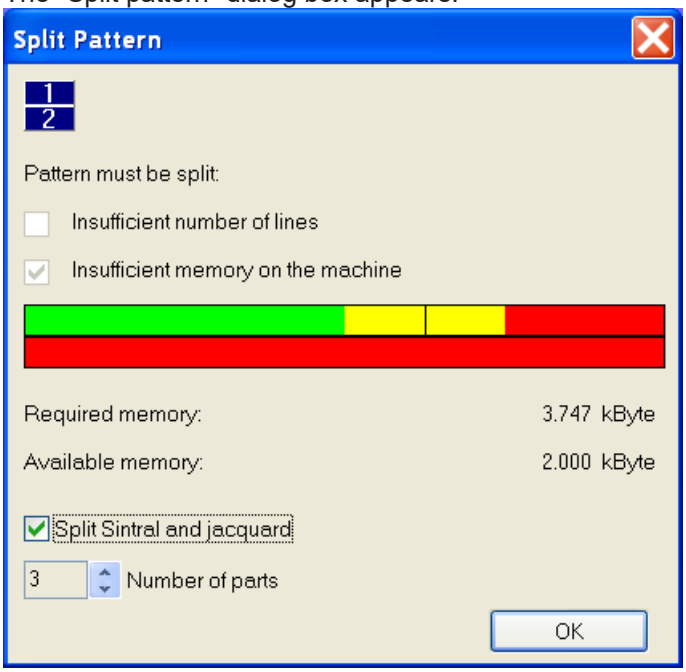
- QCPU1: Memory capacity 2,000 kB
- QCPU2: Memory capacity 9,000 kB



II. Set automatically the markings for the splitting of the pattern:

1. Generate the **MC program** after the step of processing .

▶ The "Split pattern" dialog box appears.



2. Activate the setting "Split Sintral and jacquard" in the "Split pattern" dialog box.
3. Select a number under "Number of parts".

4. Start the process with "OK".

▶ Markings are set in Sintral and jacquard (= number of parts), where the pattern is to be split.

i	Divided programs have the entry <<M1>> in the first program line.

II a. Split a pattern for the CMS Operating System ST168.0_30_03.001.001 or higher:

i	If the pattern is loaded into a machine with the computer type x68 and operating system ST168.0_30_03.001.001 **or higher**, the pattern can be loaded into the main memory of the machine. The pattern will be split in the memory of the machine.

1. Load pattern into the machine.
   - or -
   Extract pattern via the "MC program" / "Extract MC Program..." and load it into the machine.

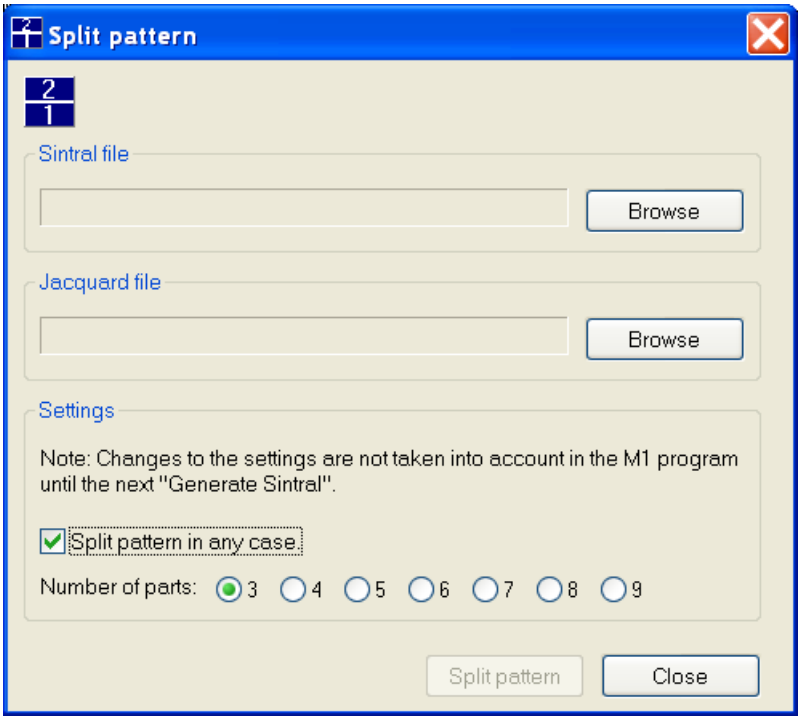
▶ If there are markings when loading the pattern, a sequence is automatically generated and loaded into the sequence mask.

2. Start the sequence editor.

II b. Split a pattern for a CMS Operating System before ST168.0_30_03.001.001:

i	If the pattern is to be read in a machine with an operating system **before** ST168.0_30_03.001.001, you have to split the pattern and put it together to a sequence.

1. Call up the program "splitsintral.exe" under the path C:/Program Files/Stoll/M1plus/ Versionsnummer…/Bin.

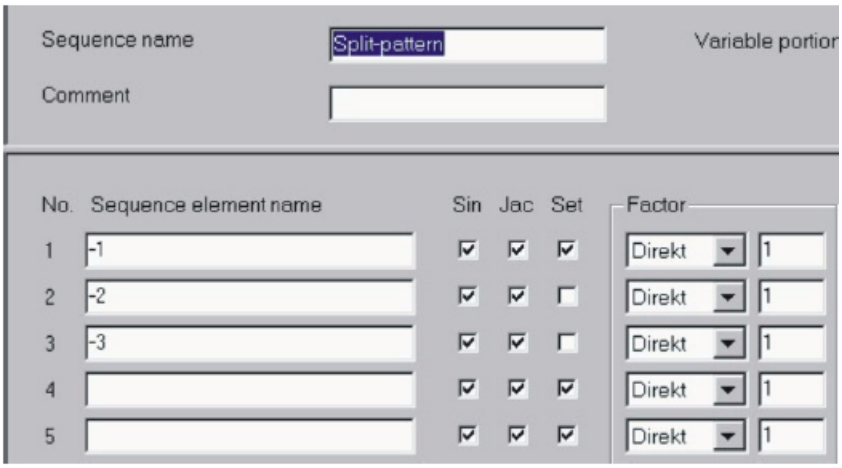


2. Set the path to the extracted Sintral and jacquard file with the "Browse" buttons.
3. Select a number under "Number of parts".
4. Start the process with the "Split pattern" button.

▶ Now the directory in which the pattern to be split is stored contains the following files:
Pattern name-1.sin / -2.sin / -3.sin, etc.
Pattern name-1.jac / -2.jac / -3.jac, etc.
Pattern name-1.set
Pattern name-.seq

---

i The split pattern is to be knitted as a sequence.



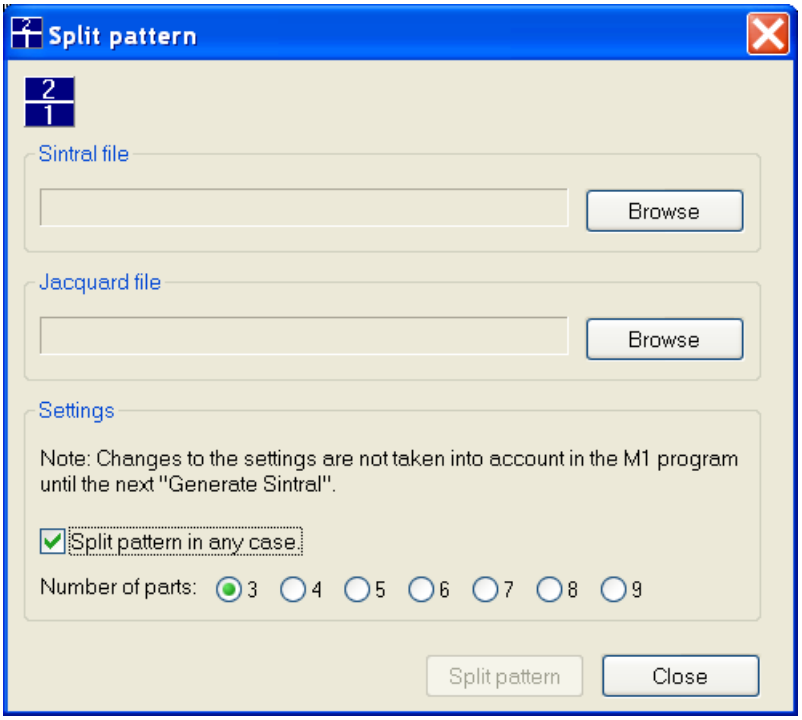
5. Load the sequence into the machine.

6. Start the sequence.

III. Start the Split pattern program manually.

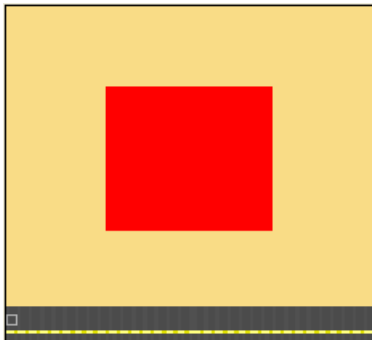
i	For patterns, which, due to their size, do not require to split pattern it is possible to start the program manually.

1. Call up the program "splitsintral.exe" under the path C:/Program Files/Stoll/M1plus/ Versionsnummer…/Bin.



2. Activate the "Split pattern in any case" checkbox
3. Close the "Split pattern" program.
4. Carry out the processing step  .
5. Continue as described under **point IIb**.

6 Color Arrangement: Shirt pocket with step module for binding-off



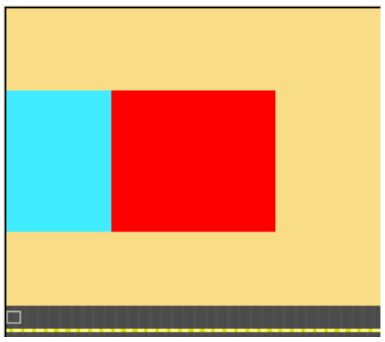
Pattern name	16_Muster_Pattern.mdv	
Pattern size	Width:	100
	Height:	80
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	8	
Start	2x1	
Basic pattern	Front stitch with transfer	
Knitting technique	Shirt pocket	
Description of pattern	Color Arrangement for ◆ Shirt pocket knitted with two yarn carriers	

6.1 Pattern and Color Arrangement for shirt pocket with two yarn carriers

I. Create and draw a new pattern:

1. Create a new pattern with "Design Pattern" setting.
2. Draw a basic pattern with three different **yarn colors**.

▶ The yarn colors are not yet allocated to any yarn carrier rail.



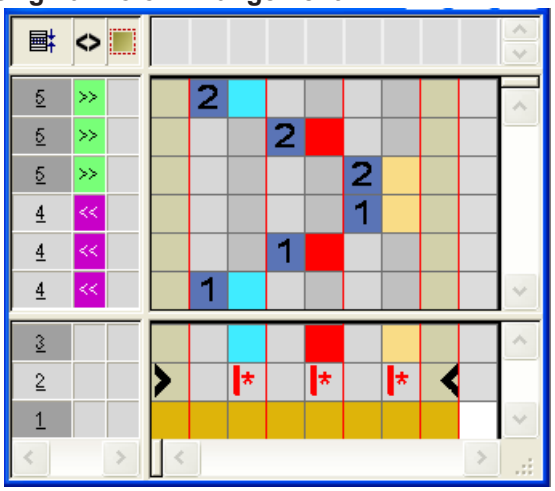
i	Create all pattern areas even-numbered in height.

	The pattern can also be drawn with yarn carrier colors. The yarn carriers will be positioned on the bars due to the selected yarn carrier colors then.

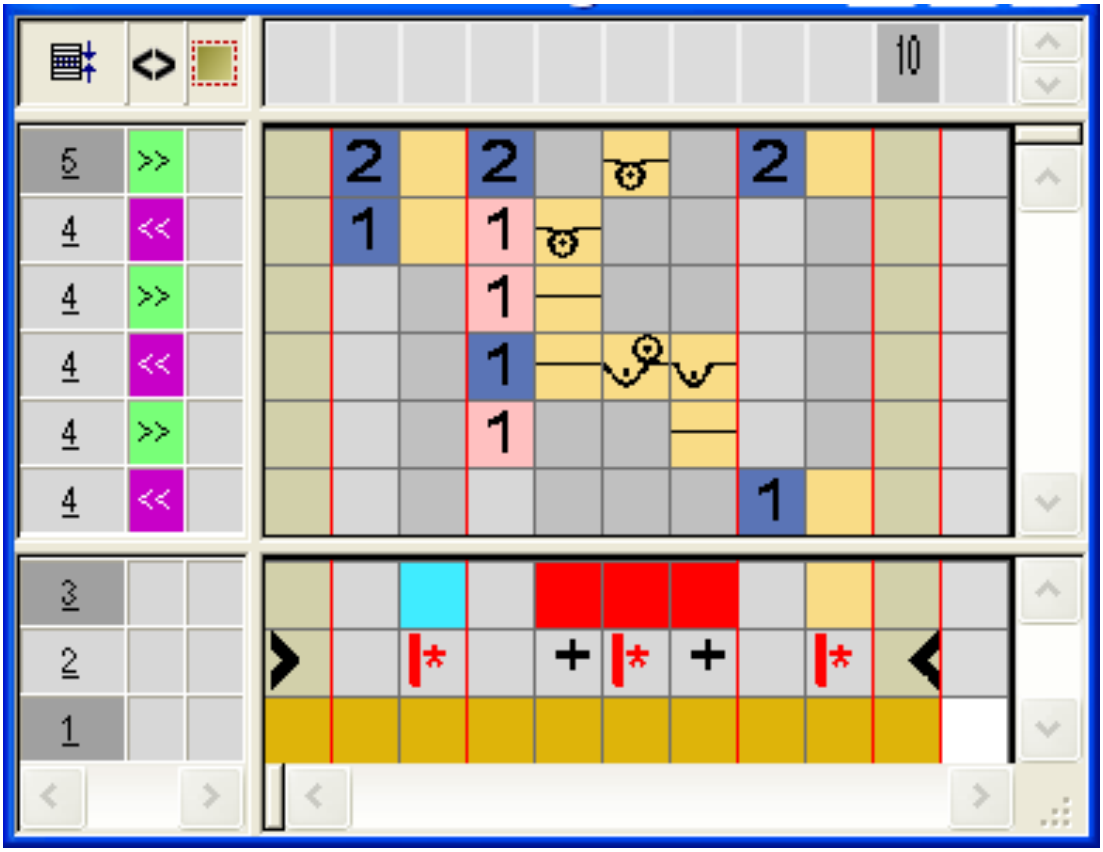
II. Generate Color Arrangement for pocket start:

1. Select the first two pattern rows in the pocket area via the row selection bar.
2. Click the  icon in the "Default" toolbar.

Original Color Arrangement:



3. Modify CA: **Start of Pocket**



- In the processing area of the red search color:
  - Insert rows:
    Draw-in knitting sequence for pocket start and additional rows with reference row number.
  - Insert columns:

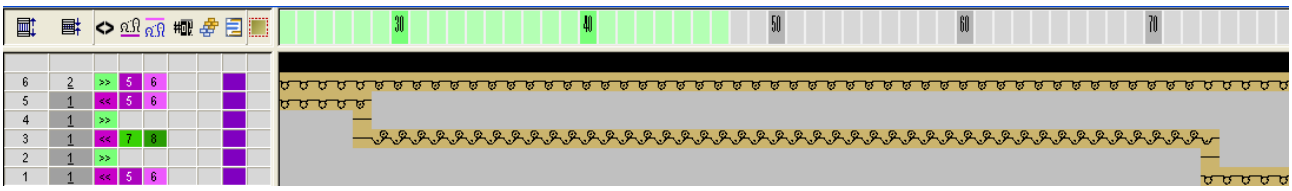
    Draw-in moving of the yarn carrier and mark the columns with .
- Enter carriage direction and stitch tensions.

4. Close the "Color Arrangement Editor" with .

▶ CA will be saved under local Color Arrangements.

5. Enter CA in the control column of the first two pattern rows of the pocket area.

▶ **Expanded pattern for pocket start:**

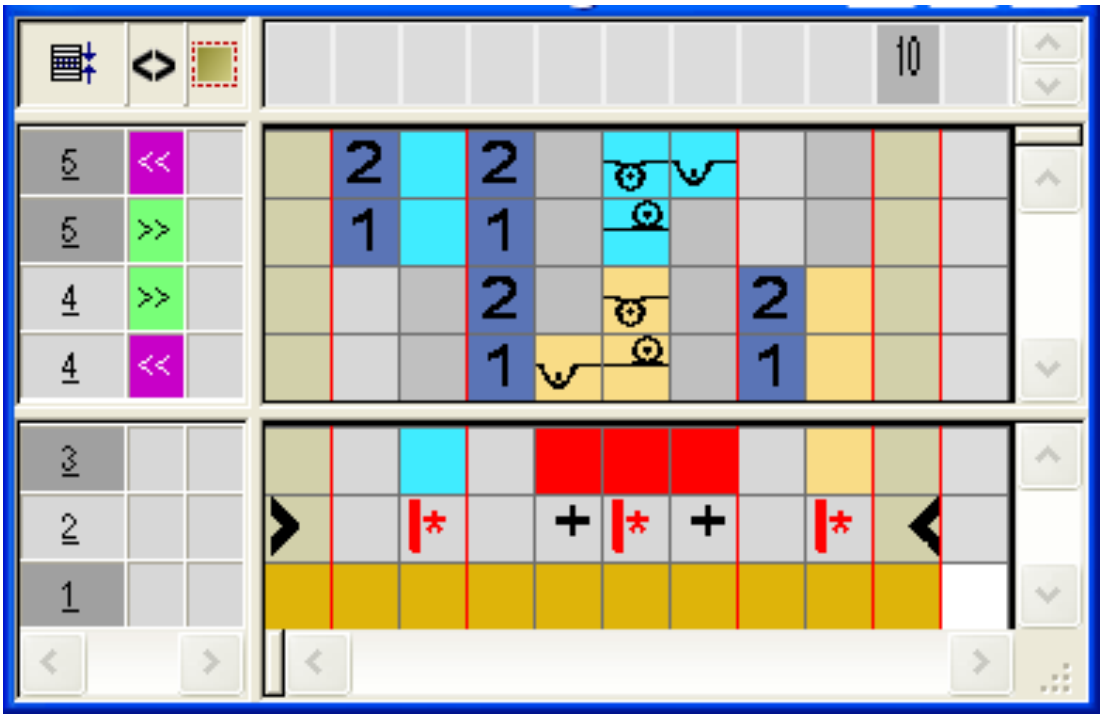


III. Generate Color Arrangement for pocket:

1. Select the pattern rows in the pocket area via the row selection bar.
2. Click the icon in the "Default" toolbar.

▶ The original Color Arrangement (see above) is displayed.

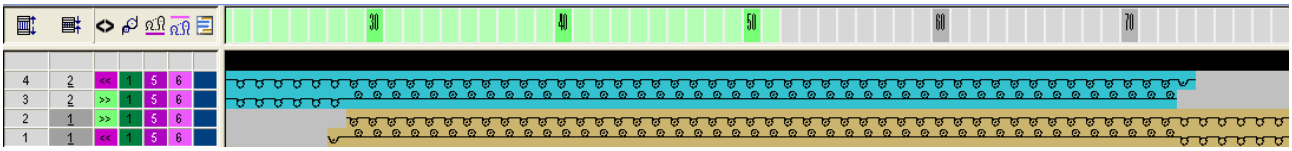
3. Modify CA: **Pocket**



- In the processing area of the red search color
  - Insert rows: Draw-in knitting sequence for pocket and reference row number.
  - Insert columns: Draw-in the binding at the pocket border and mark the columns with  .
- Enter carriage direction and stitch tensions.

4. Close the "Color Arrangement Editor" with  .
5. Enter CA in the control column of the pattern rows of the pocket area.

▶ **Expanded pattern for the pocket:**

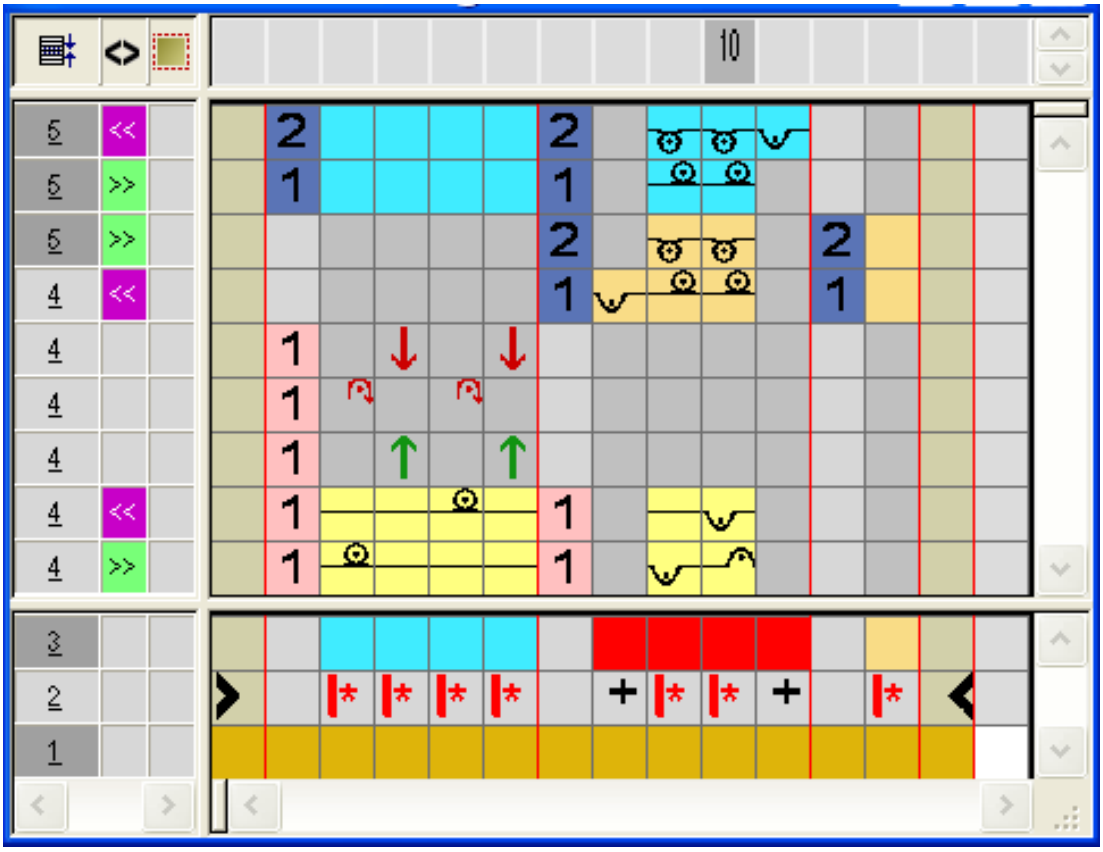


IV.IV. Generate Color Arrangement for pocket end with draw thread:

1. Select the last two pattern rows in the pocket area via the row selection bar.
2. Click the  icon in the "Default" toolbar.

▶ The original Color Arrangement (see above) is displayed.

3. Modify CA: **Pocket end**

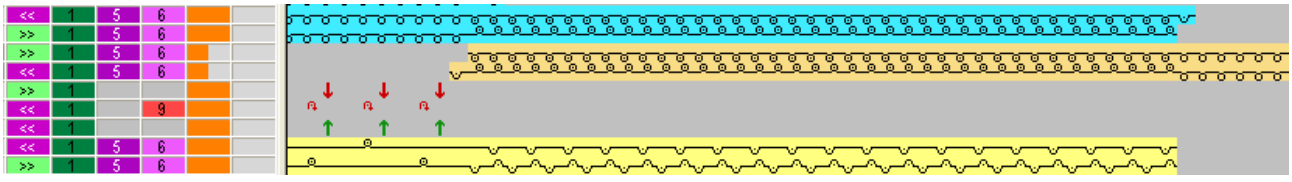


- Insert rows / columns and draw-in the knitting-in and out with casting-off the draw thread with the technique color #207 and mark them as additional rows.
- In the processing area of the red search color:
  - Insert rows.
    Draw-in knitting sequence for pocket and reference row number.
  - Insert columns.

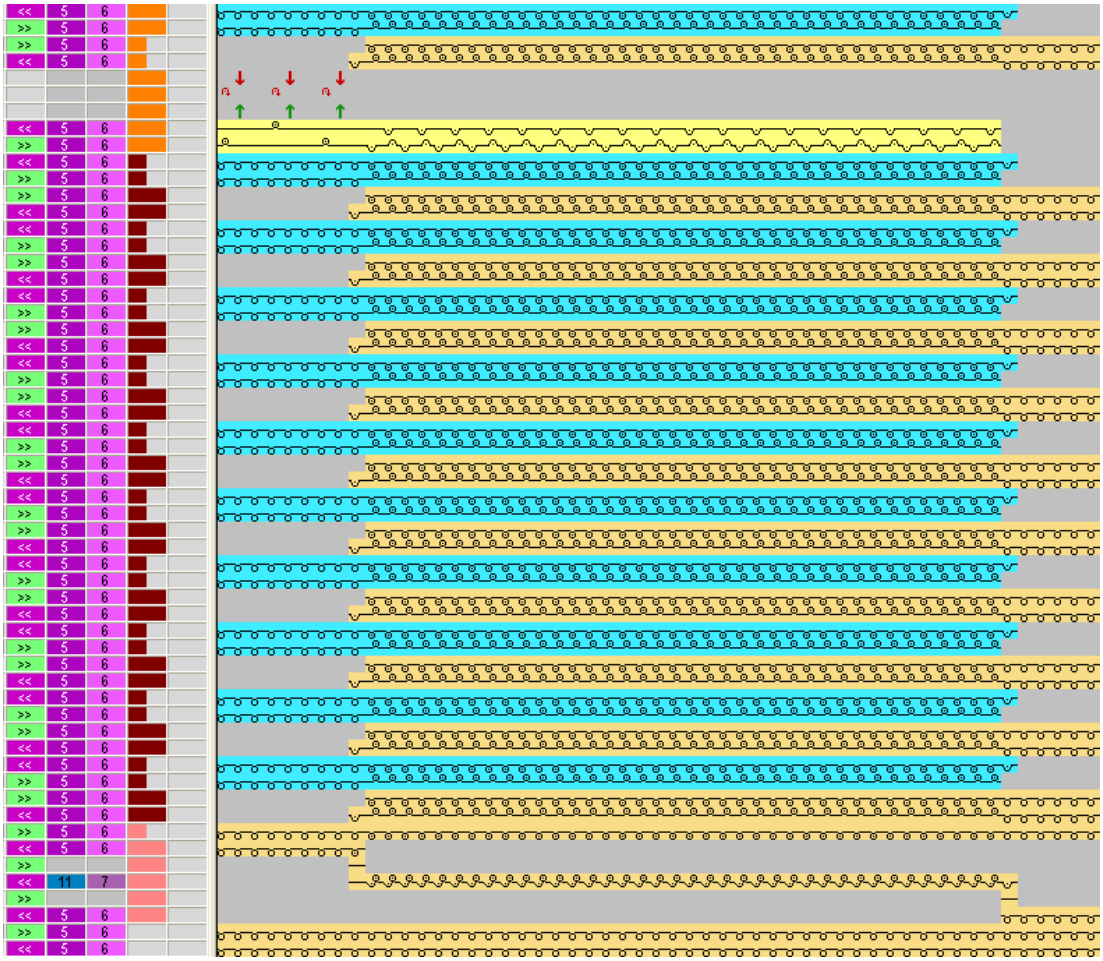
    Draw-in the binding at the pocket border and mark the columns with .
- Enter carriage direction and stitch tensions.

4. Close the "Color Arrangement Editor" with .
5. Enter CA in the control column of the last two pattern rows of the pocket area.

▶ **Expanded pattern for pocket start:**



V. Expanded pattern of the shirt pocket:



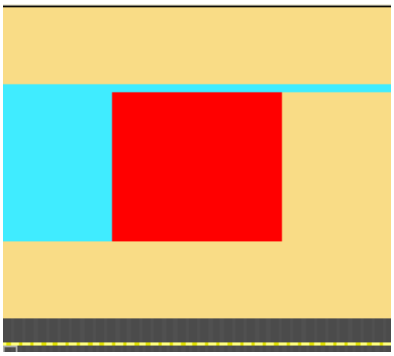
6.2 Step module: Binding-off for shirt pocket

I. Modify pattern:

i	The binding-off of the pocket is to be carried out from the left to the right.

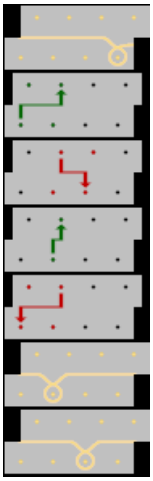
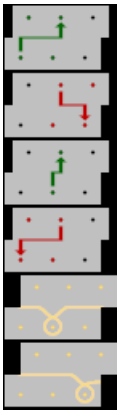
1. The yarn color on the left of the pocket is to be entered in the following two pattern rows in the connection of the pocket area.

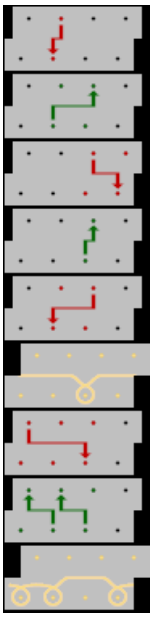
▶ The yarn carrier allocated to this yarn color will be used for binding-off and then it will be brought into home position.



II. Generate step module elements for binding-off the pocket:

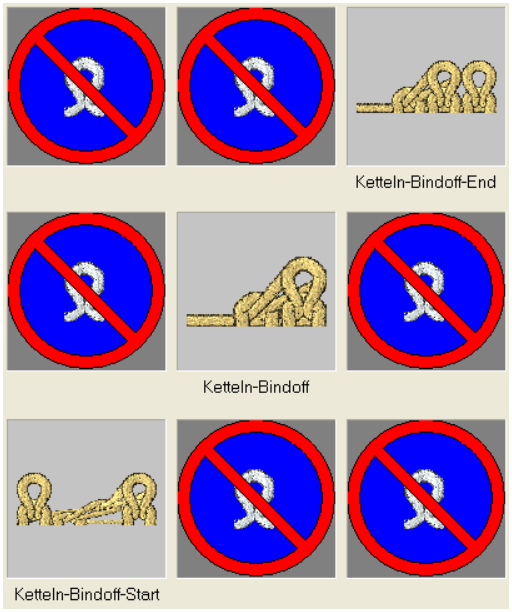
1. Create the new modules via the "Module" / "New" / "Module..." menu.

Elements of the stepping module:		
Knitting sequence	Label	Function
	**Pocket Binding-off End**	The module is inserted once at the end of binding-off. Binding-off direction to the right.
	**Pocket Binding-off**	The module is inserted repeatedly, according to the number of stitches that are to be bound off.

Elements of the stepping module:		
	**Pocket Binding-off Start**	The module is inserted once at the start of binding-off. Binding-off direction to the right.

2. Call up the "New step module" dialog box via the "Module" / "New" / "Step Module ..." menu.
3. Pull the elements (modules) into the "Step Module" with drag & drop.
4. Confirm with the "OK" key.
5. Enter the module name in the "Properties" dialog box.
6. Confirm with the "OK" key.

▶ The step module will be saved as local pattern module in the module bar.



	Overlapping insertion of the binding-off modules can be achieved by changing the offset values.

III. Draw in the step module for binding-off:

1. Draw in the step module horizontally in the desired width at the end of the pocket.

▶ Rows are inserted automatically and the knitting cycle of binding-off is entered.

6.3 Complete the pattern

Complete the pattern:

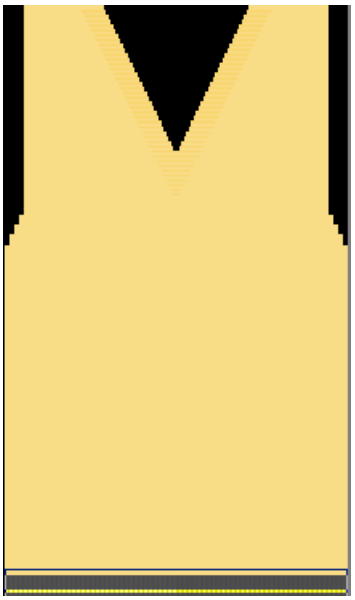
1. Open the "Yarn field allocation"  dialog box.
2. In the **Intarsia binding at the left**  and **Intarsia binding at the right**  columns for the yarn fields in the pocket area deactivate the tuck binding.
3. Expand the pattern with  of the "Steps of Processing" toolbar.
4. Start the technical processing with  .

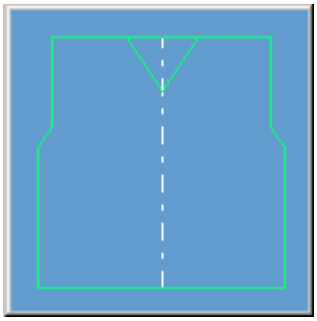
▶ The query "Generate MC Program" appears.

5. Confirm the query with "OK".
6. Call-up "Sintral Check" via the "MC Program / Conduct Sintral Check..." menu.
   - or -
   Click  in the "Steps of Processing" toolbar.

Complete the pattern

7 Fully Fashion-Pattern: V-neck with Tubular Trimming

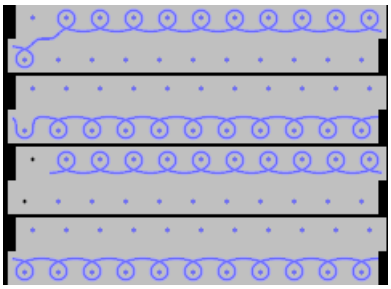
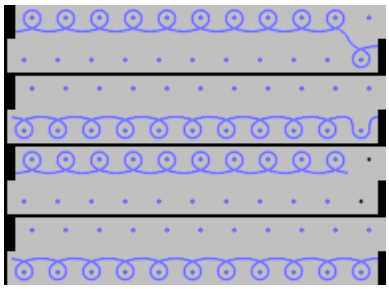


Pattern name	Schlauchblende-VMind1	
Pattern size	Width:	automatically
	Height:	automatically
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	1x1	
Basic pattern	Front stitch with transfer	
Shape	 2_set-in-front-v-neck-38.shv	
Knitting technique	Single jersey structure pattern with V neck and tubular trimming.	
Description of pattern	◆ Generate start module-V and fade-out module for V neck. ◆ Modify existing shape in shape editor.	

7.1 Generate a Module for Fade-out

I. Generate fade-out module:

1. Generate fade-out module for left and right edge of the V-neck.

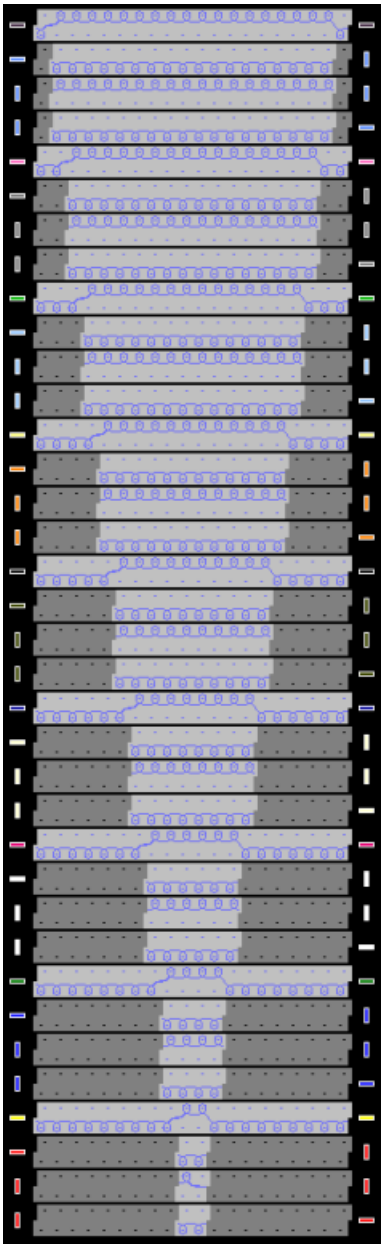
Fade-out module for tube edge V neck	
Left edge	**Right edge**
	

2. Allocate "Double Jersey structure" to the fade-out modules under Module Property in the "Technical" tab under "Knitting mode".

II. Generate start module for V neck.

1. Generate a start module with docking points for the V-neck:

V start module with docking points



2. Draw in the  "Transparent position in the module" needle action into non knitting areas.
3. Group the pattern rows and set the docking points.
4. Save module.

7.2 Generate the Shape and Allocate the Shape attributes

I. Generate shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.

▶ The dialog box will be opened.

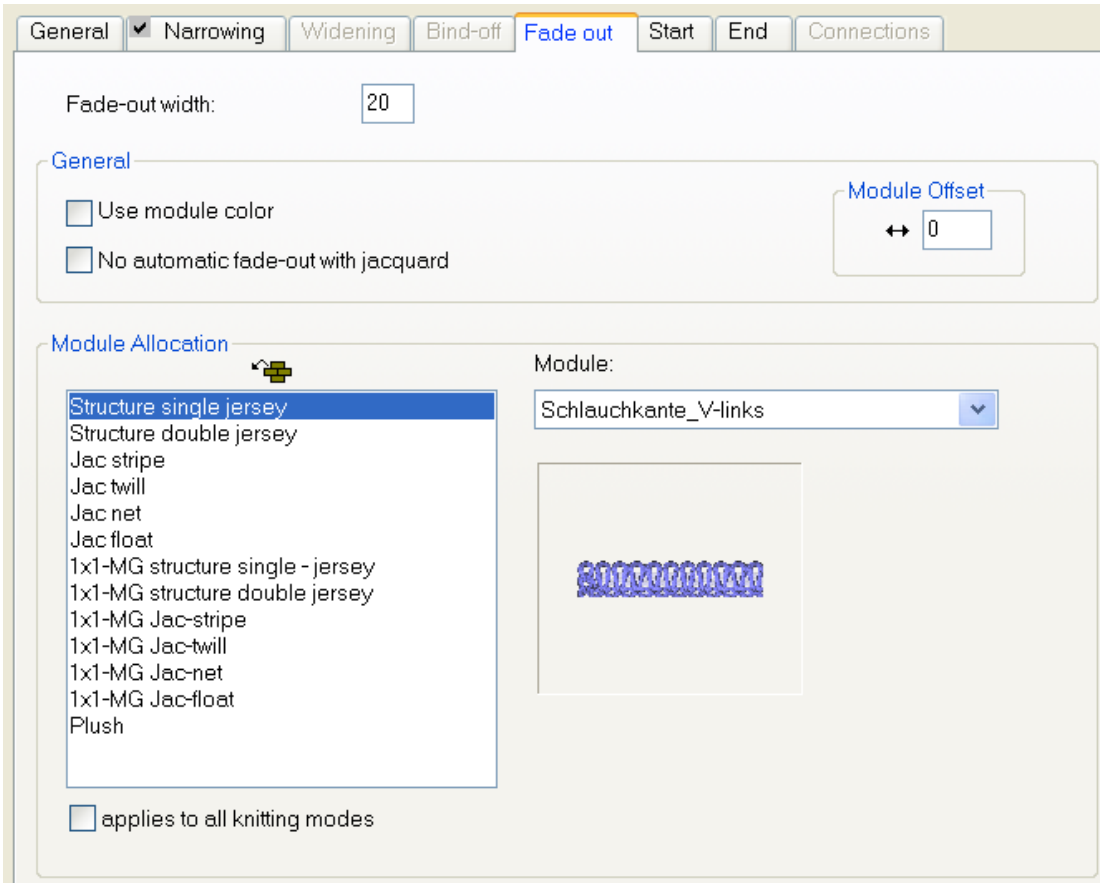
2. Open an existing shape via the "File" / "Open .shv shape [mm] …" menu.
   - or -
   Load the shape with .
   Example: D:\ Stoll \ M1plus \ Versionsnummer \ Form \ 2_set-in-front-v-neck-38.shv**.**
3. Convert the shv shape into the shp format via the "File" / "Convert and Save As…" menu.
4. Modify shape.

i	Due to the fade-out module, the narrowing stepping of the **neck opening element** must be 1 at the maximum.

II. Allocate fade-out modules to the element for the neck opening:

1. Select the **Neck opening** element.
2. Deactivate the ☐ Mirrored checkbox.
3. Open the "Fade-out" tab via the **Narrowing** function the **Left line** table.
4. Allocate the generated fade-out module "Tubular Edge_V-left" to the knitting mode of the basic pattern (single jersey structure) by drag & drop.

   ▷ Allocating the module determines the fade-out width automatically.

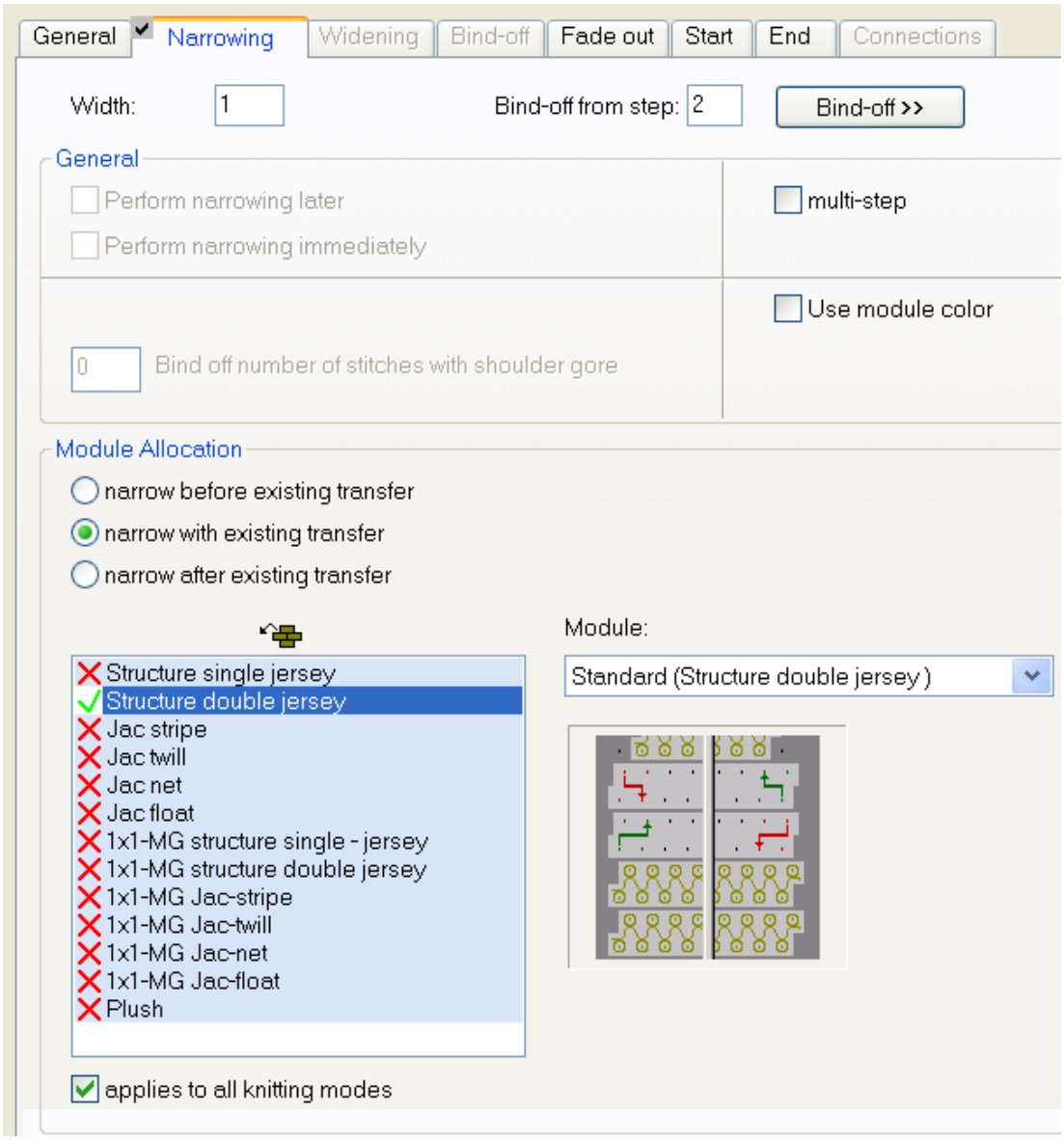


5. Proceed the same way to allocate the "Tubular edge_V right" fade-out module to the right edge of the V-neck.

III. Allocate narrowing attributes to the element for the neck opening:

The element **Neck opening** is narrowed by the fade-out module "Tubular Edge_V-left" (double jersey). Due to it the narrowing will be done as with double jersey.

1. Select the **Neck opening** element.
2. Open the "Fade-out" tab via the **Narrowing** function the **Left line** table.
3. Select the "Double Jersey Structure" knitting mode.
4. Select "Standard (Double Jersey Structure)" type of narrowing under "Module".
5. Enter the value 1 under "Width".



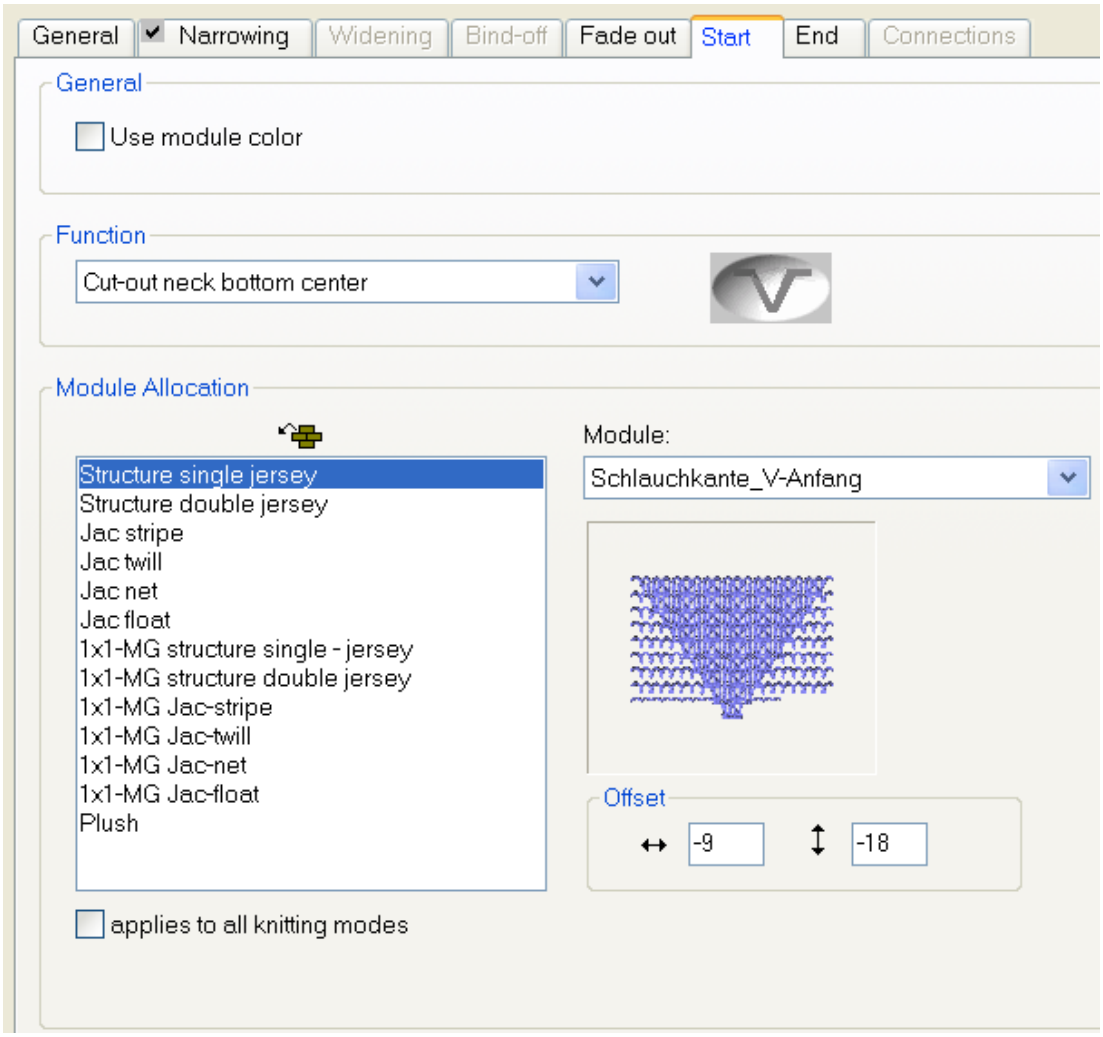
IV. Allocate a start module to the element for the neck opening:

1. Select the **Neck opening** element.
2. Click the button.

▶ The "Neck opening properties" dialog box appears.

i	"Cut-out neck bottom center" must be selected in the "Start" tab under **Function**.

3. Allocate the generated start module "Tubular edge_V start" to the knitting mode of the basic pattern (single jersey structure) by drag & drop.
4. Specify the horizontal and vertical position of the V start module under "Offset".



5. Save the shape via the "File" / "Save" or "Save As…" menu.

▶ The shape will be saved in the shp format.

6. Close the "Shape Editor" with .

7.3 Generate pattern with shape

I. Generate the pattern together with the shape:

1. Select "File" / "New" from the menu bar.
   - or -
   Click on the symbol.
2. Enter a Pattern name.
3. Select the machine type and the desired setup type.
4. Select **Basic pattern (pattern with shape)** and **Design Pattern**.
5. Select shape.

▶ The pattern size will be automatically entered based on the selected shape.

6. Select a start.

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

▶ The "Symbol view [Basic]" with positioned Fully Fashion shape will be opened.

7.4 Complete the pattern

Complete the pattern:

1. Cut-out the shape with the  button in the "Steps of Processing" toolbar.
2. Expand the pattern with  icon of the "Steps of Processing" toolbar.
3. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

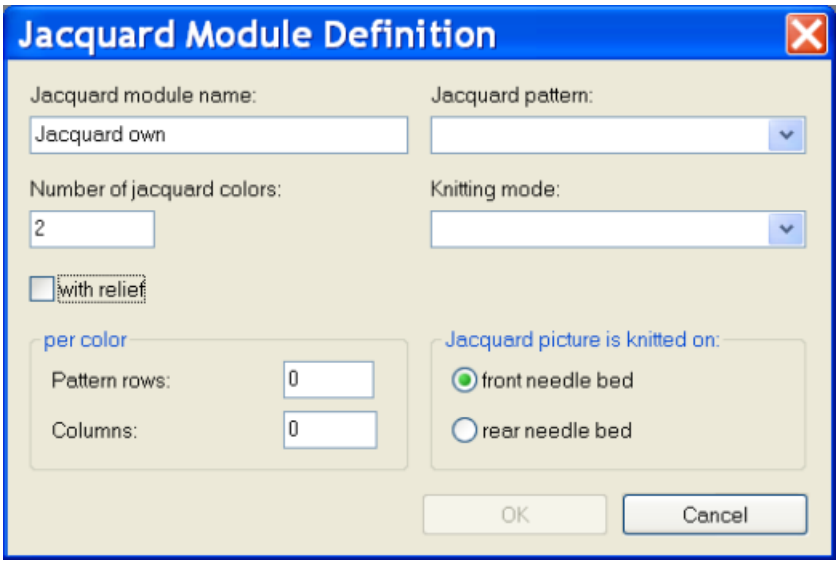
4. Confirm the query with "OK".
5. Call-up "Sintral Check" via the "MC Program / Conduct Sintral Check..." menu.
   - or -
   Click  in the Steps of Processing toolbar.

8 Jacquard Module of your own

I. Generate a new Jacquard module:

1. Call up the "Jacquard Module Definition" editor via the "Module" / "New" / "Jacquard Module..." menu.
2. Define the specifications:

- Number of jacquard colors
- Pattern rows per color
- Columns per color
- Picture side of jacquard

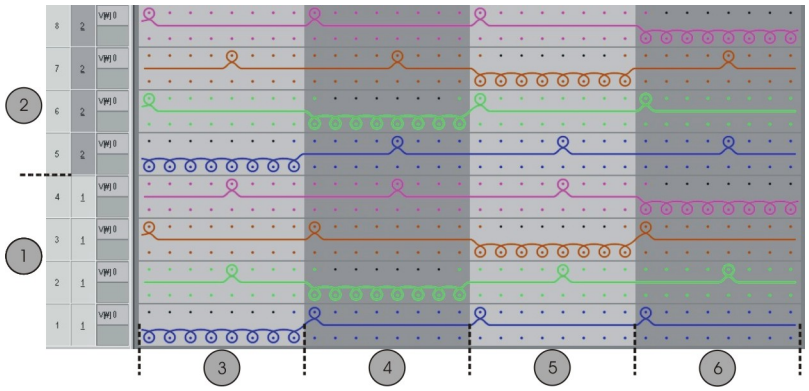


Element		Meaning
Jacquard module name		Enter a own name for the Jacquard module.
Jacquard template		Select an existing Jacquard which can be used as template.
Number of jacquard colors		Number of colors within the pattern row. For every color a block is inserted.
Knitting Mode		Select a knitting mode 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.
per color		Edit Box
	Pattern rows	Number of pattern rows per color
	Columns	Number of columns per color in the block.

Element		Meaning
Jacquard picture is knitted on		Optional Features
	◉ **front needle bed**	The jacquard picture is knit on the front needle bed.
	◉ **rear needle bed**	The jacquard picture is knit on the rear needle bed.

3. Draw the knitting sequence with **Needle actions**.
   - or -
   Select a Jacquard template, set the number of Jacquard colors and confirm with "OK".
   ▷ A template appears which you can change as desired.

> **i** 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. Close the "Module Editor" with .
5. Set up "Binding" under "Knitting mode" in the "Technique" tab of the "Properties of:" dialog box.
   ▷ The module is saved in the "Module Explorer of Database" under "New Modules".

> **i** The module can be used with Fully Fashion pattern.

6. Specify the Start and End modules in the "JAC net type" tab of the "Properties of:" dialog box.

▷ They will be used with inserting the new module.

Column	Meaning
Knitting mode:	Specify the knitting mode(s) before (during) the jacquard start.
Start modules	This module is used for the net start. Transition from pattern to the jacquard area.
End modules	This module is used for the net end. Transition from jacquard area to the pattern.

- The knitting mode of the jacquard area controls the setting of the "End module".
- The knitting mode before (below) the jacquard area controls the setting of the "Start module".

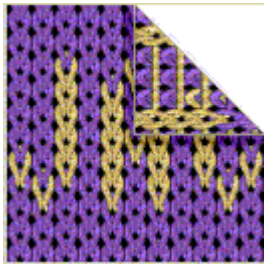
7. Save the module in the "Module Explorer of Database" under "Jacquard" / "Own" / "noname X-color".

▶ You can select the Jacquard module of your own in the "Jacquards" dialog box.

II. Allocate recognition picture:

- recognition picture of the Jacquard is displayed in "Properties of:".
- You can replace the recognition picture in order to recognize the modules of your own easily.
- Only pictures in the Bitmap format (bmp) and of the size 128x128 pixel can be used.

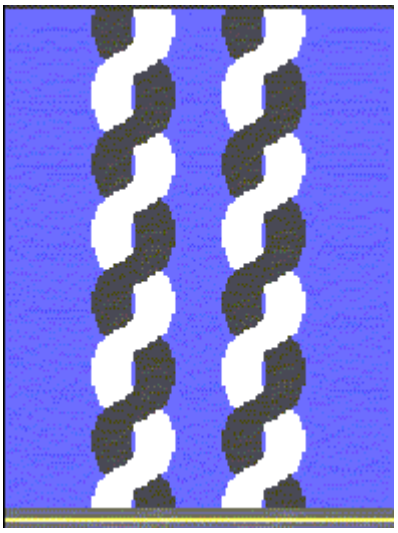
1. Specify the path to a recognition picture via "Properties of" / "Jacquard picture".



III. Apply own jacquard module:

1. Select the Jacquard area in the motif via the row selection bar.
2. Call up the "Jacquards" dialog box via the "Edit " / "Generate or Edit Jacquard..." menu.
3. Select the generated Jacquard module via "Jacquard properties" in the "Jacquard" / "Own" / "nonameX" module group.
4. Insert the jacquard generator by "Apply" into the motif.

9 3-color Jacquard with Transfer



Pattern name	3-farb Umhängen.mdv	
Pattern size	Width:	200
	Height:	400
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge:	E 8	
Start:	2x1	
Basic pattern	Front stitch with transfer	
Knitting technique	Jacquard with transfer	
Description of pattern	3-color Jacquard with Jacquard modules of your own	

9.1 Generate Jacquard Modules of Your Own

I. Generate Jacquard modules of your own:

1. Call up the "Jacquard Module Definition" dialog box via the "Module" / "New" / "Jacquard Module..." menu.
2. Define the specifications:

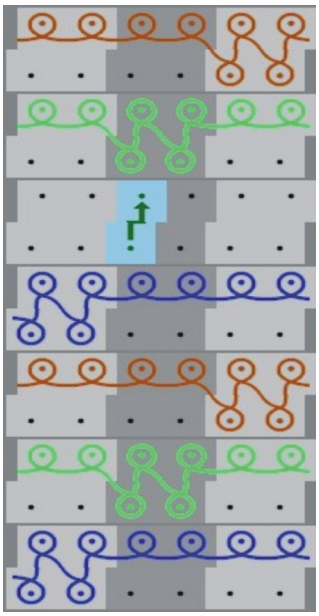
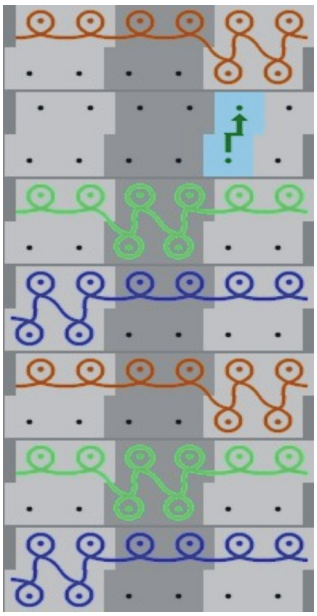
- Jacquard module name
- Number of Jacquard colors: **3 without relief**
- Pattern rows: **2**
- Columns: **2**
- Knitting mode: **Stripe Back**

3. Draw the knitting procedure with  pencil and needle actions in the Module Editor:

- Front stitch - Rear stitch 
- "Rear stitch" (without transfer) 
- For the relief stitches: "Front stitch - Back stitch with transfer toward back" 

 You need not select a pattern color for drawing.

4. Allocate the stitch length from the stitch length table to the stitch line.

Module 1	Module 2
	

5. Save the modules to the "Module Explorer of Database".
6. Save to "Jacquard" / "Private" / "noname X" / "X-colored".

9.2 Create Pattern

I. Generate the pattern:

1. Generate new pattern **without start**.
2. Draw the motif with a pattern element from the "Module Explorer of Database": "Stoll" / "Pattern Elements" / "PE-Jacquard" / "Jacq-PE-40".

II. Insert the Jacquard module:

1. Open the "Jacquards" dialog box via the "Edit" / "Generate or Edit Jacquard..." menu.
2. Select the motif starting in the center of the pattern to the left via the column bar.
3. In the "Jacquards" dialog box, under "Jacquard" / "Own" / "noname X" / "X colored" select the Jacquard module 1 and click "Apply".
4. Select the motif to the right via the column bar.
5. In the "Jacquards" dialog box, under "Jacquard" / "Own" / "noname X" / "X colored" select the Jacquard module 2 and click "Apply".
6. Adjust the color sequence of both the inserted Jacquard modules if necessary in the "Jacquards" dialog box under "Color Sequence and Stitch Length".
7. Confirm entries with the "OK" button.

▶ The "Jacquards" dialog box is closed.

8. Call up the "Replace Starts" dialog box via the Edit / Replace Starts... menu.
9. Select the desired start in the dialog box.
10. Confirm entries with the "OK" button.

▶ The "Replace Starts" dialog box closes.

9.3 Complete the pattern

Complete the pattern:

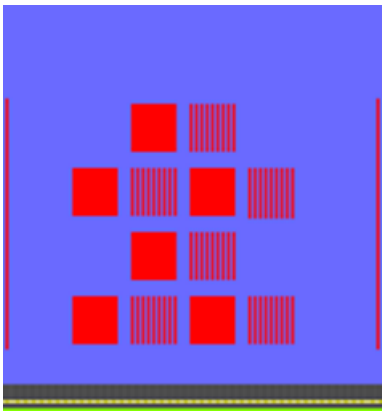
1. Expand the pattern with  of the "Steps of Processing" toolbar.
2. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

3. Confirm the query with "OK".

4. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
   - or -
   Click  in the "Steps of Processing" toolbar.

10 2-color Relief Jacquard with 1x1 Net Back



Pattern name	2-farb-Reliefjac.mdv	
Pattern size	Width:	140
	Height:	140
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	2x1	
Basic pattern	Front stitch with transfer	
Knitting technique	Jacquard with transfer	
Description of pattern	2-color Relief Jacquard with 1x1 net back	

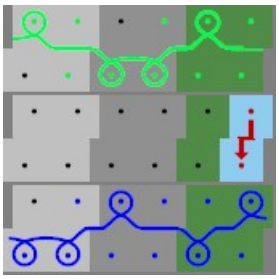
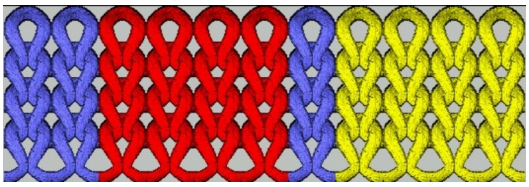
10.1 Generate Jacquard Module

I. Generate a Relief Jacquard module:

1. Call up the "Jacquard Module Definition" dialog box via the "Module" / "New" / "Jacquard Module..." menu.
2. Make settings:

- Jacquard module name
- Number of Jacquard colors: **2**
- Activate the ☑ "with relief" checkbox.
- Pattern rows: **1**
- Columns: **2**
- Knitting mode: **Jac net**
- Jacquard picture is knitted on: **front needle bed**

3. Draw the knitting procedure with  and needle actions in the Module Editor.

Module for jacquard with relief	Generating the motif
	

4. Allocate the stitch length from the stitch length table to the Jacquard module.
5. Change racking position if necessary (default: VN).
6. Close the Jacquard Module Editor" with ".
7. The "Properties of:..." dialog box appears.
8. Define the pattern related settings in the "Description", "Technique" and "JAC net type" tabs.

▶ The module will be saved in the " Module Explorer of Database" in "New Modules".

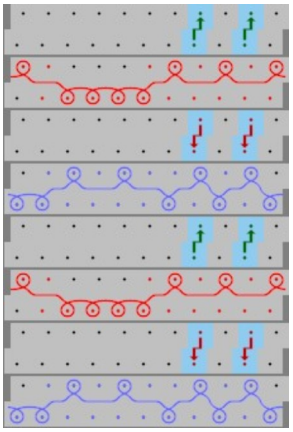
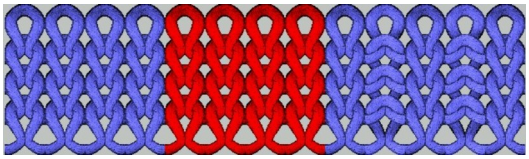
9. Save the module to "Jacquard" / "Private" / "noname1" / "X-colored".
   Pattern example:
   2 (Jacquard color) + 1 (Relief color) = 3 color.
   I.e. allocate the module under "Jacquard" / "Private" / "noname1" / "3-color".

i With jacquard modules with relief one color is always the relief color, i.e. one color of the motif is used for transfer. It will disappear from the motif after positioning the Jacquard module.
Rule: Total number of colors of the module = number of jacquard colors + relief color.

10.2 Create Pattern

Create pattern:

1. Generate a new pattern with "Front stitch with transfer" basic pattern.
2. Draw the 3-colored motif.
3. Select the jacquard area via a row selection.
4. Call up the "Jacquards" dialog box via the "Edit" / "Generate or Edit Jacquard..." menu.
5. Select the Jacquard module under "Jacquard" / "Own" / "noname1" / "X colored" and insert it with "Apply" in the selection.
6. Adjust the color sequence of the inserted Jacquard modules if necessary in the "Jacquards" dialog box under "Color Sequence and Stitch Length".
7. Confirm entries with the "OK" button.

Stitch line with 2-color relief jacquard	Fabric View
	

10.3 Complete the pattern

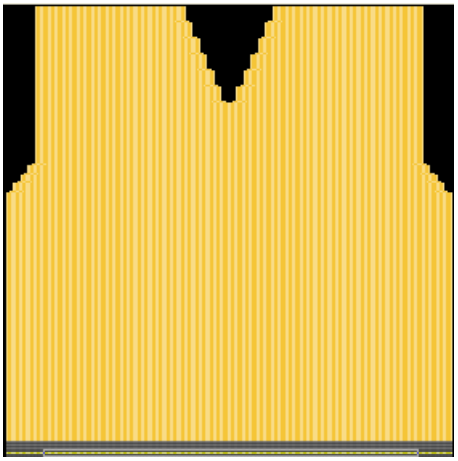
Complete the pattern:

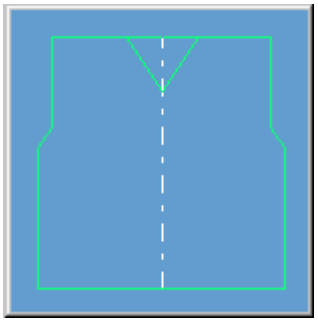
1. Expand the pattern with  of the "Steps of Processing" toolbar.
2. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

3. Confirm the query with "OK".
4. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
   - or -
   Click  in the "Steps of Processing" toolbar.

11 Fully Fashion-Pattern: 2X2 Rib -V- with Stoll module



Pattern name	2x2-Rib-Stollmodul.mdv	
Pattern size	Width:	300
	Height:	260
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	2x2	
Basic pattern	2x2 RL rib	
Shape	 2_set-in-front-v-neck-38.shv	
Knitting technique	Structure 2x2 Rib	
Description of pattern	2x2 Rib as basic pattern ◆ **Fading-out** with the module of the "Module Explorer of Database" (STOLL)	

11.1 Rules for a Shape in 2x2 Rib Knitting Mode

Shape Attributes	Rules
Knitting mode	2x2 Rib
Widening width	None With tailored shapes 1 needle
Widening height	None With tailored shapes as desired
Narrowing	4 stitches due to the 2x2 rib
Narrowing width	as desired
Narrowing height	as desired
Start of the V-neck	2 needles

11.2 Create the shape in the M1plus Shape Editor

I. Generate shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.
2. Open an existing shape via the "File" / "Open .shv shape [mm] …" menu.
   - or -
   Open an existing shape by .
   Example: D:\ Stoll \ M1plus \ x.xx.xxx \ Form \ 2_set-in-front-v-neck-38.shv**.**
   - or -
   Create a new shape by .
3. Convert the *.shv shape into the *.shp format via the "File" / "Convert and Save As…" menu.
4. Modify the basic element and the element for the neck opening:

Basic element Front:

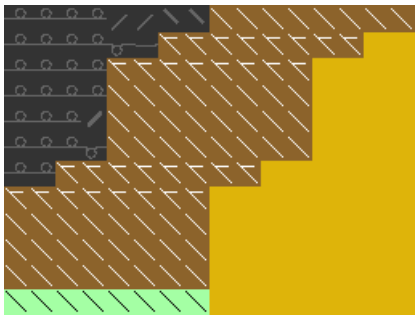
Basic element Front left

The total width of the shape should be divisable 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	

Basic element Front left

	Factor Grouped	Group	Height Steps	Width Steps	Factor
			20	16	
	4	1	4	2	1
		1	1	2	1

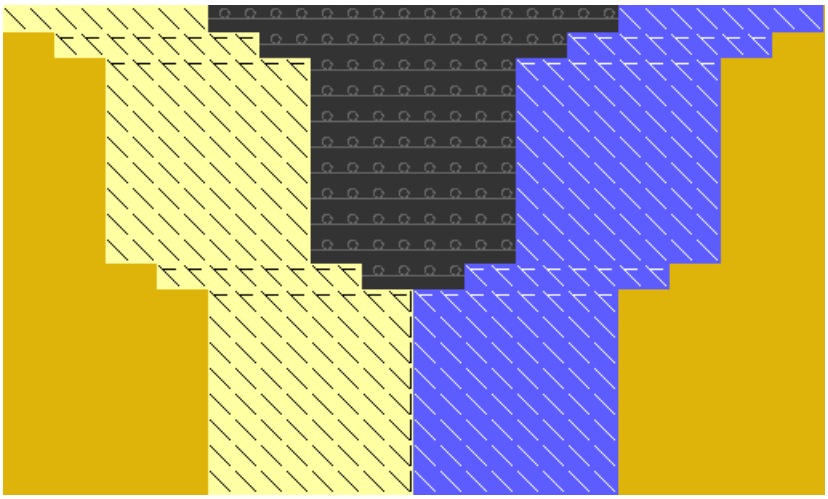


Element Neck opening:

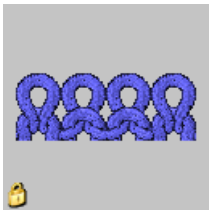
V-neck element

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function	Group	Comment
1	✓	180	-80	54	-24	0	0	0	0	0			Narrowing	0	
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	 Modules from the "Module Explorer of Database"

Attributes	
Fade-out width	as desired
Type of narrowing	◆ L-R combined transfer ◆ Separate transfer single jersey
Narrowing width	**= Fade-out width**

5. Save the shape via the "File" / "Save" or "Save As…" menu.

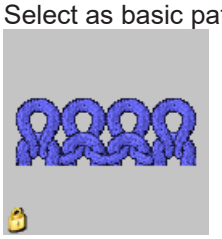
▶ The shape will be saved in the shp format.

6. Close the "M1plus Shape Editor" with .

11.3 Create a pattern without shape and open the shape

I. Generate pattern without shape:

1. Select "File" / "New" from the menu bar.
   - or -
   Click the icon.
2. Enter a Pattern name.
3. Select machine type.
4. Select the setup type 2.
5. Select **Basic pattern (pattern without shape)** and **Design Pattern**.
6. Specify the height and width of the pattern.
7. Open "Module Explorer of Database...".
8. Select as basic pattern: "Modules" / "Stoll" / "Default" / "Ribs" / "2x2 RL-Rib"



9. Add the "2x2 SJ Rib" module from the "Module Explorer of Database" to the selection list for the basic pattern by drag&drop .
10. Select "2x2" in the "Start" selection list.

You can insert the start after drawing the basic pattern as well.

---

11. Confirm the settings with "Generate Design Pattern".

▶ The "Symbol view [Basic]" will be opened.

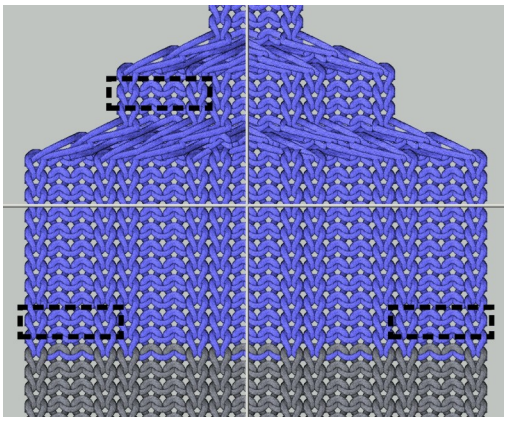
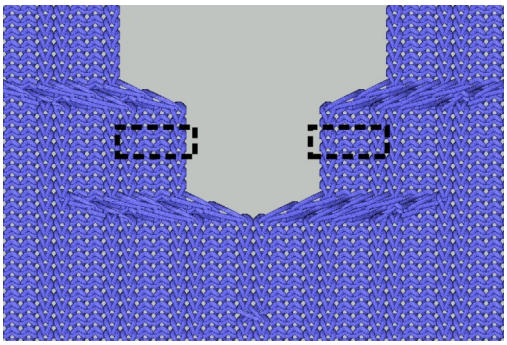
---

i The 2x2 rib of the basic pattern must match the 2x2 rib of the start.

II. Open the shape and position it in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".
   ▷ The Open dialog box will be displayed.
2. Specify path and select the desired **shp** shape.
3. Click the "Open" button.
   ▷ The shape will be laid on the pattern in the shp format.
4. Click on the  symbol.
5. Position the shape.

Result with the shape positioned:

Positioning the shape	
	
Left and right border of the shape	**Left and right border of the V-neck**

11.4 Complete the pattern

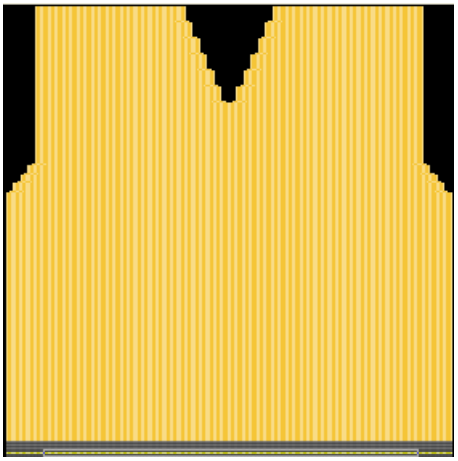
Complete the pattern:

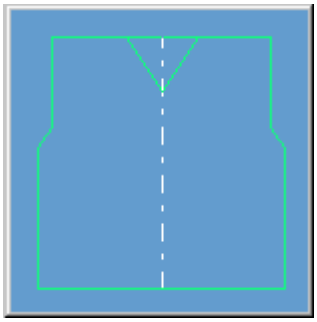
1. Cut-out the shape with the  button in the "Steps of Processing" toolbar.
2. Expand the pattern with  of the "Steps of Processing" toolbar.
3. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
   - or -
   Click  in the "Steps of Processing" toolbar.

12 Fully Fashion-Pattern: 2X2 Rib -V- with own module

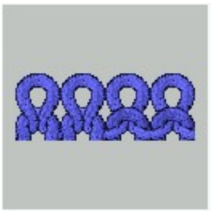
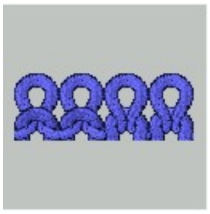


Pattern name	2x2-Rib-eigenModul.mdv	
Pattern size	Width:	300
	Height:	260
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	2x2	
Basic pattern	2x2 RL rib	
Shape	 2_set-in-front-v-neck-38.shv	
Knitting technique	Structure 2x2 Rib	
Description of pattern	2x2 Rib as basic pattern ◆ **Own modules for fading-out** the left and right edge ◆ **Narrowing modules with the stitches above**	

12.1 Generate Own Fade-out Modules

I. Generate fade-out module:

1. Call up the "New Module" dialog box via the "Module" / "New" / "Module…" menu.
2. Select the "Type of pattern" in the "New Module" dialog box.
3. Enter width and height of the module.
4. Select the  knitting mode.
5. Close the "New Module" dialog box with "OK".
   ▷ The "Properties of: XX" dialog box appears.
6. Close the "Properties of" dialog box with "OK".
   ▷ The Module Editor appears.
7. Draw the knitting process with "Needle actions".

Modules for fade-out	
Left edge **right side of V-neck**	**Right edge** **left side of V-neck**
	

8. Close the dialog box with  .
   ▷ The "Save Module in the Database?" prompt appears.
9. Confirm the dialog box with "Yes".
   ▷ The module is saved in the "Module Explorer of Database" under New Modules.
10. Move the module from "New Modules" to a module group of your own.

12.2 Create the shape in the M1plus Shape Editor

I. Generate shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.

▶ The dialog box will be opened.

2. Open an existing shape via the "File" / "Open .shv shape [mm] …" menu.
   - or -
   Click  .
   Example: D:\ Stoll \ M1plus \ x.xx.xxx \ Form \ 2_set-in-front-v-neck-38.shv
   - or -
   Create a new shape by  .

3. Convert the *.shv shape into the *.shp format via the "File" / "Convert and Save As…" menu.
4. Modify the basic element and the element for the neck opening:

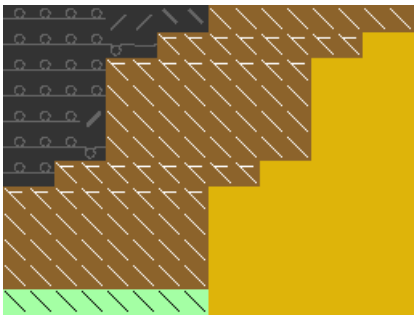
Basic element Front:

Basic element Front-left

The total width of the shape should be divisible by 4. Add two stitches to this total width.
Result: Left and right edge have the same knitting technique.

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

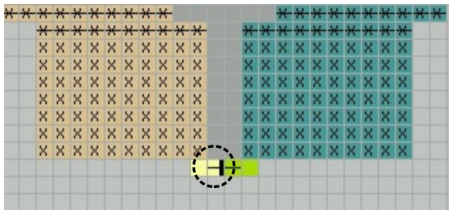


Element Neck opening:

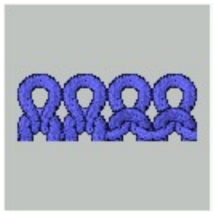
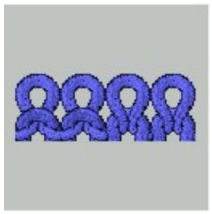
V-neck element

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 Margin Right side in the V-neck	Right Margin left side in the V-neck

Attributes		
		
Fade-out width	As desired	
Narrowing methods	◆ L-R combined transfer ◆ Separate transfer single jersey ◆ Stitch v separate transfer overlying ◆ Stitch v separated racking	
Narrowing width	**= Fade-out width**	

5. Save the shape via the "File" / "Save" or "Save As…" menu.

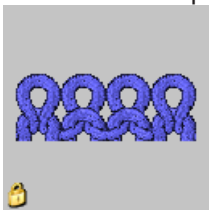
▶ The shape will be saved in the shp format.

6. Close the "M1plus Shape Editor" with .

12.3 Create a pattern without shape and open the shape

I. Generate pattern without shape:

1. Select "File" / "New" from the menu bar.
   - or -
   Click the icon.
2. Enter a Pattern name.
3. Select machine type.
4. Select the setup type 2.
5. Select **Basic pattern (pattern without shape)** and **Design Pattern**.
6. Specify the height and width of the pattern.
7. Open "Module Explorer of Database".
8. Select as basic pattern: "Modules"/"Stoll"/"Default"/"Ribs"/"2x2 RL-Rib".



9. Add the "2x2 SJ Rib" module from the "Module Explorer of Database" to the selection list for the basic pattern by drag&drop .
10. Select the "2x2" start.

You can insert a start after drawing the basic pattern as well.

11. Confirm the settings with "Generate Design Pattern".

▶ The "Symbol view [Basic]" will be opened.

II. Open the shape and position it in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".

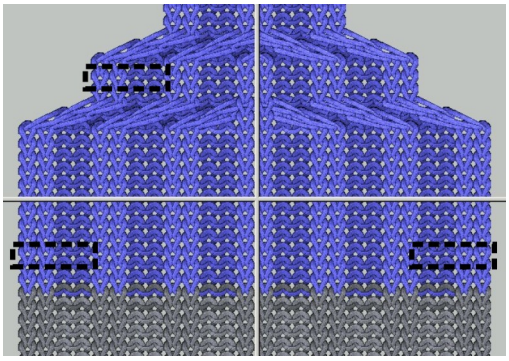
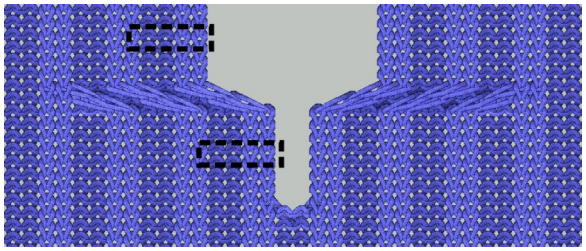
▶ The "Open" dialog box appears.

2. Specify the path and select the desired shape in the shp format.
3. Click the "Open" button.

▶ The shape in the shp format will be laid on the pattern.

4. Position the shape with the icon activated and the left mouse button pressed.

Result with the shape positioned:

Positioning the shape
Left and right border of the shape

Left and right border of the V-neck


12.4 Complete the pattern

Complete the pattern:

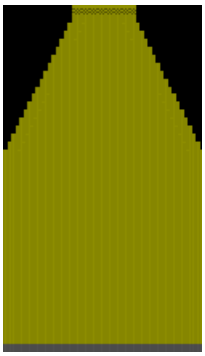
1. Cut-out the shape with the button in the "Steps of Processing" toolbar.
2. Expand the pattern with of the "Steps of Processing" toolbar.

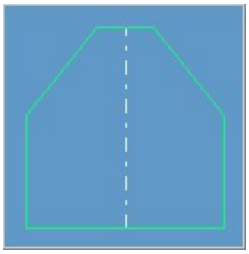
3. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
   - or -
   Click  in the "Steps of Processing" toolbar.

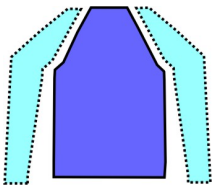
13 Fully Fashion-Pattern: 2x1 Rib



Pattern name	2x1 Rippe.mdv	
Pattern size	Width:	200
	Height:	250
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	2x1	
Basic pattern	2x1 Rib double jersey	
Shape	 2x1 Rib	
Knitting technique	Structure 2x1 Rib	
Description of pattern	Fading-out the left and the right edge with "2x1 SJ-Rib".	

13.1 Rules for a Shape in 2x1 Knitting Mode

I. Rules for a Shape in 2x1 Rib Knitting Mode:

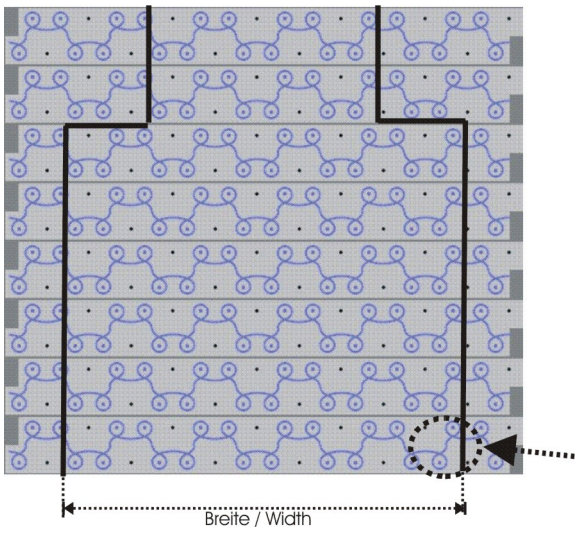


Shape Attributes	Rules
Knitting mode	2x1 rib
Widening	None With tailored shapes: 1 Stitch
Narrowing	3 stitches
Narrowing width	Minimum width: 5 stitches Additional widths in steps of three Example: 5, 8, 11, 14 and so on
Narrowing height	as desired

II. Rules for a shape with V-neck

Specify the shape width	
Without V-neck	**With V-neck**
Total width = divisible by 3 + 2	Total width = divisible by 3 + 1 and distance of shape halves = 1 Add the distance of the shape halves to the total width.
Fading out a stitch at the right outer edge in order to get both edges equal.	Fading-out of one stitch at the right outer edge and at the left edge of the V-neck.
Fading out by "Stitch in front with transfer".	

Specify the shape width



13.2 Create the Shape in the M1plus Shape Editor

I. Generate a shape:

1. Call up the "Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.
2. Enter the shape elements for the left and right basic element:

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	8		Narrowing
4		0	83	0	25	0	25	1	0	0			

Right 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		1	
3		360	-180	108	-54	6	-3	18	0	0	8	1	Narrowing
4		0	-83	0	-25	0	-25	1	0	0			

3. Allocate the attributes for narrowing and fading-out.

Attributes		
	Left basic element	**Right basic element**
Fade out	Not necessary	"Front stitch with transfer" + ☑ "applies to all knitting modes"

Attributes		
Fade-out width		1 Stitch
Type of narrowing	"2x1- Rib (vv^.....^vv)" + ☑ "applies to all knitting modes"	"2x1- Rib (vv^.....^vv)" + ☑ "applies to all knitting modes"
Narrowing width	8 stitches	8 stitches

4. Save shape.
5. Close the "Shape Editor".

13.3 Create a pattern without shape and open the shape

I. Generate pattern without shape:

1. Generate a new pattern via "File / New... " or with .
2. Select **Basic Pattern (pattern without shape)** and "Design Pattern" in the "New Pattern" dialog box.
3. Select machine type, setup type and gauge.
4. Open the "Module Explorer of Database" with the "Module Explorer ..." button.
5. Select the "Stoll" / "Standard" / "Ribs" / "2x1 Rib_double jersey" module.
6. Drag the "2x1 Rib_double jersey" module with drag&drop into the selection list for the basic pattern.

7. Select the "2x1" start.
8. Close the "New Pattern" dialog box with "Generate Design Pattern".

II. Position shape on the pattern:

1. Position the shape on the pattern via "Shape" / "Open and Position Shape...".
2. Click on the symbol.
3. Position the shape in the way that it starts with "Stitch in front" at the **left edge** and with "Stitch double jersey" at the **right edge**.

i	The total width has to match the ribs of the 2x1 start. The outer edges must have double jersey each after cutting-out the shape.

13.4 Complete the pattern

Complete the pattern:

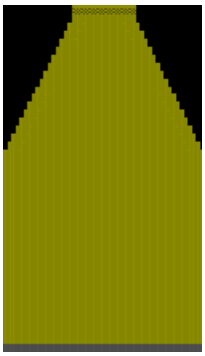
1. Cut-out the shape with the  button in the "Steps of Processing" toolbar.
2. Expand the pattern with  of the "Steps of Processing" toolbar.
3. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
   - or -
   Click  in the "Steps of Processing" toolbar.

Complete the pattern

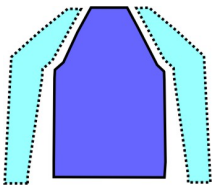
14 Fully Fashion-Pattern: Variant of the 2x1 Rib



Pattern name	2x1 Rippe-Variante.mdv	
Pattern size	Width:	200
	Height:	250
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	2x1	
Basic pattern	1x1 SJ Rib	
Version	Modified sequence of fading-out and narrowing at the outer edge	

14.1 Rules for a Shape in 2x1 Knitting Mode - Variant

I. Rules for a shape for front with raglan:

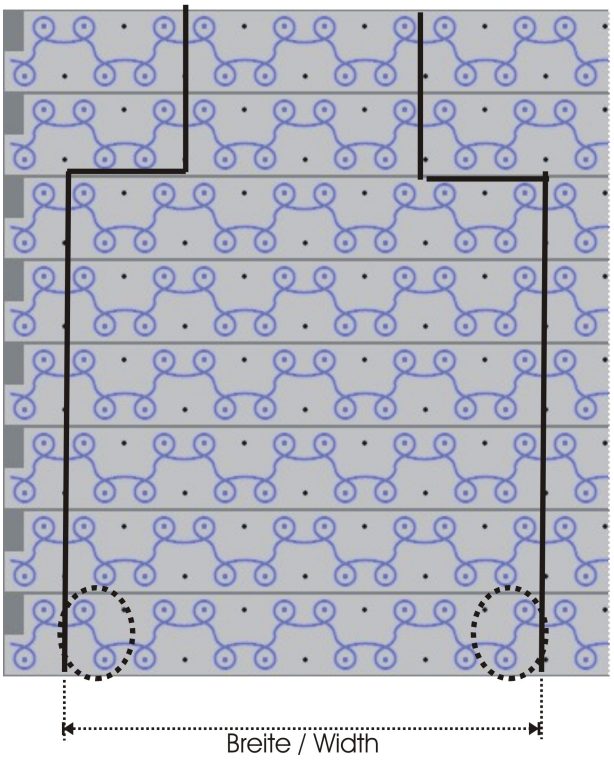


Shape Attributes	Rules
Knitting mode	2x1 rib
Widening	none
Narrowing	3 stitches
Narrowing width	Minimum width: 6 stitches Additional widths in steps of three Example: 6, 9, 12, 15 etc.
Narrowing height	as desired

II. Rules for a shape with V-neck

Specify the shape width	
Without V-neck:	**With V-neck:**
Total width = divisible by 6	Total width = divisible by 6 Distance of shape halves = 0
Fading out at the edges not necessary.	

Specify the shape width



14.2 Create the Shape in the M1plus Shape Editor

Create the shape:

1. Open the "Shape Editor" via "Shape" /"Shape Editor (Generate or Edit Shapes)...".
2. Enter the shape elements for the left and right basic element.

Left/right shape elements

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	-250	0	-75	0	-75	1	0	0			Basis
2		466	0	140	0	140	0	1	0	0			
3		360	180	108	54	6	3	18	0	0	9		Narrowing
4		0	80	0	24	0	24	1	0	0			

3. Allocate the attributes for narrowing and fading-out.

Attributes	Basic element left/right
Fading-out	Not necessary
Fading-out Width	None
Type of narrowing	2x1- Rib (^vv.....vv^)
Narrowing Width	9 stitches

4. Save shape.
5. Close the "Shape Editor".

14.3 Create a Pattern without Shape and Open the shape - Variant

I. Generate pattern without shape:

1. Generate a new pattern via "File / New..." or with  .
2. Select **Basic Pattern (pattern without shape)** and "Design Pattern" in the "New Pattern" dialog box.
3. Select machine, setup type and gauge.
4. Open the Module Explorer of Database with the "Module Explorer..." button.
5. Select the "2x1 Rib_double jersey" module under "Stoll" / "Standard" / "Ribs" and drag it into the selection list for the basic pattern.

6. Select "2x1" under Start.
7. Close the "New Pattern" dialog box with "Generate Design Pattern".

II. Position shape on the pattern:

1. Position the shape on the pattern via "Shape" / "Open and Position Shape...".
2. Click on the  symbol.
3. Position the shape in a way that it starts with "Rear stitch" at the **left edge** and with "Double jersey stitch" at the **right edge**.

i	The total width has to match the ribs of the 2x1 start. The outer edges must have two left stitches each after cutting-out the shape.

14.4 Complete the pattern

Complete the pattern:

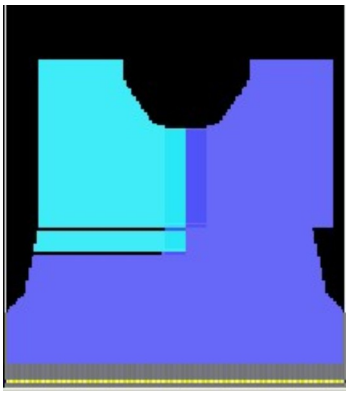
1. Cut-out the shape with the  button in the "Steps of Processing" toolbar.
2. Expand the pattern with  of the "Steps of Processing" toolbar.
3. Start the technical processing with the  icon.

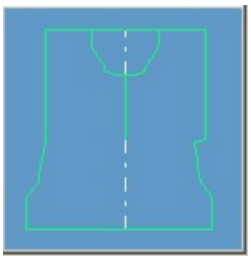
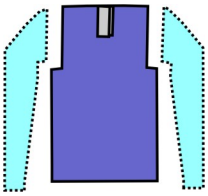
▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.

Complete the pattern

15 Fully Fashion-Pattern: Overlapping Tubular Trimming



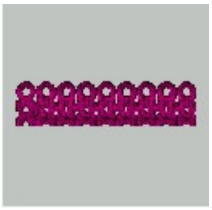
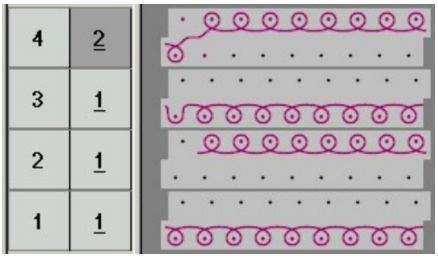
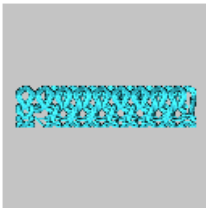
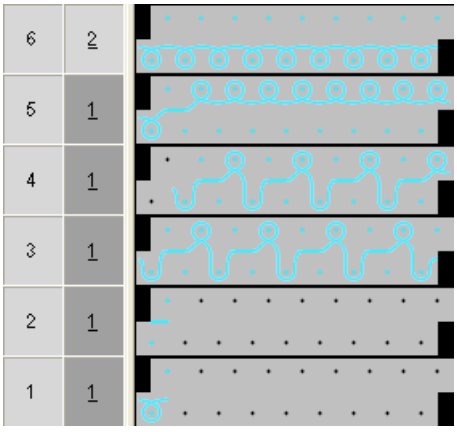
Pattern name	Schlauchblende ueberlappend.mdv	
Pattern size	Width:	140
	Height:	140
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	1x1	
Basic pattern	Front stitch with transfer	
Shape	 Generate a new shape in the shp format:	
Knitting technique	Single jersey structure with tubular border	
Description of pattern	Fully fashion front with overlapping tubular trimming. 	

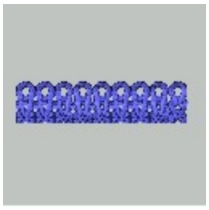
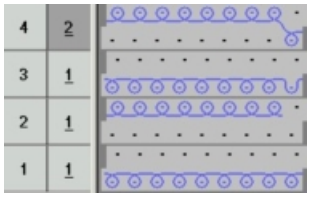
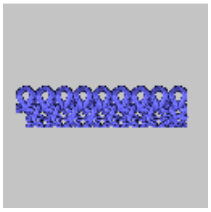
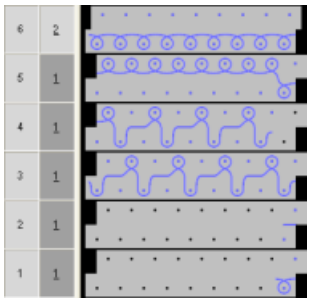
15.1 Generate a Fade-out Module for the Tubular Trimming

I. Generate fade-out module:

Generate fade-out modules for the tubular trimmings and allocate them to the shape edges.

1. Call up the "New Step Module" dialog box via the "Module" / "New" / "Module…" menu.
   ▷ The "New Module" dialog box appears.
2. Select the  pattern type in the "New Module" dialog box.
3. Enter width and height.
4. Select the desired knitting mode in the selection list.
5. Close the "New Module" dialog box with "OK".
   ▷ The Properties of: xx dialog box appears.
6. Close the "Properties of" dialog box with "OK".
   ▷ The Modul Editor appears.
7. Draw the knitting process with "Needle actions".

Modules for overlapping tubular border		
Left edge		
Module name	**Presentation**	**Stitch line**
Left border		
Start of left border		
Right edge		

Modules for overlapping tubular border		
Module name	**Presentation**	**Stitch line**
Right border		
Start of right border		

15.2 Create the shape in the M1plus Shape Editor

I. Generate a shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.
   ▷ The dialog box will be opened.
2. Create a new shape in the **shp** format via "File" / "New".
   - or -
   Click the  icon.
3. Create a "Basic shape" element for a **front**:

■ The "Mirrored" checkbox is activated.

Basic element Front Left Edge:

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	-255	0	-69	0	-69	1	0	0			Basis
2		55	0	21	0	21	0	1	0	0			
3		21	29	8	8	1	1	8	0	0			Narrowing
4		63	22	24	6	4	1	6	0	0			Narrowing
5		2	0	1	0	1	0	1	0	0			
6		168	0	64	0	64	0	1	0	0			
7		0	203	0	55	0	55	1	0	0			

4. Deactivate "Mirrored" checkbox.
5. Modify the right edge of the basic element.

Basic element Front Right Edge:

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	225	0	61	0	61	1	0	0			Basis
2		55	0	21	0	21	0	1	0	0			
3		21	-29	8	-8	1	-1	8	0	0			Narrowing
4		63	-22	24	-6	4	-1	6	0	0			Narrowing
5		2	29	1	8	1	8	1	0	0			
6		168	0	64	0	64	0	1	0	0			
7		0	-203	0	-55	0	-55	1	0	0			

Settings in the basic element for the left edge				
Line of the edge	"General" tab	Tab "Fade-out"	Tab "Narrowing"	Allocated module
No.1-6		As desired	As desired	As desired
Settings in the basic element for the right edge				
Line of the edge	"General" tab	Tab "Fade-out"	Tab "Widening"	Allocated module
No. 1-4 +6		As desired	As desired	As desired

i The right side of the basic element is enlarged by 8 needles (= width of the border) in edge line No. 5, as the tubular trimming is transferred outward in the line before.

6. Create a new element with  button.
7. Select under "Type" via the selection menu **Neck opening**.

■ The "Mirrored" checkbox is activated.

Element Neck opening:

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		5	0	2	0	2	0	1	0	0			
2		94	0	36	0	36	0	1	0	0			
3		0	-29	0	-8	0	-8	1	0	0			Bind-off
4		5	-22	2	-6	1	-3	2	0	0			Narrowing
5		21	-14	8	-4	2	-1	4	0	0			Narrowing
6		21	-14	8	-4	4	-2	2	0	0			Narrowing
7		21	0	8	0	8	0	1	0	0			
8		0	81	0	22	0	22	1	0	0			

Settings in the cut-out neck left lines				
Line of the edge	"General" tab	Tab "Fade-out"	Tab "Narrowing"	Fade-out width
No. 1	No entry	Start of left border	No entry	9
No. 2	No entry	Left border	No entry	9
Line of the edge	"General" tab	Tab " Binding-off"	Tab "Narrowing"	Fade-out width

Settings in the cut-out neck left lines				
No. 3	Binding-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 edge	"General" tab	Tab "Fade-out"	Tab "Narrowing"	Fade-out width
No. 1	No entry	Start of right border	No entry	9
No. 2	No entry	Right border	No entry	9
Line of the edge	"General" tab	Tab " Binding-off"	Tab "Narrowing"	Fade-out width
No. 3	Binding-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

8. Deactivate "Mirrored" checkbox.
9. Allocate the narrowing and fade-out modules of your own to the edge lines at the left and right.
10. Save the shape via the "File" / "Save" or "Save As…" menu.
    ▷ The shape will be saved in the .shp format.
11. Close the M1plus Shape Editor with  .

15.3 Create a pattern without shape and open the shape

I. Generate pattern without shape:

> **i** Create the pattern **without** start.

1. Select "File" / "New" from the menu bar.
   - or -
   Click the  icon.
2. Enter a Pattern name.

3. Select machine type, setup type and gauge.
4. Select **Basic pattern (pattern without shape)** and "Design Pattern".
5. Set pattern size and select the "Front stitch with transfer" basic knitting mode.
6. Select **no** start.
7. Confirm the settings with "Generate Design Pattern".

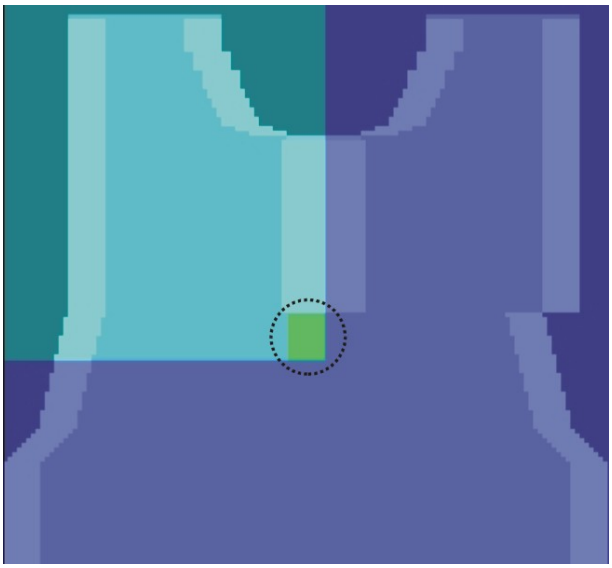
▶ The "Symbol view [Basic]" will be opened.

II. Open the shape and position it in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".
   ▷ The Open dialog box will be displayed.
2. Specify path and select the desired shape (shp).
3. Click the "Open" button.
   ▷ The shape in (shp) format will be laid on the pattern.
4. Activate the  icon to move the shape.
5. Position the shape.

III. Adjust the basic motif:

Additional yarn colors are necessary in order to generate the Color Arrangements.



✓ The shape is placed on the pattern.

1. Draw in an yarn color below the border (fading-out of the neck opening):

- with the width of the modules for the tubular trimming
  Example: 8 stitches
- with any desired but even-numbered height
  Example: 10 stitches

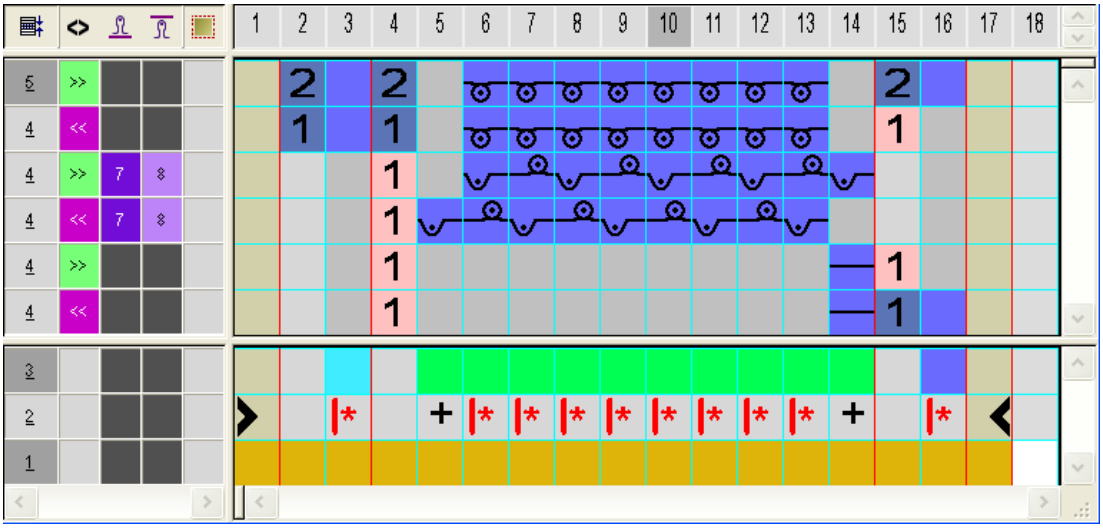
2. Use another yarn color in the left shoulder area from the tubular trimming start on.

▶ The yarn fields can be influenced manually by the CA.

15.4 Generate Color Arrangements

I. Generate a Color Arrangement for picking up the overlapping area:

1. Select the first two pattern rows of the overlapping area via the row selection bar.
2. Click the  icon in the "Default" toolbar.
   ▷ The Color Arrangement Editor appears with the search colors existing in the basic motif.
3. Modify the original CA:



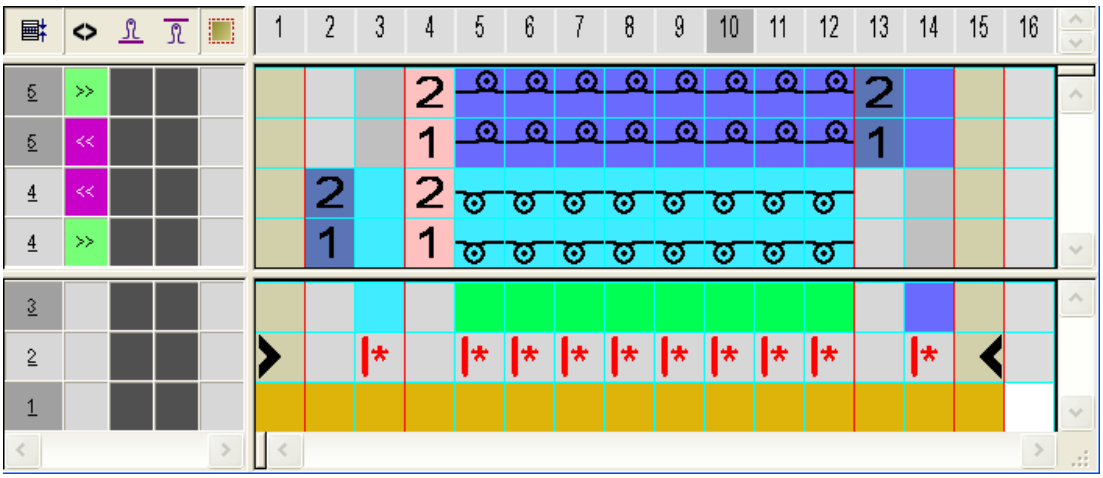
> **i** You can define other stitch tensions for the pick-up of the tubular trimming.

4. Close the "Color Arrangement Editor" with  .

▶ CA will be saved under local Color Arrangements.
The CA is entered in the control column of the first two pattern rows of the overlapping area.

II. Generate Color Arrangement for the overlapping area:

1. Select the next two pattern rows via the row selection bar.
2. Click the  icon in the "Default" toolbar.
3. Modify the original CA:

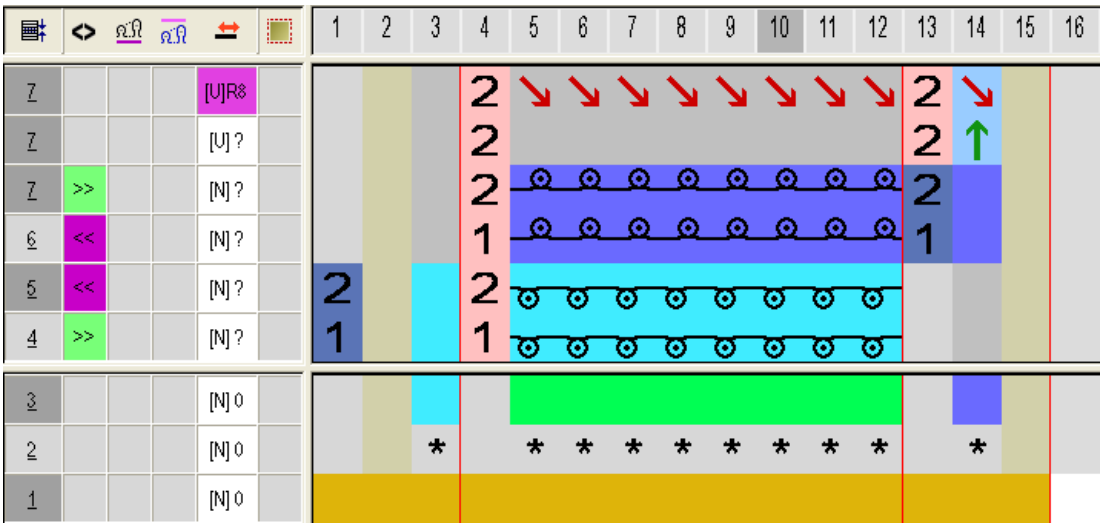


4. Close the "Color Arrangement Editor" with .
5. Enter CA in the control column of the next six pattern rows of the overlapping area.

III. Generate Color Arrangement for the end of the overlapping area:

i	This Color Arrangement contains the transferring outward for the following tubular trimming.

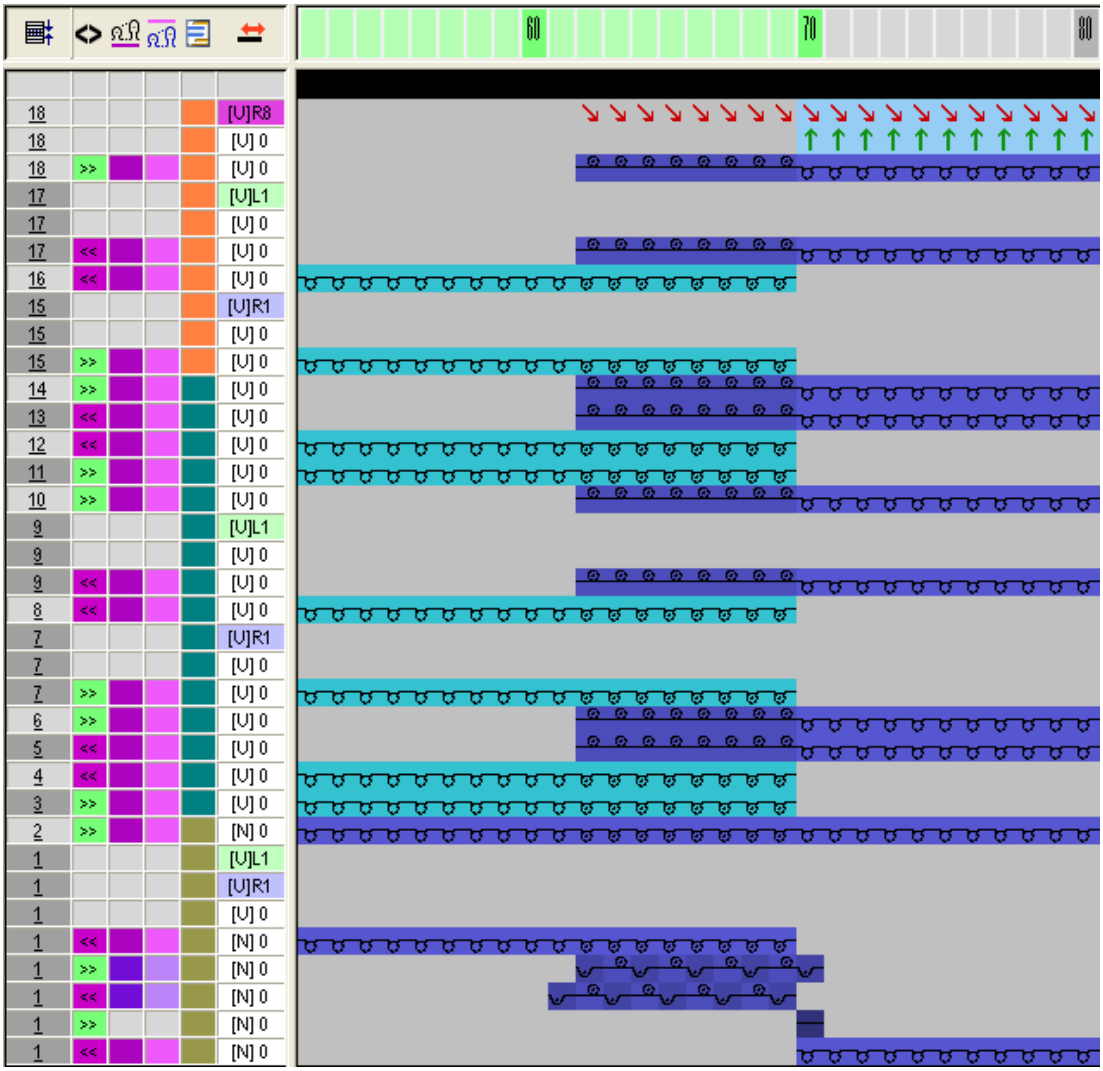
1. Select the last two pattern rows via the row selection bar.
2. Click the icon in the "Default" toolbar.
3. Modify the original CA:



4. Close the "Color Arrangement Editor" with .

▶ CA is entered in the control column of the last two pattern rows of the overlapping area.

IV. Expanded pattern:



15.5 Complete the pattern

Complete the pattern:

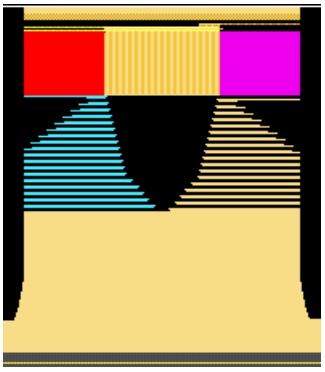
1. Cut-out the shape with the button in the "Steps of Processing" toolbar.
2. Expand the pattern with of the "Steps of Processing" toolbar.
3. Start the technical processing with the icon.

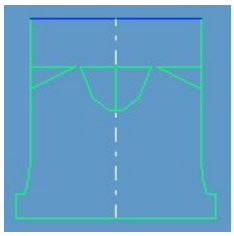
▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.

Complete the pattern

16 Fully Fashion-Pattern: Round neck with knit on Collar



Pattern name	Rundhals mit Kragen.mdv	
Pattern size	Width:	220
	Height	200
Machine type:	CMS 530	
Gauge	E 8	
Setup Type	Setup2	
Start	1x1	
Basic pattern	Front stitch with transfer	
Shape	 Rundhals mit angestricktem Kragen.shp	
Knitting technique	Fully Fashion with knit on collar.	
Description of pattern	Front with gore and knit on collar.	

16.1 Create the shape in the M1plus Shape Editor

Generate shapes of your own for a front with neck and shoulder gore:

1. Open the Shape Editor.
2. Enter the values for the "Basic Shape" element of the shape into the table.

Basic element Front

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width xxx	Function
1		0	-333	0	-100	0	-100	1	0	0			Basis
2		66	0	20	0	20	0	1	0	0			
3		0	26	0	8	0	8	1	0	0			*Bind-off*
4		80	20	24	6	0	0	0	0	0			Narrowing
5		266	0	80	0	80	0	1	0	0			
6		133	0	40	0	40	0	1	0	0			
7		0	286	0	86	0	86	1	0	0			

> **i** Additional pattern rows for the collar (= edge line 6) are added in the basic shape element.

3. Allocate the "2x2 RL rib" module to edge line no. 6 in the **Fading-out** tab.
4. Specify the entire width of the collar under "Fade-out width".
5. Create a new element for the **neck gore** with  .
6. Set **Gore** under "Type:".

Neck gore 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	-16	0	-5	0	-5	1	0	0			
2		6	-13	2	-4	2	-4	1	0	0			
3		13	-20	4	-6	2	-3	2	0	0			
4		13	-26	4	-8	2	-4	2	0	0			
5		86	-43	26	-13	2	-1	13	0	0	6		*Narrowing*
6		0	116	0	35	0	35	1	0	0			

7. Allocate **narrowing** to the edge line No. 5.
8. Specify the **y-distance to the end line** for this element.

■ y distance from the end line: 40

9. Create a further new element for the **shoulder gore**.
10. Set **Gore** under "Type:".
11. Activate the **mirrored** checkbox.
12. Create the table for the left gore element under  .

Gore element (for the shoulder)

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		60	150	18	45	2	5	9	0	0			
2		0	-150	0	-45	0	-45	1	0	0			
3		-60	0	-18	0	-18	0	1	0	0			
4		0	0	0	0	0	0	1	0	0			

13. Specify the position for the gore element:
- **x distance from center axis:** 86
- **y distance from the end line:** 41

i: Depending on the starting point of the gore and on the direction of knitting.

---

i Further settings for the gore element are not necessary.

---

14. Create another **New element** for the opening of the neck gore.
15. Set **Opening** under "Type:".
16. Create a new line in the table.
17. Enter 36 in the **Height Stitches** column.

---

i This value corresponds to the total height of the neck gore element.

---

18. Specify the **y-distance to the end line** for this element.
    y distance from the end line: 40
19. Save the shape and close the Shape Editor.

16.1.1 Create the pattern and load the shape

I. Generate pattern without shape

1. Select "File" / "New" from the menu bar.
   - or -
   Click on the  symbol.
2. Enter a pattern name.
3. Select the machine type, setup type and gauge.
4. Select **Basic pattern (pattern without shape)** and "Design Pattern".
5. Set pattern size and select the "Front stitch" basic knitting mode.
6. Select a start.
7. Confirm the settings with "Generate Design Pattern".

▶ The "Symbol view [Basic]" will be opened.

II. Open the shape and position it in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".

▶ The "Open" dialog box will be displayed.

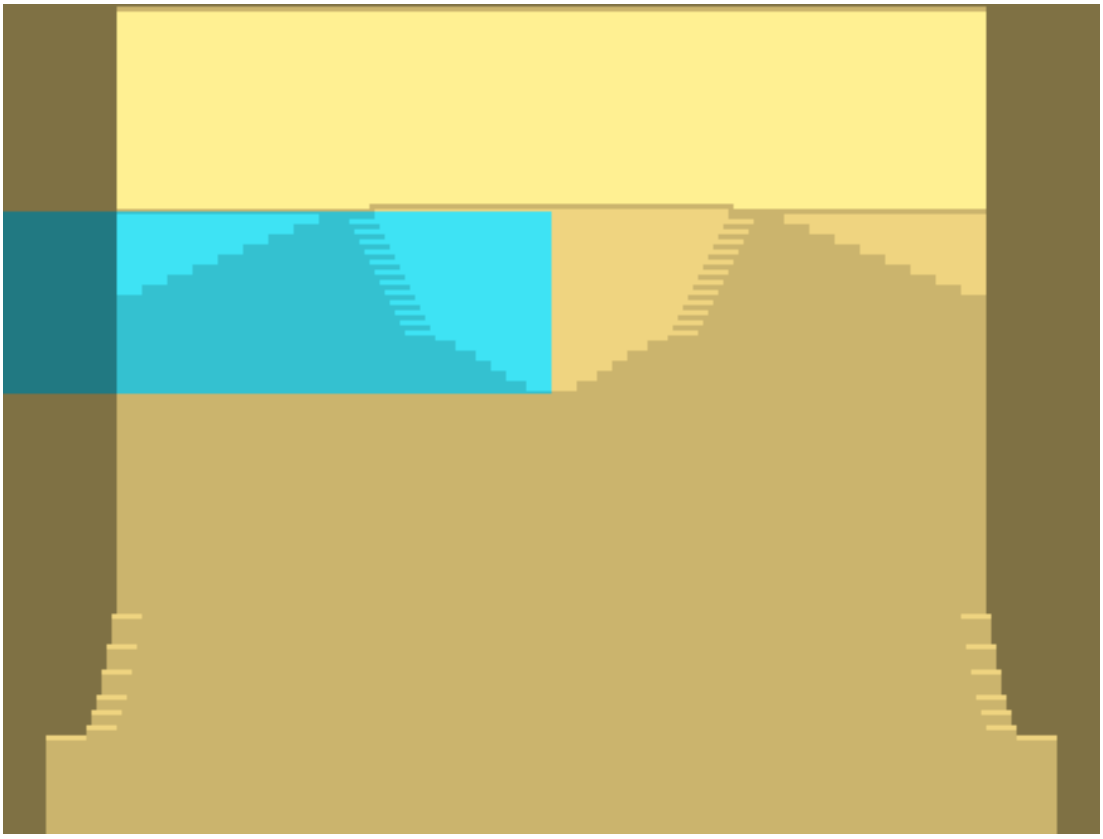
2. Specify path and select the desired shape in the shp format.
3. Click the "Open" button.

▶ The shape will be laid on the pattern in the shp format.

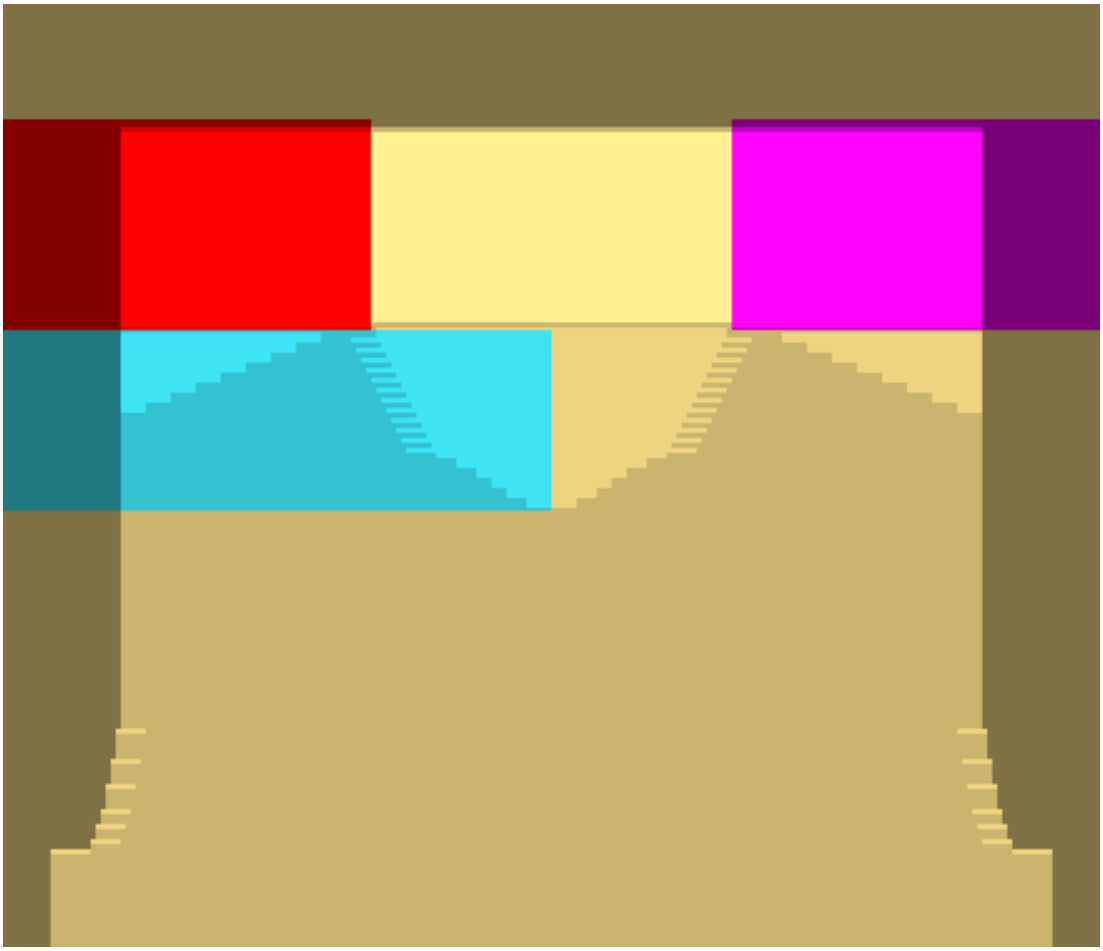
III. Draw in corrections:

i	Additional colors are necessary in order to use Color Arrangements.

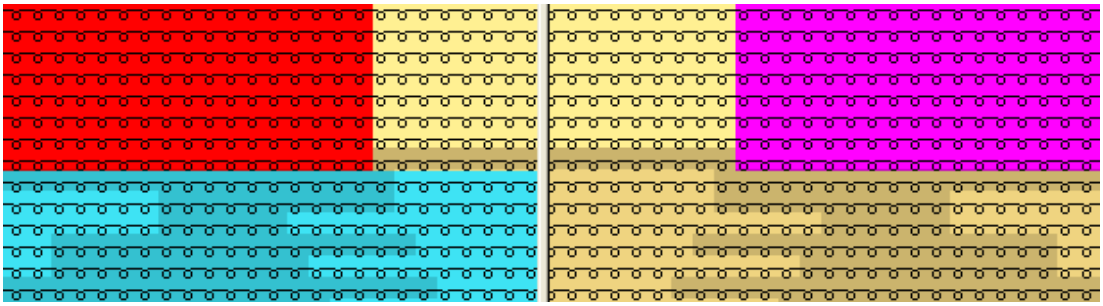
1. Draw in a separate color in the left shoulder element up to the pattern center.



2. Draw in a separate color for residual yarn above both the shoulder elements



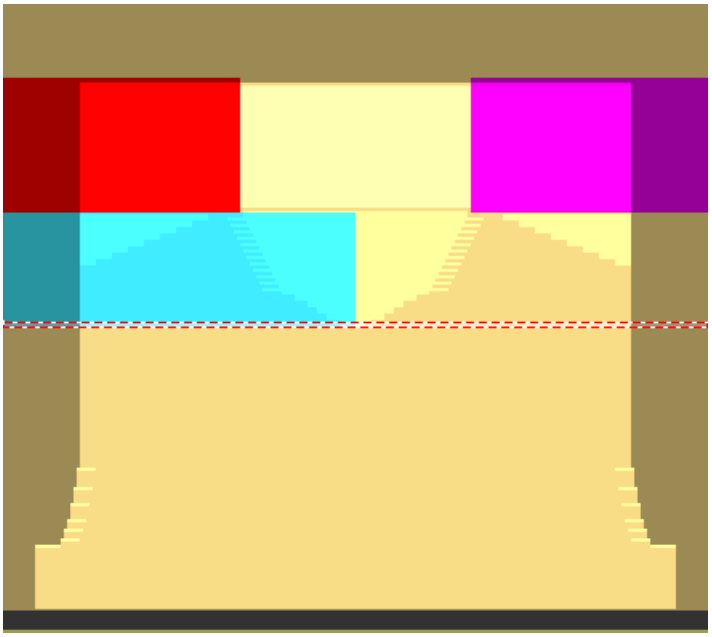
Detailed presentation of the additionally drawn-in colors:



16.2 Generate Color Arrangements

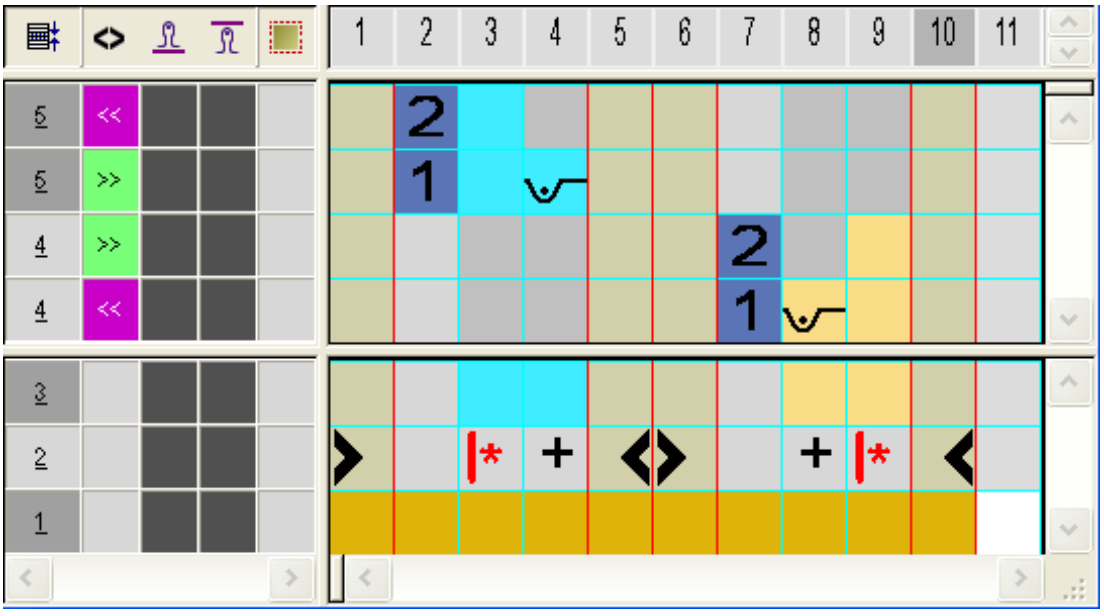
I : Generate a Color Arrangement for area without narrowing within the neck gore:

1. Select to pattern rows starting at the start of the neckline.



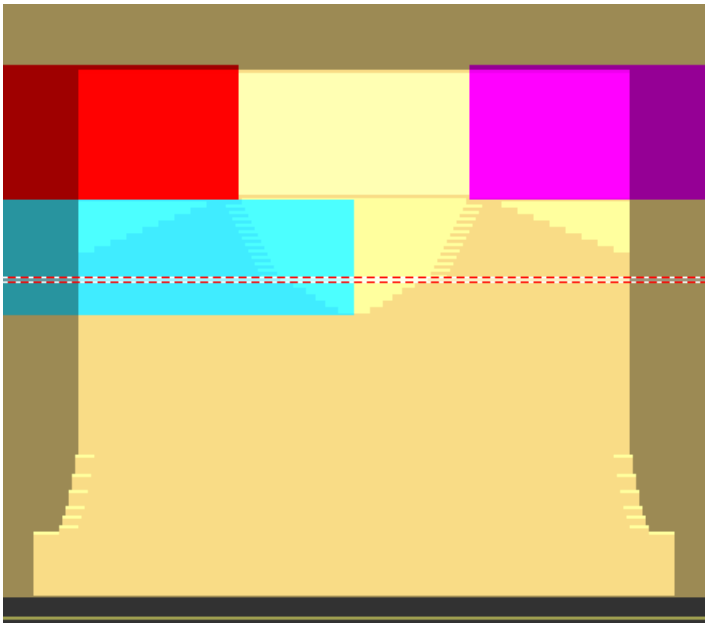
2. Click  "Generate Color Arrangement from Selection".
3. Edit the knitting process within the CA:

- Draw in the binding for the neck gore with the "Front Tuck" needle action.
- Enter the **+** symbol for excess width in the search area.



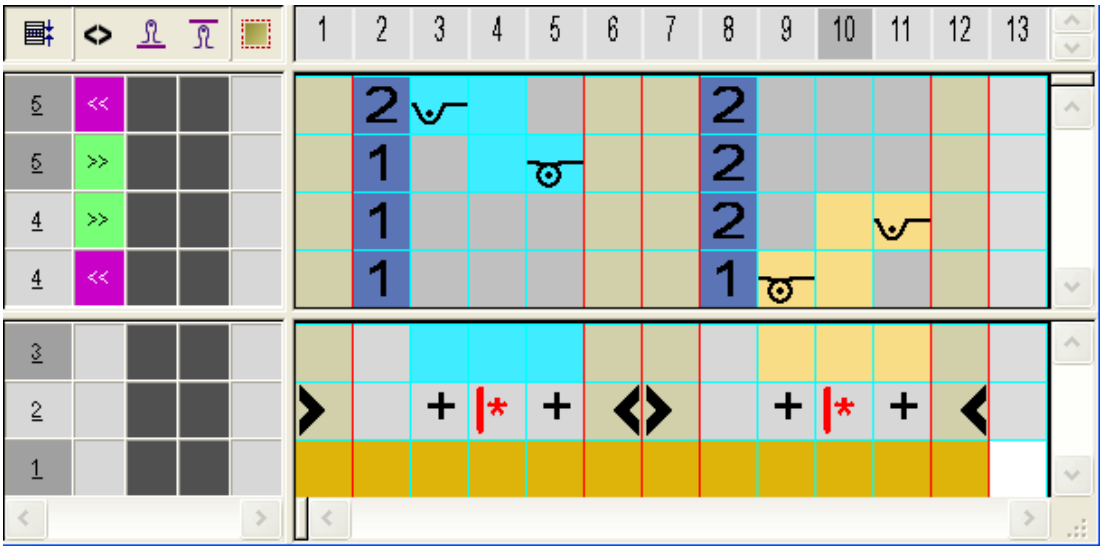
II. Generate a Color Arrangement for the area with narrowing and shoulder gore within the neck gore:

1. Select two pattern rows starting with the start of the narrowings.



2. Click  "Generate Color Arrangement from Selection".
3. Draw in the knitting sequence in the CA:

- "Front stitch" needle action as structure of the neck gore
- "Front tuck" needle action for the shoulder gore
- Enter the reference row number in rows without knitting specification as well.

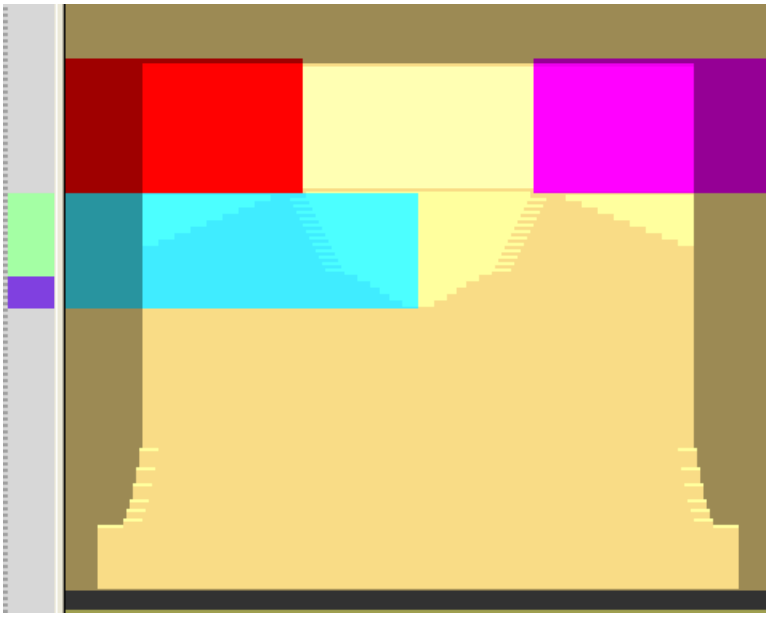


i	Due to the reference row numbers entered in rows without knitting specifications, the shape edges will be inserted in those rows with their corresponding shape data (= edge color).

III. Insert Color Arrangements:

1. Draw in the Color Arrangements into the control columns in the area of the neckline.

- **CA1**: for the neckline without narrowing
- **CA2**: for the neckline with narrowing and shoulder gore

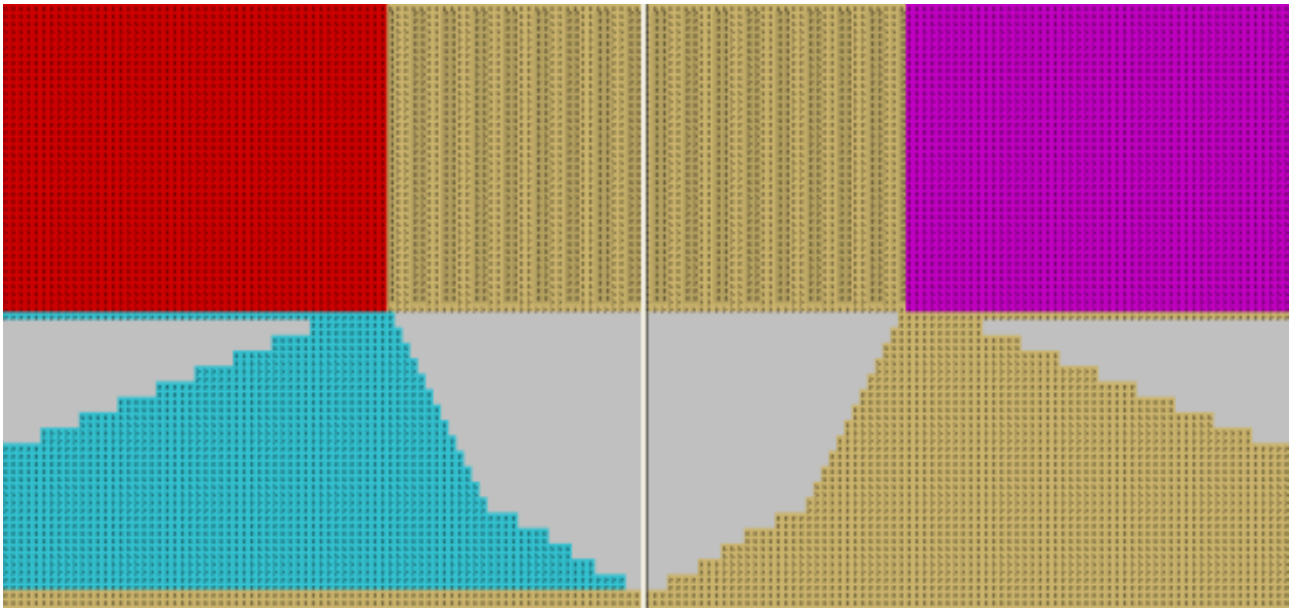


16.3 Edit the pattern manually

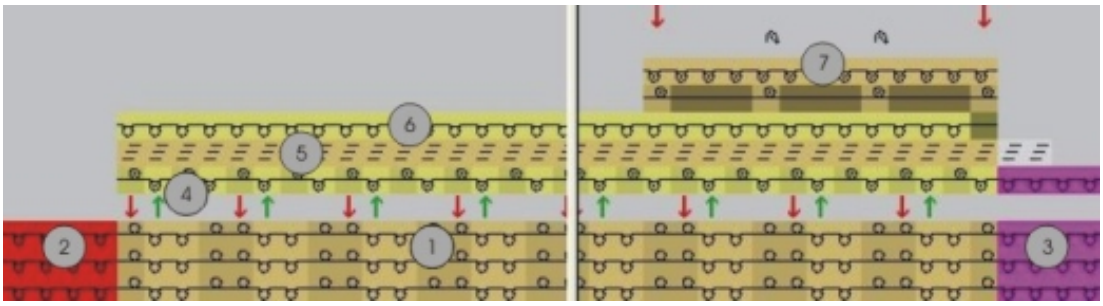
i If you correct patterns with cut-out shape or expanded patterns and then switch back to the basic pattern the modifications are not present in the **Basic Pattern** state.
The modifications will be overwritten by cutting out the shape again or by expanding again.

16.3.1 Correct a Pattern with cut-out Shape

1. Cut out the shape with  of the "Steps of Processing" toolbar.
2. Correct the protection rows at the left and right of the collar and overwrite them with "Front Stitch with Transfer".



3. Insert several rows with **Within Shape** following the collar end.
4. Draw in knitting sequences in to the inserted rows manually.

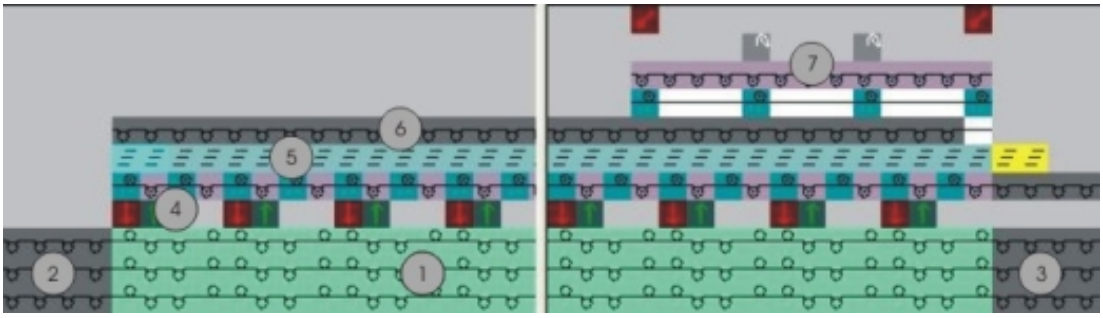


No.	Knitting sequence
1	Collar
2	Protection rows at the left
3	Protection rows at the right
4	Knit-in draw thread
5	Binding-off
6	Knit out draw thread
7	Thread securing at the end of the collar

5. Delete the last row of the protection row at the left (2).
6. Draw-in the knitting-in of the draw thread (4) by "Front Stitch" / "Rear Stitch" and with yarn color # 207 into the last row of the collar.
   Note: Insert the draw thread in empty needles.
7. Draw-in binding-off (5) for the collar.
   Use the module "Stoll" / "Binding-off" / "without Draw thread" / "1x1" / "BO-1x1-01>" of the "Module Explorer of Database".

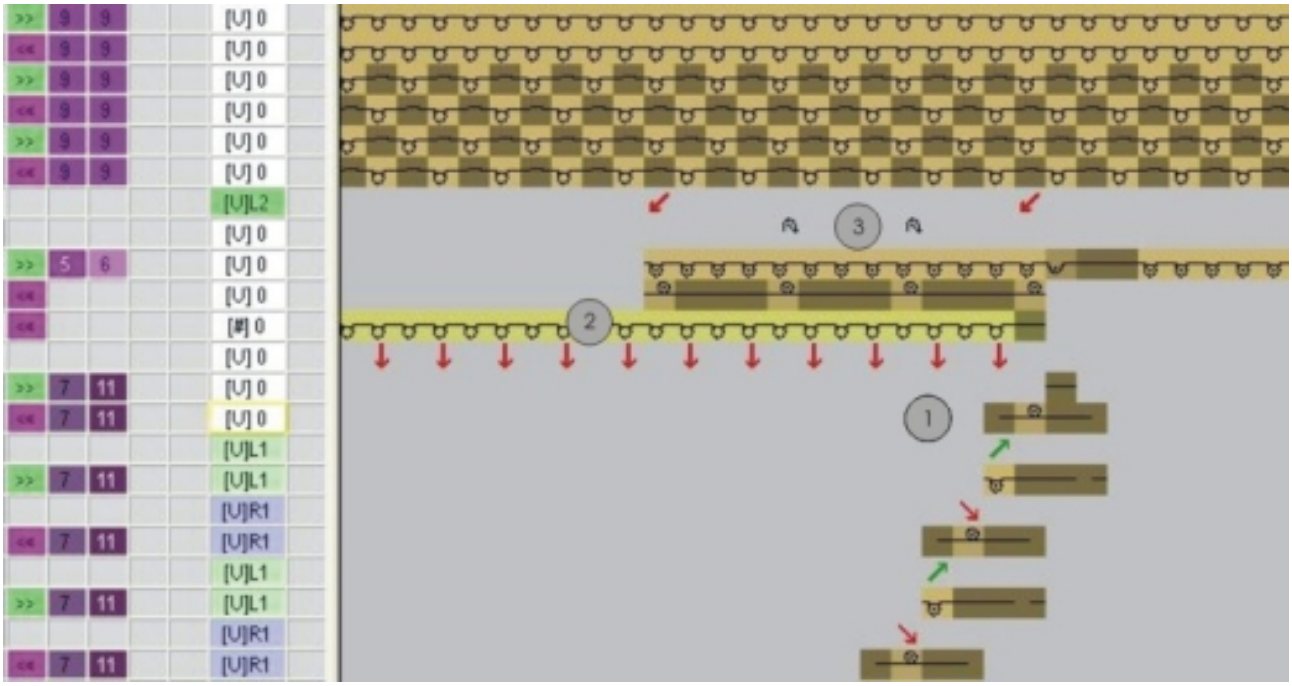
8. Draw-in the knitting-out of the draw thread (6) by "Front Stitch with Transfer".
9. Draw-in a thread securing at the end of collar (7).

Switch to "Module Color as Background" for editing.



16.3.2 Correct the expanded pattern

1. Expand the pattern with of the "Steps of Processing" toolbar.
2. Correct the expanded pattern.

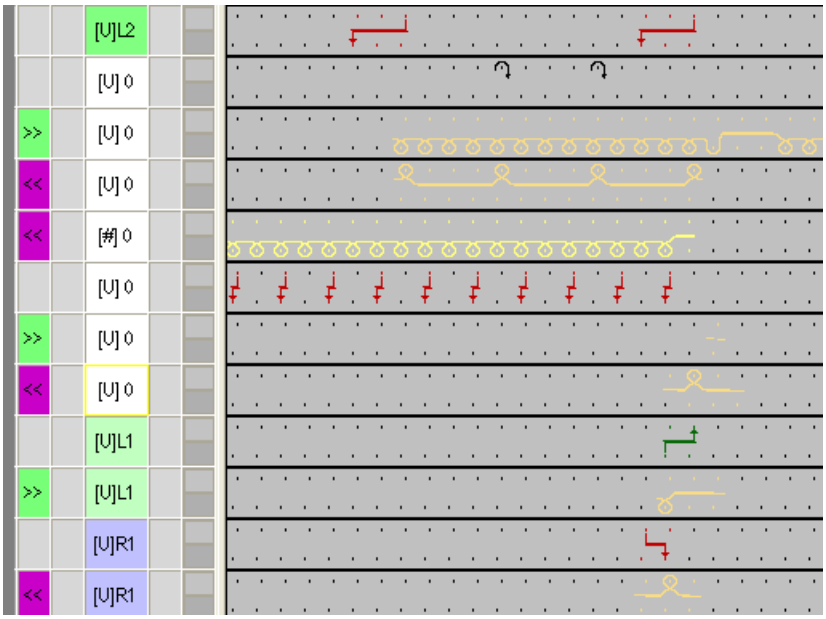


No.	Knitting sequence
1	Binding-off the end of the collar
2	Knit out draw thread
3	Secure the thread at the end of the collar

3. Adjust the binding-off (1) at the collar end.

4. Correct the thread securing (3) at the collar end.

▶ Corrected pattern in the Technical View.



5. Insert an extension cycle into the collar if necessary.

16.4 Complete the pattern

Complete the pattern:

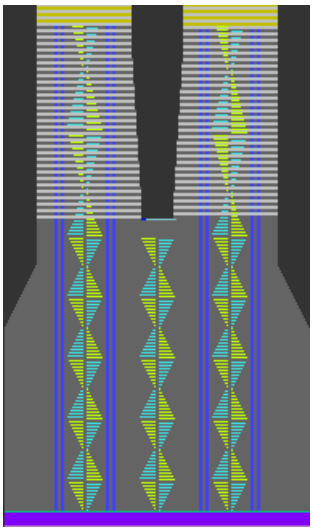
1. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

2. Confirm the query with "OK".
3. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.

Complete the pattern

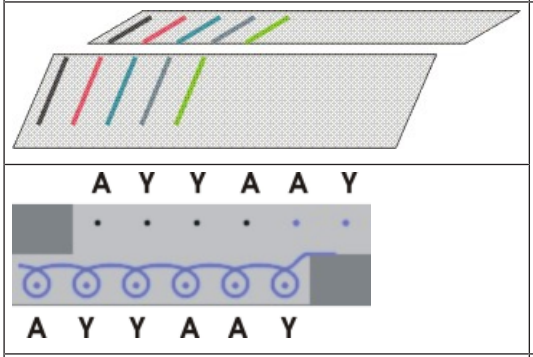
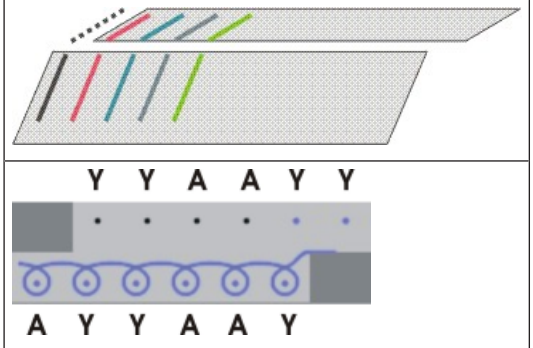
17 Fully Fashion-Pattern: Knitting in Racking



Pattern name	SIV-FF	
Pattern size	Width:	200
	Height:	250
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	1X1	
Basic pattern	Front stitch with transfer	
Knitting technique	Pointelle Technique	
Description of pattern	Fully Fashion with **Pointelle without empty rows**	

17.1 Behavior of the Jacquard selection in the rear needle bed

The Jacquard selection on the rear needle bed will be influenced based on the commands VJA^1 and VJA^0.

Presentation	Command	Function
	VJA^1(Standard)	The jacquard selection on the rear 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.

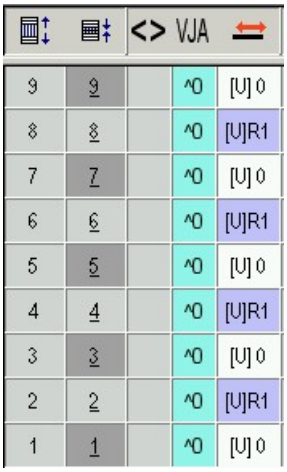
17.2 Create and draw a pattern

Create and draw the petinet pattern (pointelle):

1. Generate new pattern.
2. Enter the racking sequence e.g. V0 - VR1 - V0 - VR1 in the control column Racking rear  in alternation over the height of the motif.

- in odd-numbered knitting rows the racking position is V0
- in even-numbered knitting rows the racking position is VR1

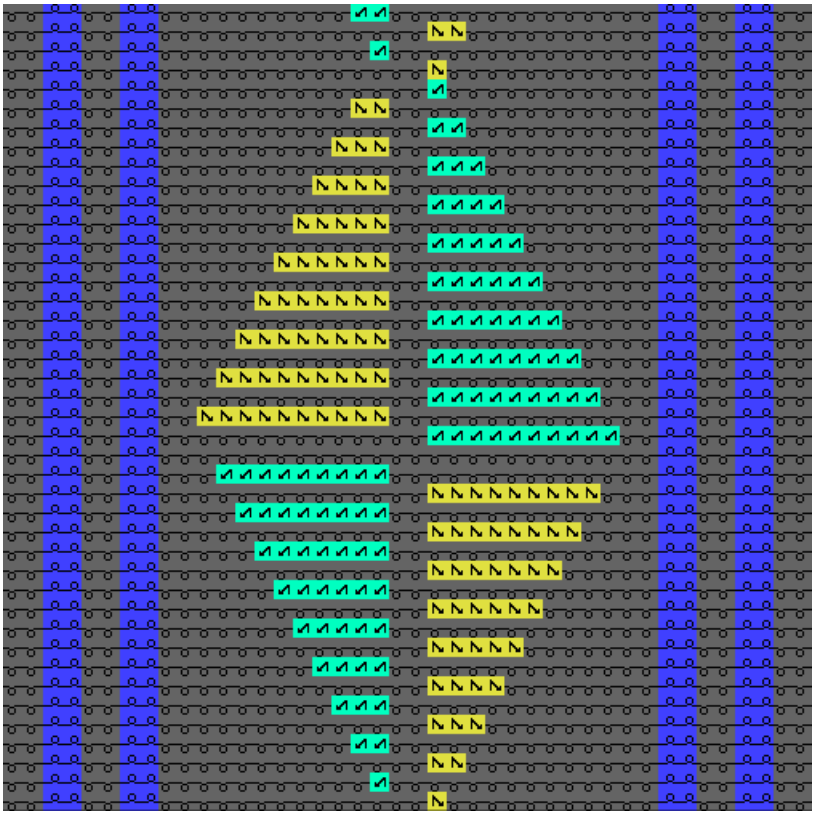
3. Activate the  control column in the "Symbol View [Basic]" and insert the VJA^0 command over the height of the motif.



4. Select Petinet modules from the "Module Explorer of Database" under "Modules" / "Stoll" / "Standard" / "Pointelle".
5. Draw the motif with the "Pointelle_v_Repetition<=" and "Pointelle_v_Repetition=>" modules.

Switch from "Enter Module Racking" to "Retain Pattern Racking" in the "Module" / "Insert Modules (Settings)" menu for drawing in the modules.

- Draw in Petinet to the right on odd rows (1,3,5) with V0 racking.
- Draw in Petinet to the left on even rows (2,4,6) with VR1 racking.



6. Draw in further structure and ribs in to the basic pattern.

> **i** 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 JA^0 the edge stitches will get outside the knitting area and therefore they will not be knitted or transferred.

17.3 Create the shape in the M1plus Shape Editor and load it

I. Create a shape for the front and the V-neck:

1. Call up the "Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.

Watch out when generating the shape:

- Narrowing stepping by one needle only as this corresponds to the racking with Pointelle.
  Result: With it you can combine the narrowings with the Pointelle.
- The narrowings at the left and right should be offset in the height in all elements.

2. Generate the shape element for the **left front**.

Left front 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	-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	Narrowing
4		296	0	89	0	89	0	1	0	0		8	
5		0	250	0	75	0	75	1	0	0			

> **i** Set the narrowing 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**.

Right front 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	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	Narrowing
4		300	0	90	0	90	0	1	0	0		8	
5		0	-250	0	-75	0	-75	1	0	0			

> **i** Set the narrowing 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**.

Left neck 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	-33	0	-10	0	-10	1	0	0		0	Bind-off
2		6	0	2	0	2	0	1	0	0		8	
3		160	-20	48	-6	8	-1	6	0	0	6	8	Narrowing
4		33	0	10	0	10	0	1	0	0		8	
5		0	53	0	16	0	16	1	0	0			

> **i** Set the narrowing 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**.

Right neck 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	33	0	10	0	10	1	0	0		0	Bind-off
2		3	0	1	0	1	0	1	0	0		8	
3		160	20	48	6	8	1	6	0	0	6	8	Narrowing
4		36	0	11	0	11	0	1	0	0		8	
5		0	-53	0	-16	0	-16	1	0	0			

> **i** Set the narrowing on the right to an odd row number as the narrowing shall be done together with the "Pointelle =>".

6. Allocate attributes to the edges of the front and of the 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 neck-line	Structure single jersey V2

7. Save shape.
8. Close the "Shape Editor".

II. 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.

17.4 Complete the pattern

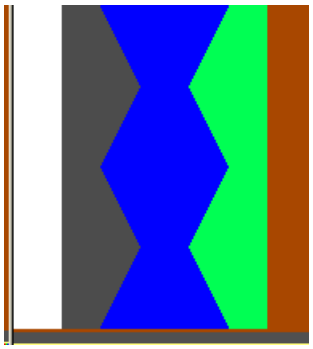
Complete the pattern:

1. Cut out the shape with  of the "Steps of Processing" toolbar.
2. Expand the pattern with  .
3. Start the technical processing with  .

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call up the "Sintral Check" by  .

18 Color Arrangement: Intarsia Binding with Float



Pattern name	Intarsia-Bindung mit Flottung.mdv	
Pattern size	Width:	200
	Height:	200
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	8	
Start	2x1	
Basic pattern	Front stitch with transfer	
Knitting technique	Single jersey Intarsia	
Description of pattern	Intarsia pattern with float as binding at the color field edge	

18.1 Create intarsia pattern

Create pattern:

1. Generate a new pattern.
2. Select **Pattern without shape** and "Design Pattern".
3. Draw intarsia motif with yarn or yarn carrier colors.

18.2 Generate Color Arrangement for Intarsia binding

I. Generate Color Arrangement for Intarsia binding with float:

✓ The Intarsia pattern is drawn with different yarn or yarn carrier colors.

1. Select the first two motif rows via the row selection bar.
2. Click the  icon in the "Default" toolbar.
3. Confirm and close the "Properties of: CA#1" dialog box with "OK" button.

▶ The color sequence present in the selection will be displayed in the "Color Arrangement Editor".

4. Edit Color Arrangement:

■ Create column selections.

■ Specify number of columns to be inserted.

■ Column type: select "Empty column" or "Selection".

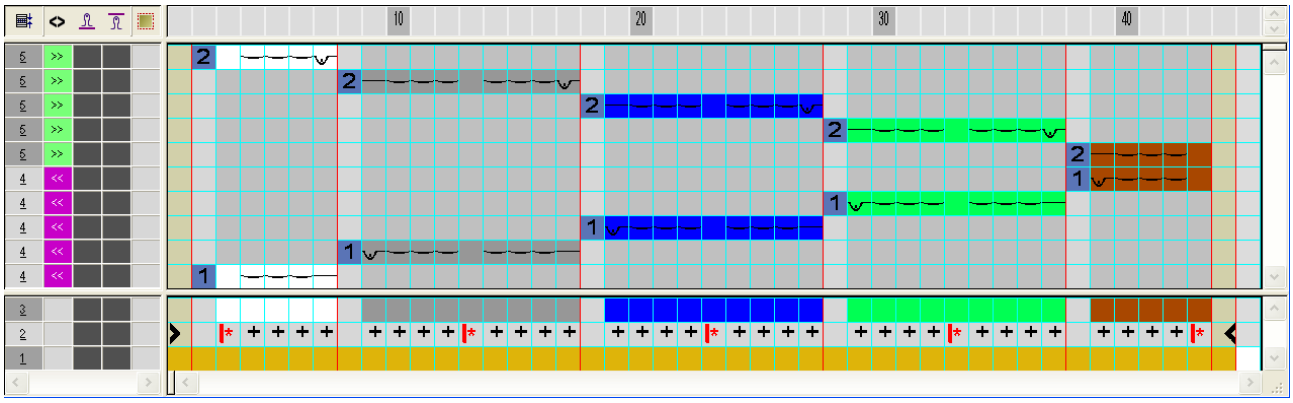
5. Draw in the "Float with transfer to the rear" **needle action** in the inserted columns.

i	In the columns with the **+ symbol** you always have to enter **color and needle actions** or **no entry**.

6. Insert the  icon below the search color in the columns for the **Intarsia Binding** .

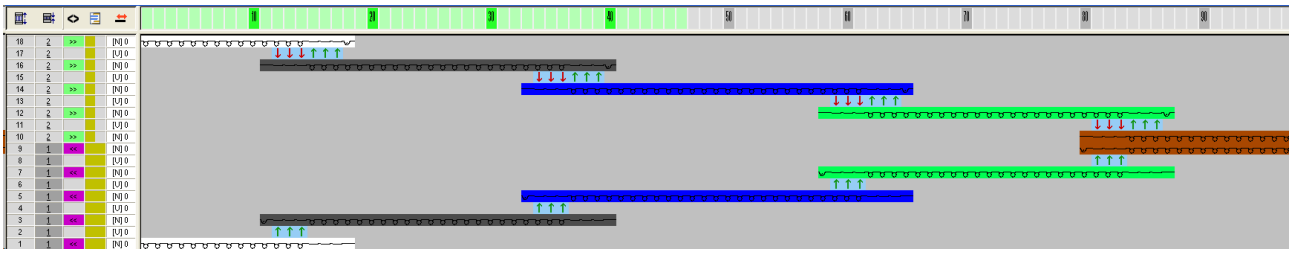
▶ The columns marked with the  icon will be inserted in the defined width at the color field border once.

Example: Binding intarsia by means of symbol +



7. Close the "Color Arrangement Editor" with .
8. Expand the selected rows to check the binding.

▶ The preview window will be opened.



9. Close the preview with .
10. Draw-in the CA in the control column over the entire height of the pattern.

18.3 Complete the pattern

Complete the pattern:

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

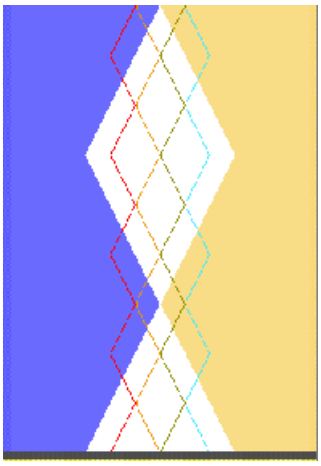
▶ Pattern in expanded "Symbol and Technical view".

2. Start the technical processing with the icon.

▶ The query "Generate MC Program" appears.

3. Confirm the query with "OK".
4. Click in the Steps of Processing toolbar.

19 Color Arrangement: Yarn Bridges



Pattern name	23_Color Arrangement: Garnbrücken.mdv	
Pattern size	Width:	100
	Height:	50
Machine type:	CMS 822	
Setup Type	Setup2	
Gauge	6.2	
Start	1x1	
Basic pattern	Front stitch with transfer	
Knitting technique	Intarsia with yarn bridges and normal yarn carrier	
Description of pattern	Color Arrangement for ◆ Yarn Bridges ◆ Move the yarn carriers (kicking)	

19.1 Generate Color Arrangement for intarsia patterns

The following "Color Arrangements" contain different functions and special features:

- Several colors are processed in one knitting system. (Combining yarn carriers).
- Knitting cycle without empty rows
- Yarn bridges behind the diagonals.

I. Create and draw a new pattern:

1. Create a new pattern with "Design Pattern" setting.
2. Draw intarsia motif diamond and diagonals with the yarn colors.

II. Generate Color Arrangements:

i	Generate the Color Arrangement in such a way that all colors of the diagonals are knitted first within a pattern row and then the basic colors. You can combine several colors into one system to get an optimum production. Watch out the minimum distances of the yarn carrier type in use (1 or 2). The type 2 is used in the example.

1. Select the first pattern rows via the row selection bar.

2. Click the  icon in the "Default" toolbar.

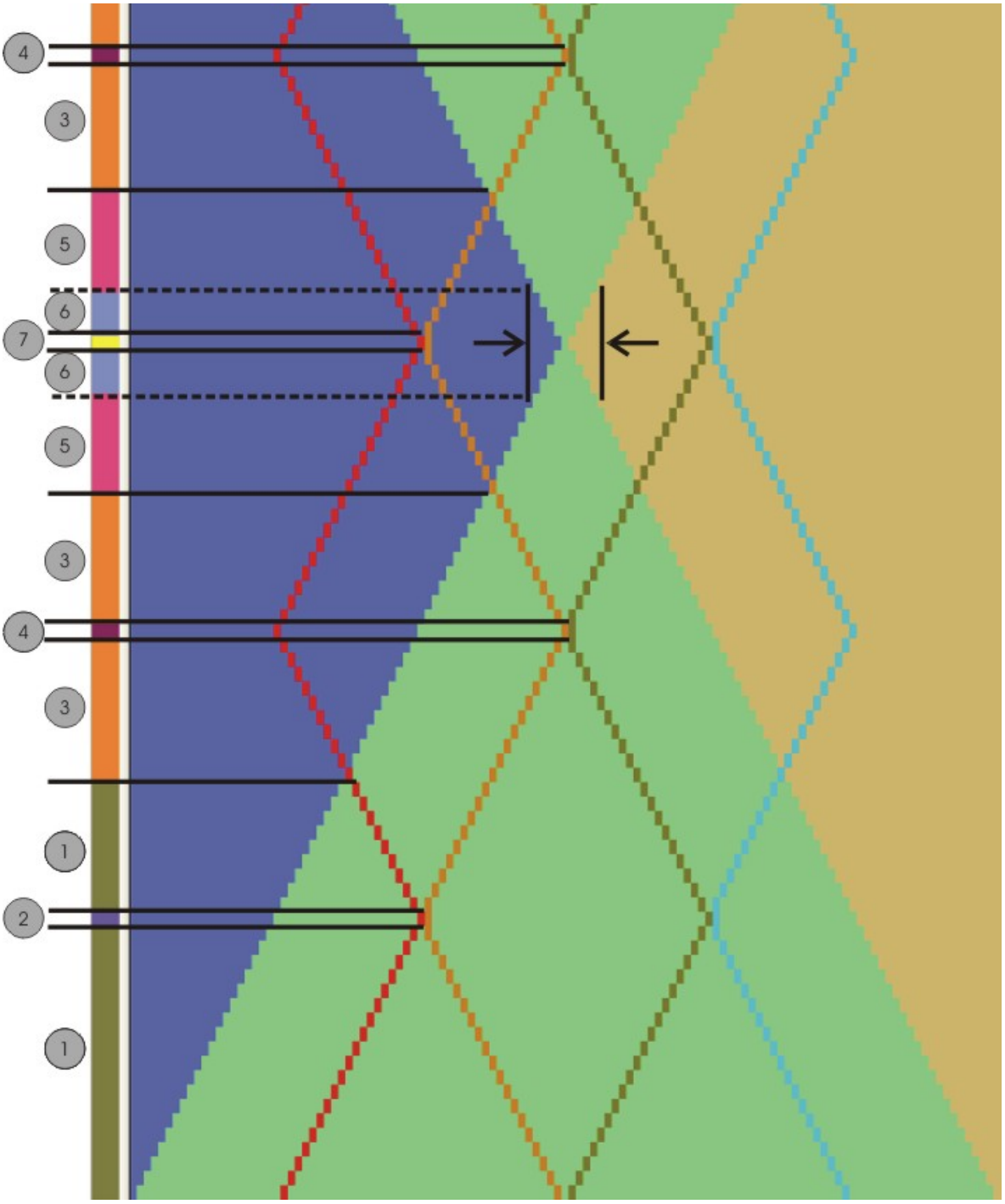
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Make changes.
4. Close the "Color Arrangement Editor" with  .
5. Confirm the query "Save the modified module?" with "Yes".

▶ The Color Arrangement will automatically be entered in the control column of the selected pattern area.

6. Select the further areas in the pattern and generate Color Arrangements.
7. Work out Color Arrangements according to the illustrations in the following chapter **Color Arrangement 1-8**.

III. Overview of used Color Arrangements



Area	CA	Function of the Color Arrangements
1	CA 1	CA with yarn bridges behind the diagonals for area 1
2	CA 2	Move CA with yarn bridges behind the diagonals, yarn carriers and knit stitch at the point of contact of the diagonals

Area	CA	Function of the Color Arrangements
3	CA 3	CA with yarn bridges for area 3
4	CA 4	Move CA with yarn carrier, knit yarn bridges and stitch.
5	CA 5	CA with yarn bridges for area 5
6	CA 6	Move CA with yarn carrier, knit yarn bridges and stitch considering the minimum distance and the used yarn carrier type for area 6
7	CA 7	CA with yarn bridges for area 7
	CA 8	(Not mapped) CA with yarn bridges for area 8 (same situation as area 4)

IV. Expand the pattern for control.

✓ The Color Arrangements are generated and entered at the respective place in the CA column bar.

1. Expand the selected rows for a function check.

▶ The preview window will be opened.

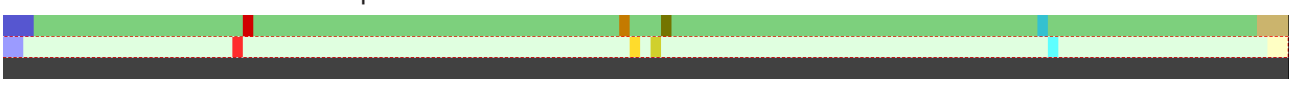
2. Close the preview window with  .
3. Delete selection.
4. Edit the pattern further.

- Color Arrangement #1 [🗋 128]
- Color Arrangement #2 [🗋 129]
- Color Arrangement #3 [🗋 130]
- Color Arrangement #6 [🗋 133]
- Color Arrangement #7 [🗋 134]
- Color Arrangement #8 [🗋 135]
- Color Arrangement #4 [🗋 131]
- Color Arrangement #5 [🗋 132]

19.2 Color Arrangement #1

Generate Color Arrangement for area 1.

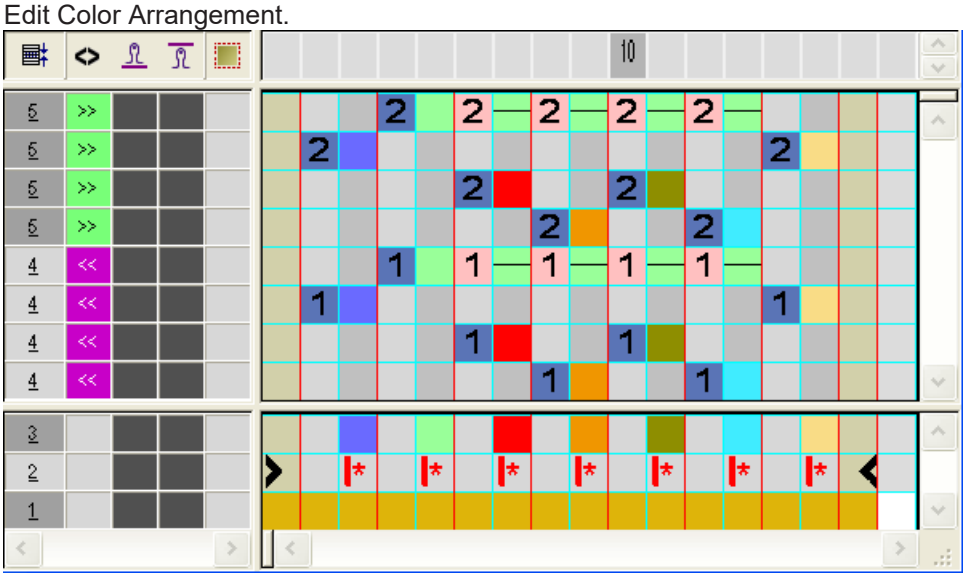
1. Select two pattern rows in area 1.



2. Click the  icon in the "Default" toolbar.

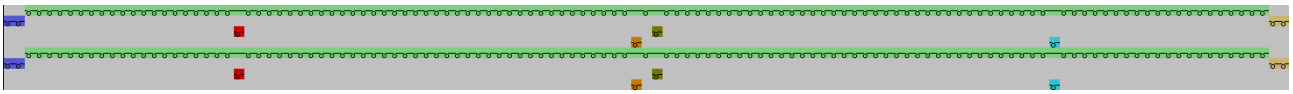
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Edit Color Arrangement.



4. Close the "Color Arrangement Editor" with .

Expanded presentation:



19.3 Color Arrangement #2

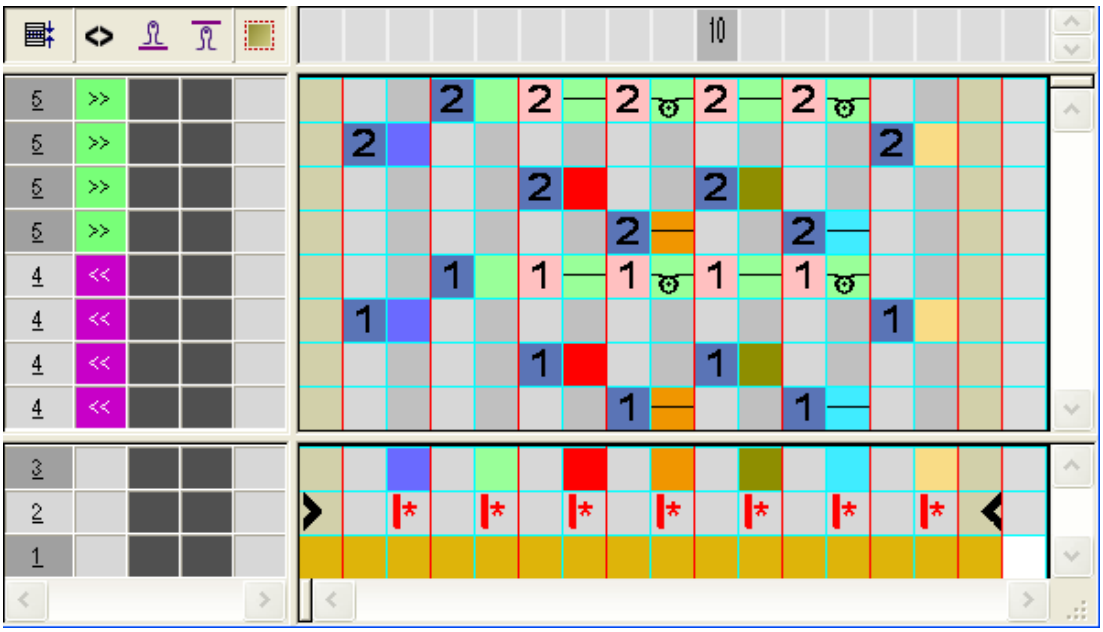
Generate Color Arrangement for area 2.

1. Select two pattern rows in area 2

2. Click the icon in the "Default" toolbar.

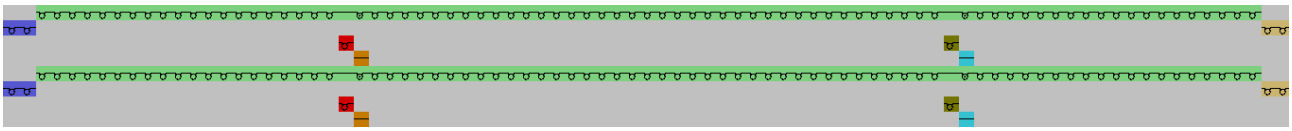
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Edit Color Arrangement.



4. Close the "Color Arrangement Editor" with .

Expanded presentation:



19.4 Color Arrangement #3

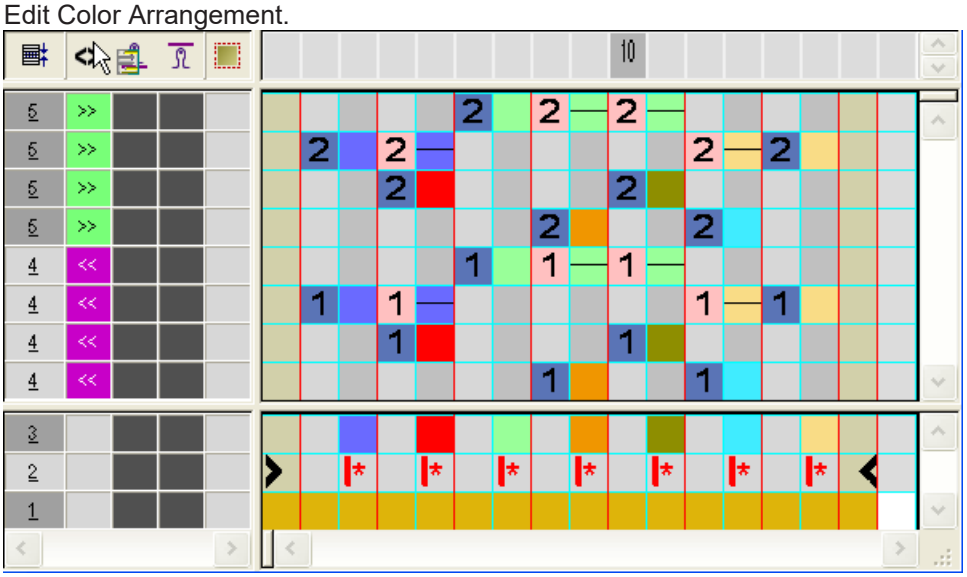
Generate Color Arrangement for area 3.

1. Select two pattern rows in area 3.

2. Click the icon in the "Default" toolbar.

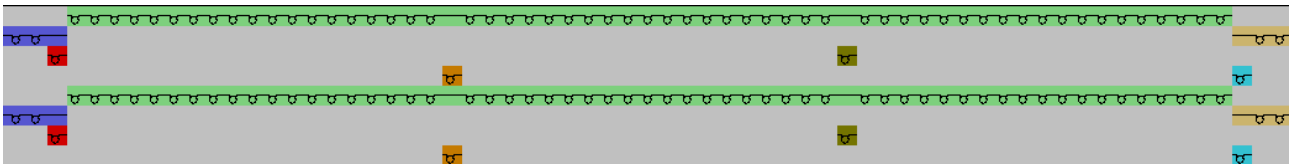
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Edit Color Arrangement.



4. Close the "Color Arrangement Editor" with .

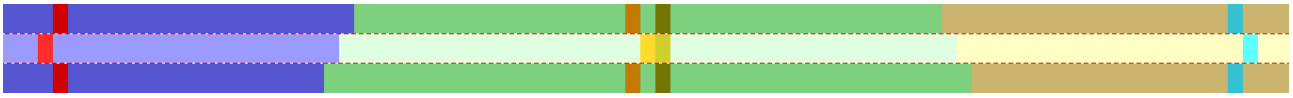
Expanded presentation:



19.5 Color Arrangement #4

Generate Color Arrangement for area 4.

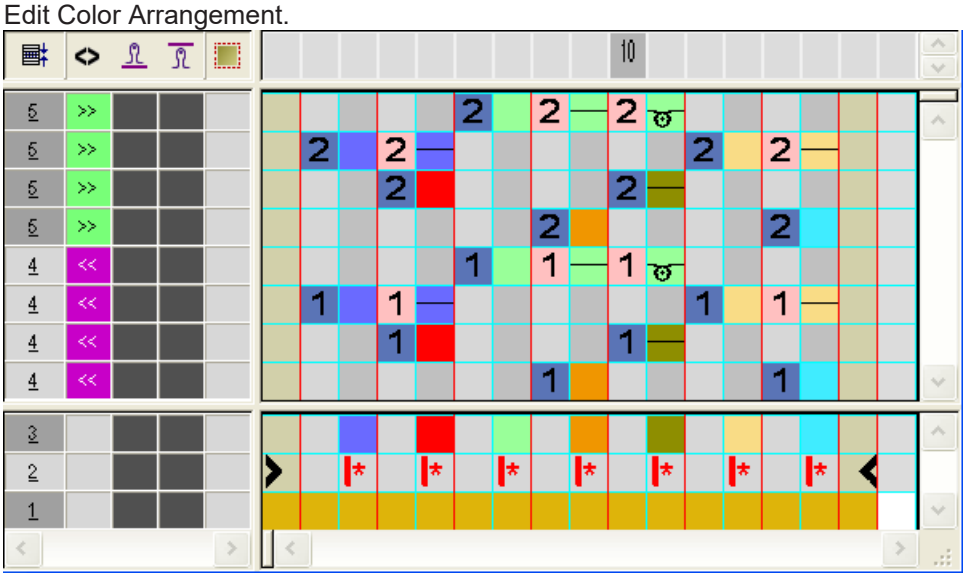
1. Select two pattern rows in area 4.



2. Click the icon in the "Default" toolbar.

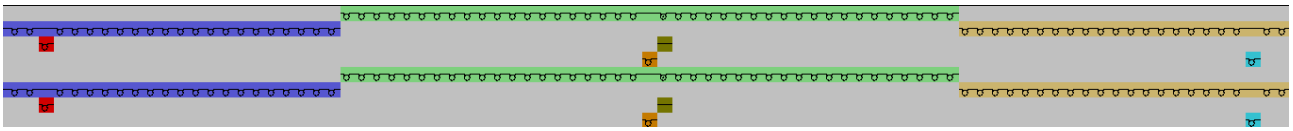
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Edit Color Arrangement.



4. Close the "Color Arrangement Editor" with  .

Expanded presentation:



19.6 Color Arrangement #5

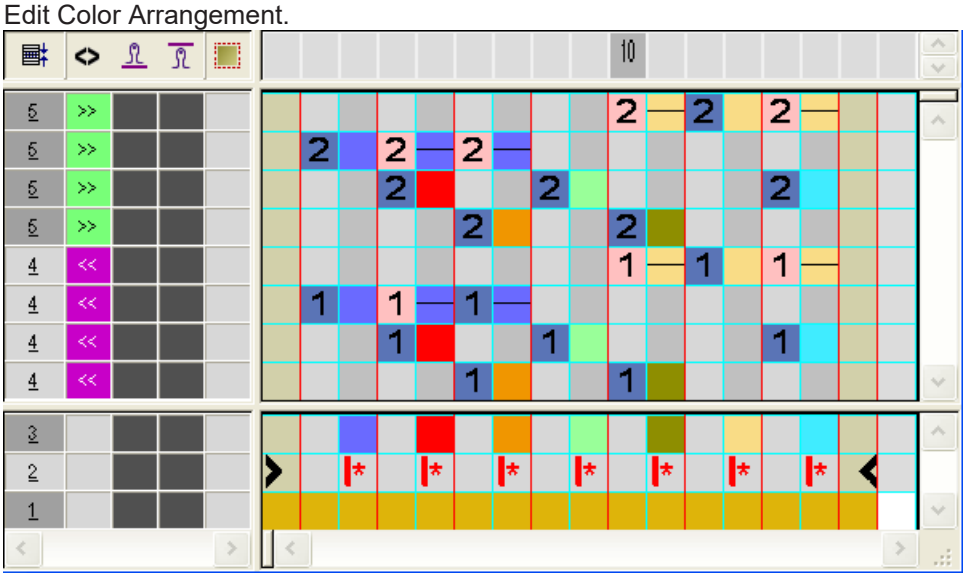
Generate Color Arrangement for area 5.

1. Select two pattern rows in area 5.

2. Click the  icon in the "Default" toolbar.

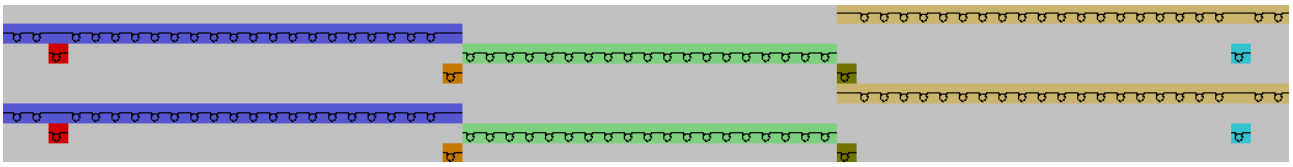
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Edit Color Arrangement.



4. Close the "Color Arrangement Editor" with .

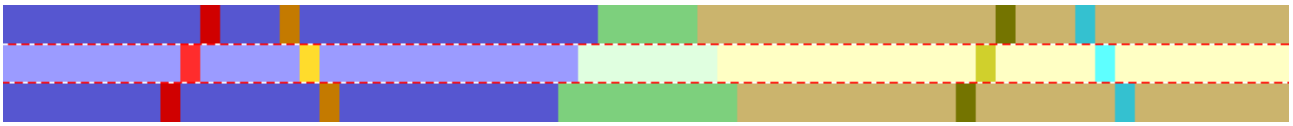
Expanded presentation:



19.7 Color Arrangement #6

Generate Color Arrangement for area 6.

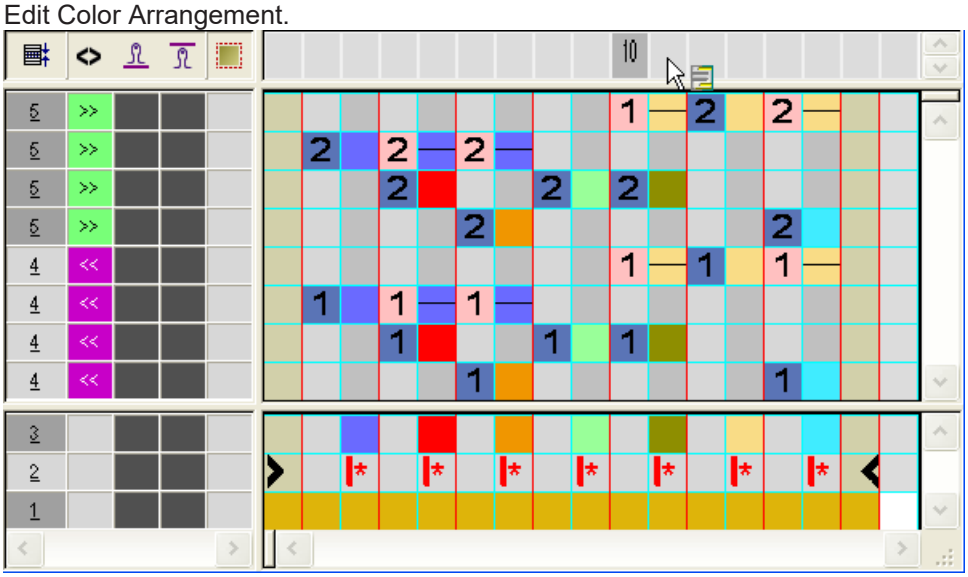
1. Select two pattern rows in area 6.



2. Click the icon in the "Default" toolbar.

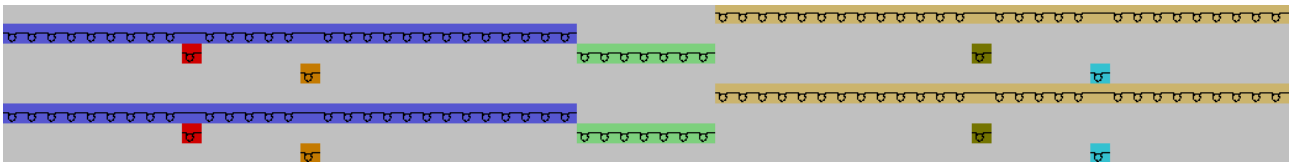
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Edit Color Arrangement.



4. Close the "Color Arrangement Editor" with  .

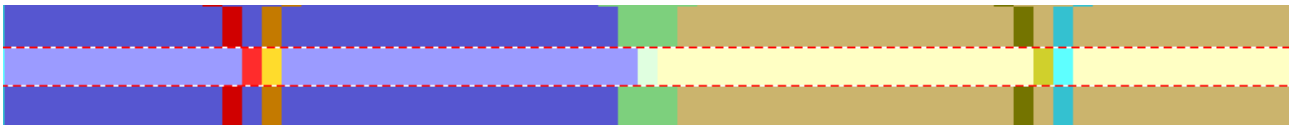
Expanded presentation:



19.8 Color Arrangement #7

Generate Color Arrangement for area 7.

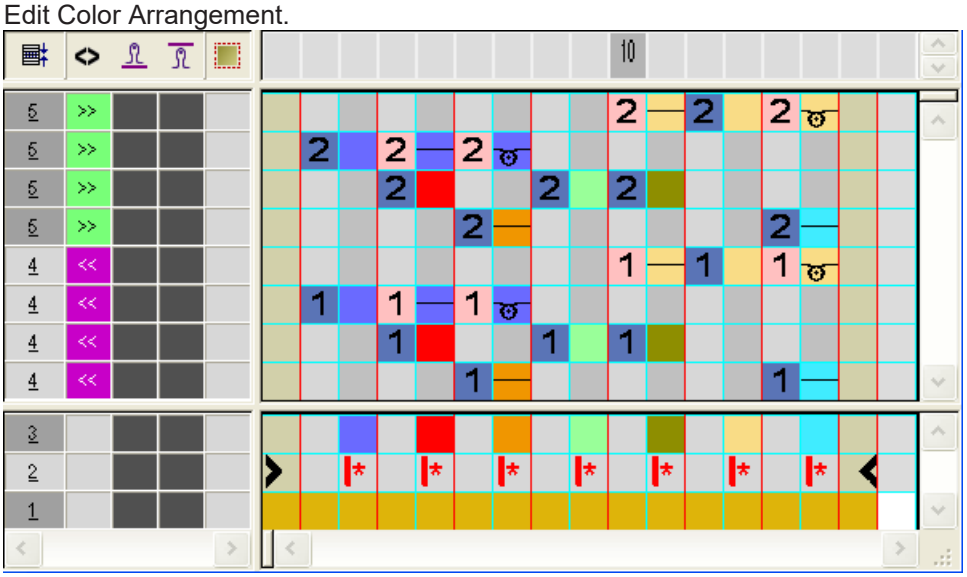
1. Select two pattern rows in area 7.



2. Click the  icon in the "Default" toolbar.

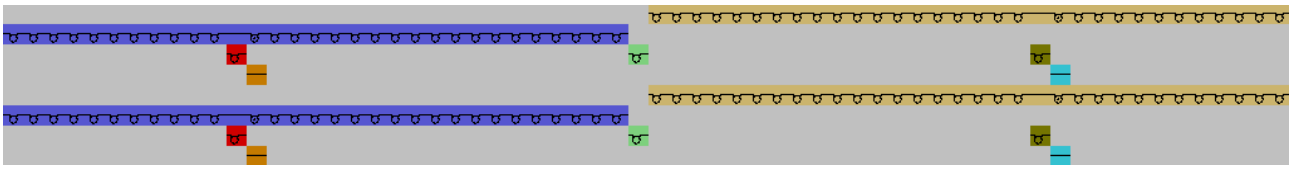
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Edit Color Arrangement.



4. Close the "Color Arrangement Editor" with .

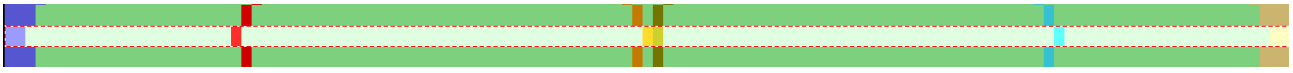
Expanded presentation:



19.9 Color Arrangement #8

Generate Color Arrangement for area 8.

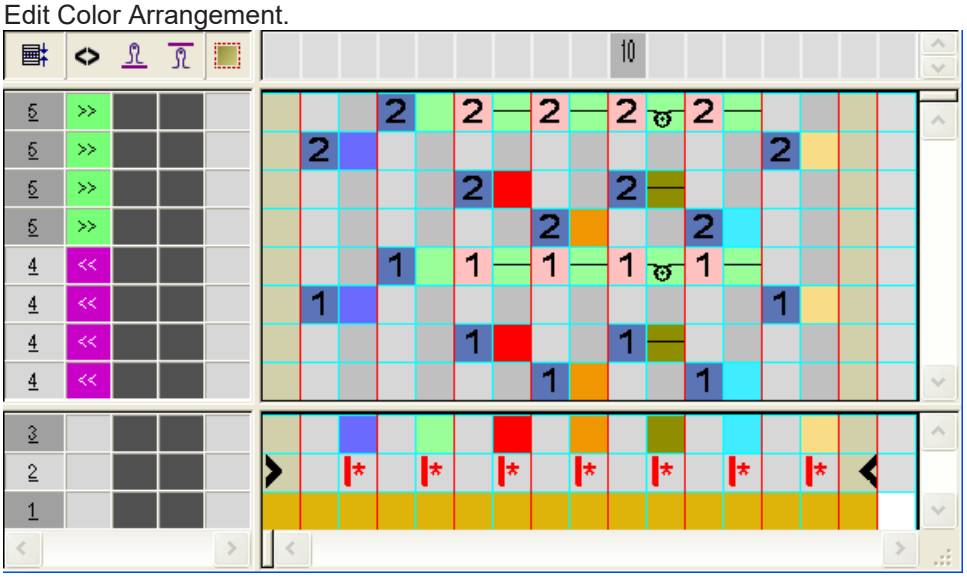
1. Select two pattern rows in area 8.



2. Click the icon in the "Default" toolbar.

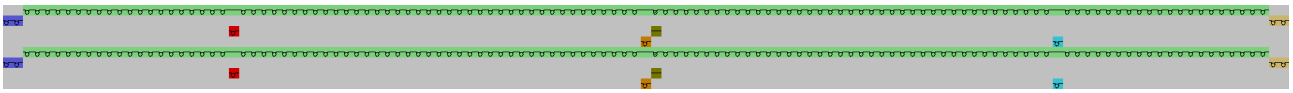
▶ The selection will be displayed in the "Color Arrangement Editor".

3. Edit Color Arrangement.



4. Close the "Color Arrangement Editor" with .

Expanded presentation:



19.10 Settings in the Yarn Field Allocation dialog box

In the "Yarn field allocation" dialog box you can make further specifications.

I. Switch off Intarsia binding

i	An intarsia binding can be avoided with the diagonals as they run diagonally and yarn bridges are formed behind it.

1. Call up the "Yarn Field Allocation" dialog box with .
2. In the and columns deactivate the Intarsia binding for the diagonals on both sides with and .

II. Allocate yarn carriers:

You can allocate the yarn carriers to the bars manually.

1. Allocate manually the yarn carriers to the yarn carrier bars.
   The following arrangement is advantageous:

- Put the basic colors on low bar numbers
- Put the colors of the diagonals too high bar numbers
- Allocate the yarn carrier of one basic color to one of the rib yarn carriers.

III. Specify yarn carrier type Intarsia in the MC Attributes:

1. Call up the "MC Attributes" dialog box via the "Pattern Parameters" / "Machine Attributes..." menu.
2. Select the **Yarn Carrier Type** of the "Yarn Carrier Drive" options.

- Type 1 - Previous Intarsia yarn carrier
- Type 2 – New Intarsia yarn carrier

3. Close the dialog box with "OK".

▶ The selected setting will be applied to all Intarsia yarn carriers of the selected machine. The color field distances will be calculated regarding the yarn carrier type set in "MC Attributes".

---

i The Intarsia yarn carrier type 2 requires less distance of yarn carrier fields.

IV. Specify the yarn carrier type in the Yarn Field Allocation:

1. Select **Intarsia** or **Normal** in "Yarn Field Allocation" dialog box in the "Yarn carrier type" column in the "Type" selection menu.
2. Make these settings for all yarn fields (yarn carriers).
3. Close the Yarn Field Allocation dialog box with "OK".

19.11 Complete the pattern

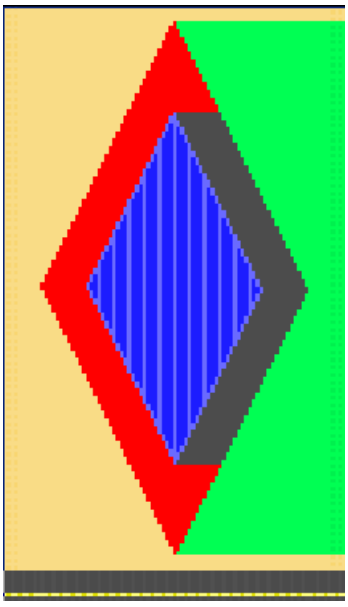
Complete the pattern:

1. If necessary, further settings can be made in the "Yarn Field Allocation" dialog box.
2. Expand the pattern with  of the "Steps of Processing" toolbar.
3. Start the technical processing with  .

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
   - or -
   Click  in the "Steps of Processing" toolbar.

20 Color Arrangement: Inlay Thread Technique



Pattern name	13_Muster_Pattern.mdv	
Pattern size	Width:	91
	Height:	149
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	8	
Start	2x1	
Basic pattern	◆ Front stitch with transfer ◆ 3x1 rib structure (blue intarsia area)	
knitting technique	Intarsia with **Normal yarn carrier**	
Pattern description	Color Arrangement for ◆ Insertion of a inlay thread	

20.1 Generate pattern and Color Arrangement for inlay thread

I. Create and draw a new pattern:

1. Create a new pattern with "Design Pattern" setting.
2. Draw intarsia motif with **yarn colors**.
3. In the blue intarsia area, draw-in the 1x3 rib structure with a front stitch at the color field border.

▶ The structure ties-in the inlay thread.

II. Generate Color Arrangement with inlay thread:

1. Select two pattern rows at the beginning of the area with inlay thread via the row selection bar.
2. Click the  icon in the "Default" toolbar.

▶ The color sequence present in the selection will be displayed in the "Color Arrangement Editor".

3. Insert the desired number of rows and columns in the Color Arrangement Editor.
4. Draw-in the desired knitting sequence into the inserted rows and columns with the corresponding color and needle actions.
5. Enter the corresponding reference row numbers in the reference column of the additional rows.

---

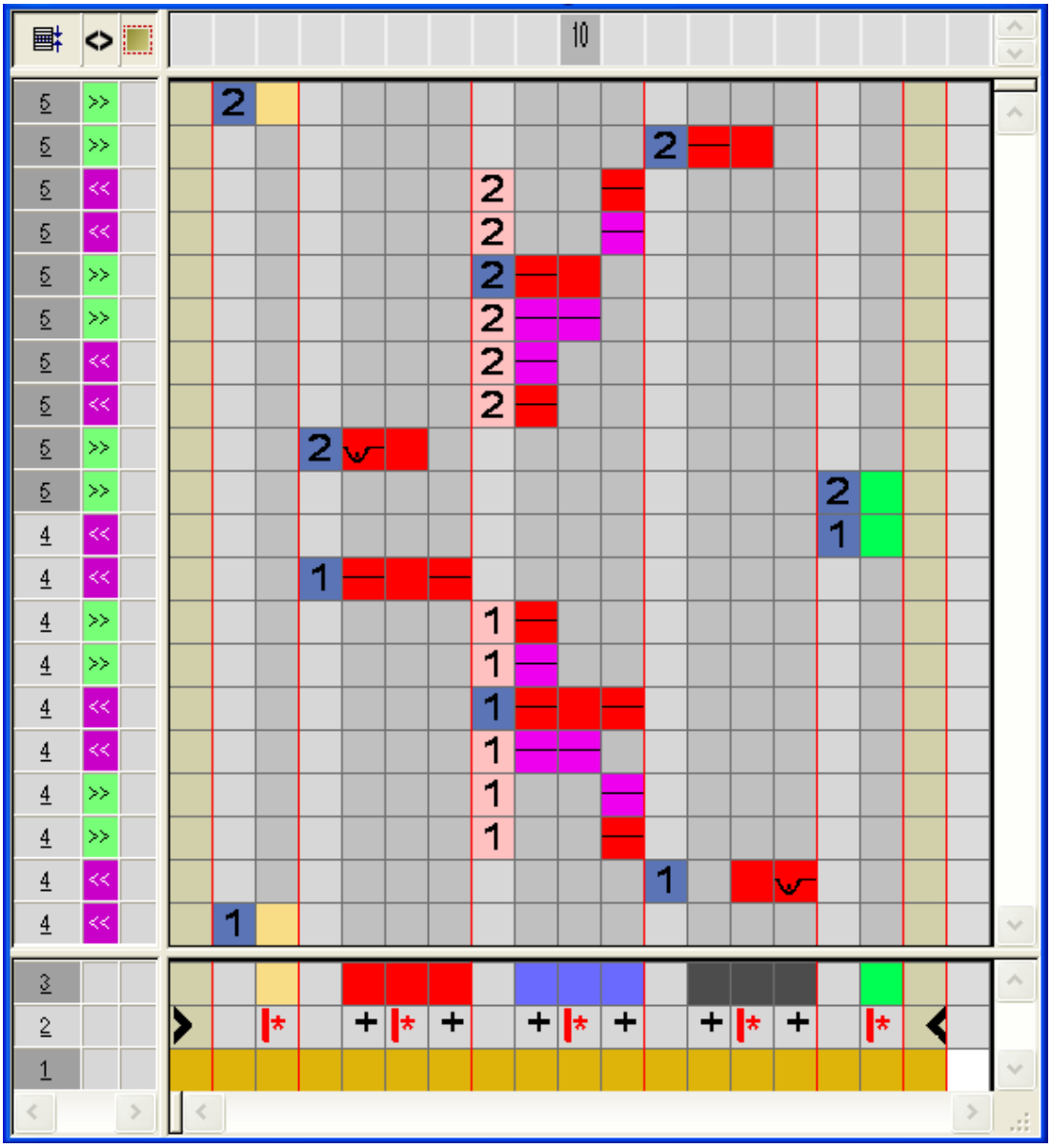
i **Normal Yarn Carriers** will be used in this pattern.
This means:

Draw-in the shifting of the yarn carriers (for the motif thread and the inlay thread) in the CA.

Watch out the Intarsia binding at the motif edge.

---

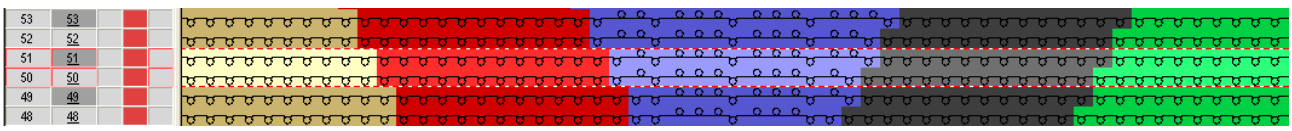
6. Enter the  symbol in the inserted columns below the search color.



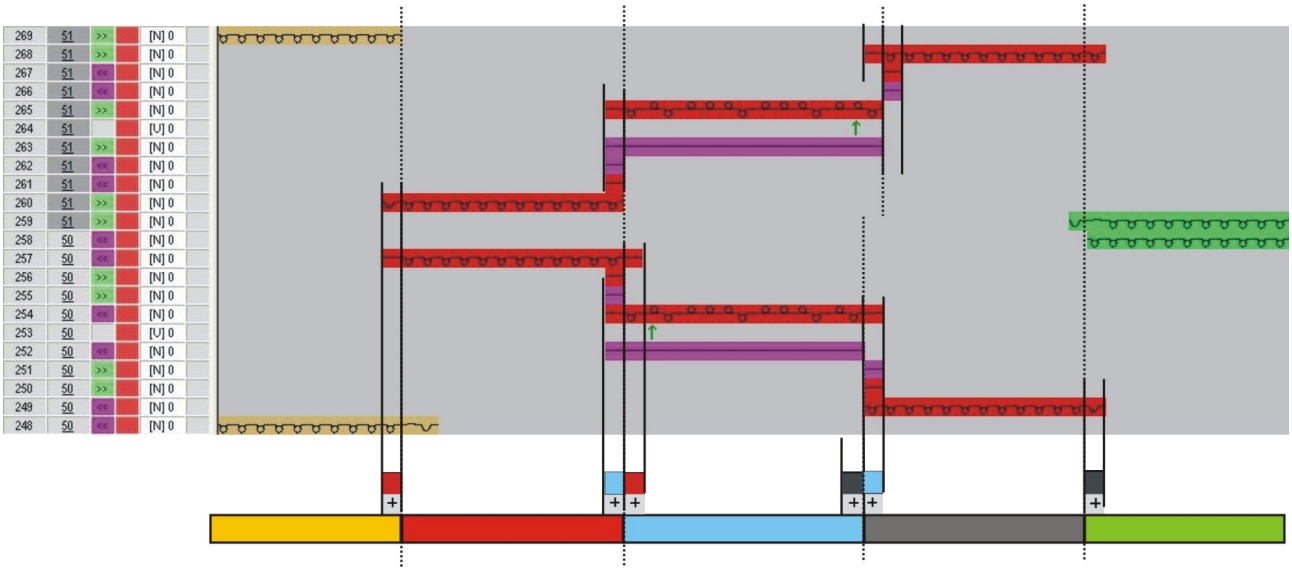
7. Close the "Color Arrangement Editor" with .
8. Confirm the query "Save the modified module?" with "Yes".
9. Expand the selected rows.

Example: Intarsia with inlay thread knitted with normal yarn carrier

Selected rows before expanding:



Selected rows after expanding:



10. Close the preview window with .
11. Delete selection.
12. Continue editing the pattern.

20.2 Complete the pattern

Complete the pattern:

1. If necessary, further settings can be made in the "Yarn Field Allocation" dialog box.
2. Expand the pattern with of the "Steps of Processing" toolbar.
3. Start the technical processing with .

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral check" via "MC program / Conduct Sintral Check..." menu.
   - or -
   Click in the "Steps of Processing" toolbar.

21 Skirt with Plissee

Pattern name	Plissee.mdv	
Pattern size	Width:	450
	Height:	280
Machine type:	CMS 822	
Setup Type 2	Setup2	
Gauge	E 6.2	
Start	Tubular draw thread end	
Basic pattern	Front stitch with transfer	
Knitting technique	Structure	
Description of pattern	Skirt with plissee	

21.1 Version 1 Skirt with plissee

i	The plissee is worked by knitting one row in between, starting from the outer edge.

I. Generate pattern and shape for a plissee skirt:

1. Generate a "New pattern" via "File" / "New" menu bar.
2. Select machine type.
3. Select **Basic pattern (pattern without shape)** and "Design Pattern".
4. Set pattern size and select the "Front stitch" basic pattern.
5. Select the start "Tubular with draw thread end" for the beginning.
6. Confirm the settings with "Generate Design Pattern".

II. Create shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.
   ▷ The dialog box will be opened.
2. Create a new shape in the **shp** format via "File" / "New".
   - or -
   Click the  icon.
3. Create a "Basic shape" element for a **front**:

■ The "Mirrored" checkbox is activated.

Example:

■ Total knitting width of 420 needles

■ Plissee module 20 needles wide

■ Plissee with 10 needles overlapping.

Basic element:

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function	Group
1		0	-700	0	-210	0	-210	1	0	0			Basis	0
2		400	0	120	0	120	0	1	0	0		0		0
3		3	66	1	20	1	20	1	0	0	70		Narrowing	0
4		3	66	1	20	1	20	1	0	0	80		Narrowing	0
5		3	66	1	20	1	20	1	0	0	90		Narrowing	0
6		3	66	1	20	1	20	1	0	0	100		Narrowing	0
7		3	66	1	20	1	20	1	0	0	110		Narrowing	0
8		70	0	21	0	21	0	1	0	0		0		0
9		0	366	0	110	0	110	1	0	0				0

4. Allocate "narrowing" and "fading-out" to the edge lines no. 3-7:

Specifications in the basic element left edge			
Line of the edge	Tab "General information"	Tab "Fade-out"	Tab "Narrowing"
No. 3 to 7	Narrowing	No fading-out	Plissee

5. Enter the value **70** in the "Width ---" column in order to place the module of the edge line 3 at the right position.

▶ The module will be inserted 70 needles to right from the left edge.
The step width amounts to 20. Therefore, the right-most needle of the module is located with a distance of 90 needles from the left edge.

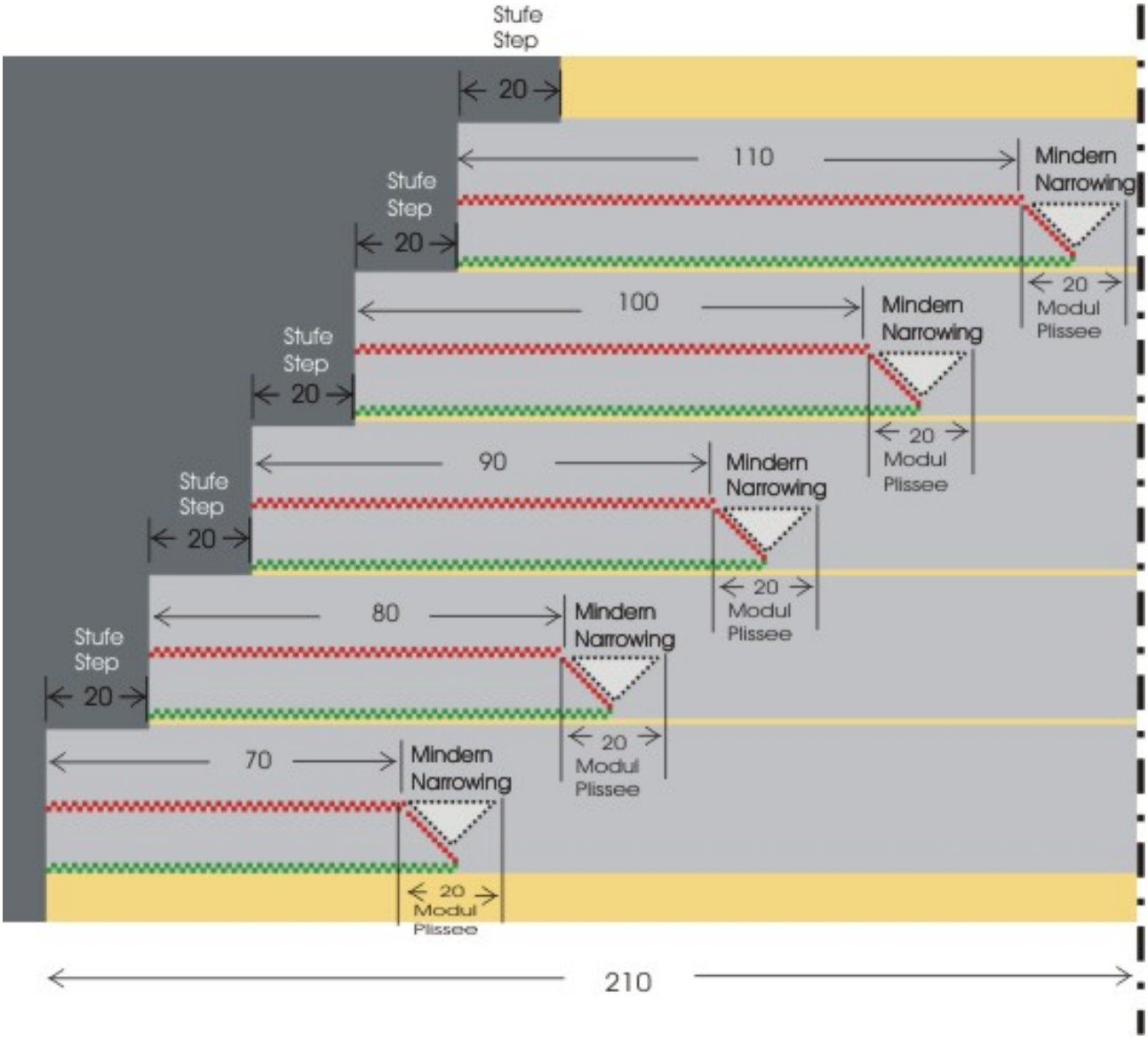
6. Call-up the shape attributes "Fading-out" of this shape edge.
7. Enter the fade-out width **0** or do not select any module for fading out.
8. Call-up the shape attributes "Narrowing" of this shape edge.
9. Select the "Plissee" module for "Structure single jersey".
10. Define a higher stepping as the narrowing width (step 20) for the edge line under "Binding-off from step".
11. Define the attributes for the other shape edges 4-7 and complete the shape table.
12. Insert the pleats as follows:

■ with the same width of the pleats

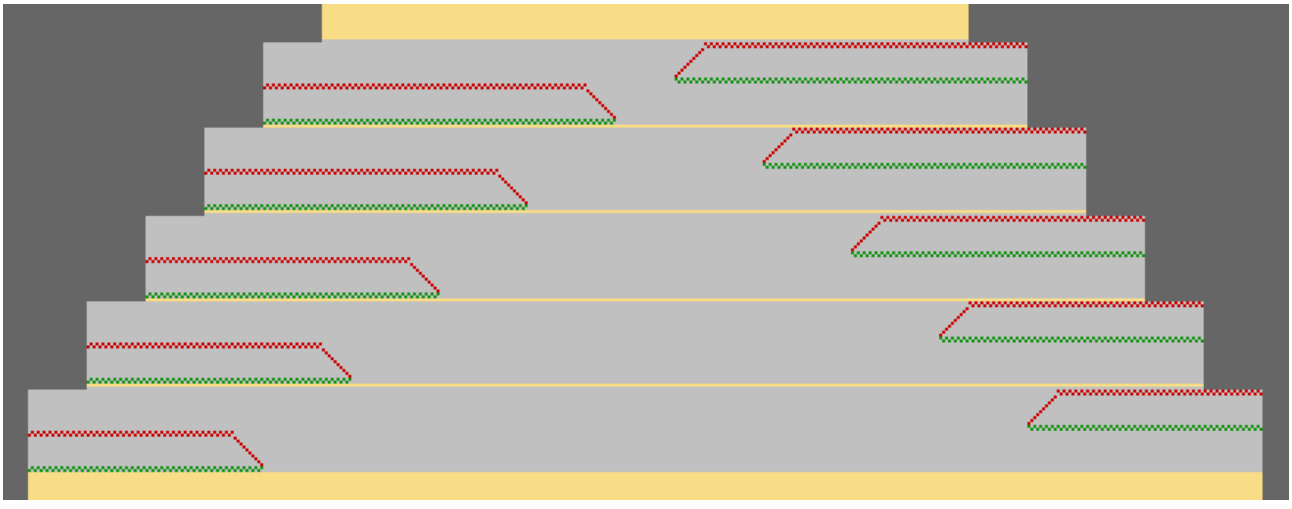
■ following step by step

- with a distance of one stitch row between the pleats

Presentation of the fading-out and narrowing distances:



Overview presentation for plissee transferring



13. Save the shape via the "File" / "Save" or "Save As…" menu.
    ▷ The shape will be saved in the shp format.
14. Close the M1plus Shape Editor with .

II. Placing the shape in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".

▶ The "Open" dialog box will be displayed.

2. Specify the path and select the desired shape in the shp format.
3. Click the "Open" button.

▶ The shape will be laid on the pattern in the shp format.

21.1.1 Generate length cycles

By transferring the pleats, the fabric width is reduced and the tension in the fabric is increased. Therefore, the fabric needs a minimum length between the fabric beginning and the pleat transfer.

i **A cycle has to be inserted in the basic pattern for the length control.**

✓ The fabric has to be grasped by the main take-down when the pleats are transferred.

1. Below the pleats select the rows that are to build a cycle.
2. Call up the "Cycles" dialog box with the "Pattern Parameters" / "Cycles..." menu.
   - or -
   Press the key combination "Ctrl" + "R".

▶ The "Cycles" dialog box is opened.

3. Use a cycle counter for the length control:
4. Select rows also above the pleats and insert a cycle, if necessary.

21.1.2 Complete the pattern

Complete the pattern:

1. Cut-out the shape with the button in the "Steps of Processing" toolbar.
2. Expand the pattern with icon of the "Steps of Processing" toolbar.
3. Start the technical processing with the icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral Check" via the "MC Program / Conduct Sintral Check..." menu.

21.2 Version 2: Skirt with plissee

i	With this variant the pleats are worked starting in the center of the pattern, directly neighboring and without intermediate knitting.

I. Generate pattern and shape for a plissee skirt:

1. Generate a "New pattern" via "File" / "New" menu bar.
2. Select machine type.
3. Select **Basic pattern (pattern without shape)** and "Design Pattern".
4. Set pattern size and select the "Front stitch" basic pattern.
5. Select the start "Tubular with draw thread end" for the beginning.
6. Confirm the settings with "Generate Design Pattern".

II. Create shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.
   ▷ The dialog box will be opened.
2. Generate a new shape in the shp format via "File" / "New".
   - or -
   Click the  icon.
3. Create a "basic shape" element:

■ The "Mirrored" checkbox is activated.

Example:

■ Total knitting width of 420 needles

■ Plissee module 20 needles wide

■ Plissee with 10 needles overlapping

Basic element:

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function	Group
1		0	-700	0	-210	0	-210	1	0	0			Basis	0
2		400	0	120	0	120	0	1	0	0		0		0
3		0	66	0	20	0	20	1	0	0	190	210	Narrowing	0
4		6	0	2	0	2	0	1	0	0		210		0
5		0	66	0	20	0	20	1	0	0	160	190	Narrowing	0
6		6	0	2	0	2	0	1	0	0		190		0
7		0	66	0	20	0	20	1	0	0	130	170	Narrowing	0
8		6	0	2	0	2	0	1	0	0		170		0
9		0	66	0	20	0	20	1	0	0	100	150	Narrowing	0
10		6	0	2	0	2	0	1	0	0		150		0
11		0	66	0	20	0	20	1	0	0	70	130	Narrowing	0
12		6	0	2	0	2	0	1	0	0		130		0
13		33	0	10	0	10	0	1	0	0				0
14		0	366	0	110	0	110	1	0	0				0

4. Allocate narrowing and fading out to the edge lines:

edge lines numbers	General **tab**	**Tab** Fading-out	**Tab** Narrowing
3, 5, 7, 9, 11	Narrowing	Module: "No needle action"	Plissee
4, 6, 8, 10, 12		Module: "No needle action"	

5. Enter the value **210** in the shape edge no.3 in the "Width \\\" column

▶ A module with the width of 20 needles will be inserted for plissee.

6. Enter the value **190** in the "Width ---" column in order to place the module at the right position.

▶ The module will be inserted 190 needles to right from the left edge.
The step width is 20. Therefore, the right-most needle of the module is located exactly in the pattern center on needle 210.

7. Call-up the shape attributes "Fading-out" of this shape edge.
8. Allocate the "No needle action" module from the "Module Explorer of Database" under "Stoll" / "Basic pattern" to the "Structure single jersey" knitting mode.
9. Call-up the shape attribute "Narrowing" of this shape edge.
10. Select the "Plissee" module for "Structure single jersey".
11. Define a higher stepping as the narrowing width (step 20) for the edge line under "Binding-off from step".
12. Enter the value **190** in the shape edge no. 5 in the "Width \\\" column
13. Enter the value **160** in the "Width ---" column.

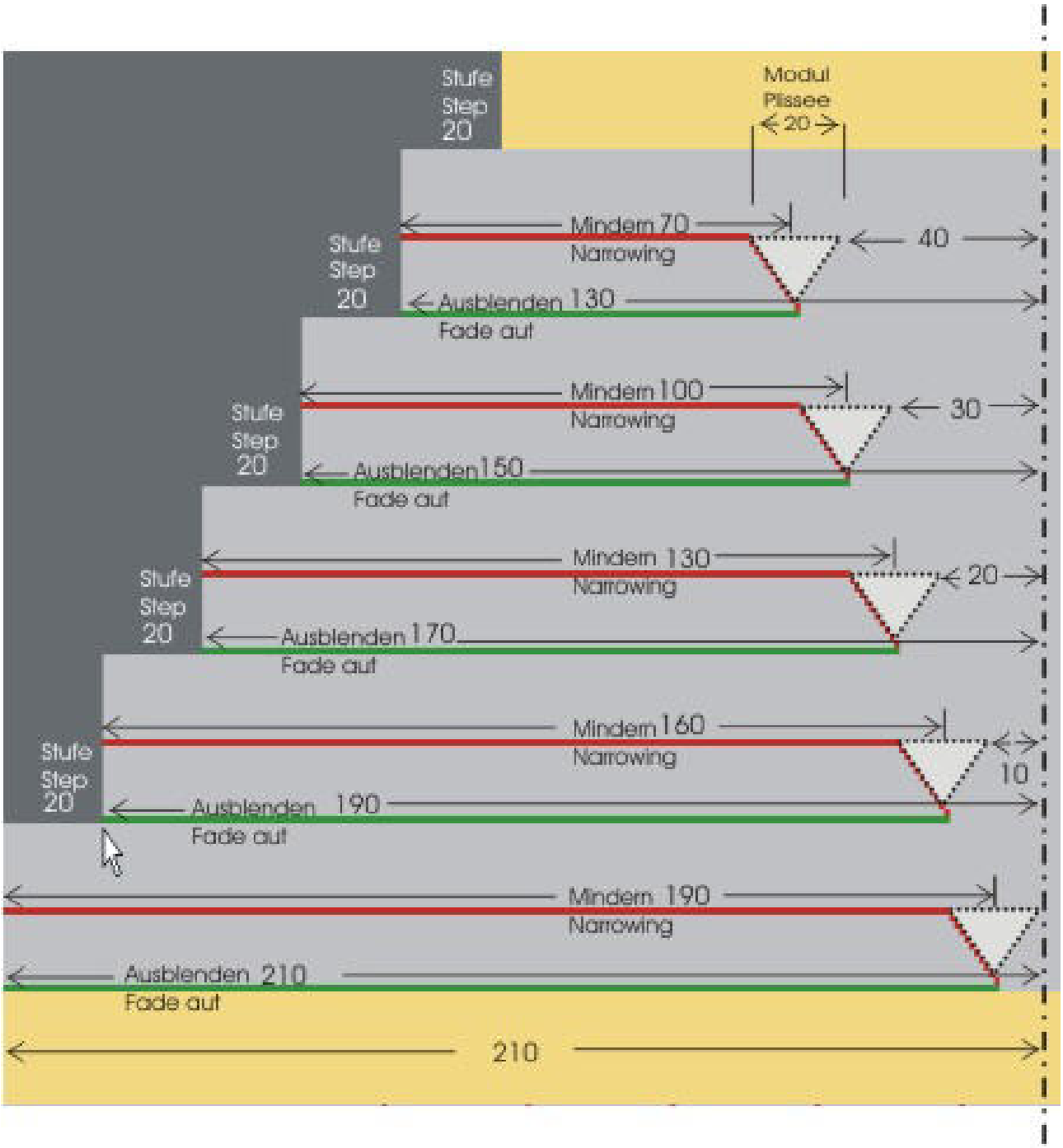
▶ The module is inserted 160 needles to right of the left edge. This way the most-right needle of the module is located with a distance of 10 from the pattern center.

14. Define the same attributes for the other shape edges no. 7, 9 and 11 and complete the shape table.
15. Allocate the "No needle action" module from the "Module Explorer of Database" under "Stoll" / "Basic pattern" to the shape edges no. 4,6,8,10 and 12 by fading-out the "Structure single jersey" knitting mode.
16. Save the shape via the "File" / "Save" or "Save As…" menu.

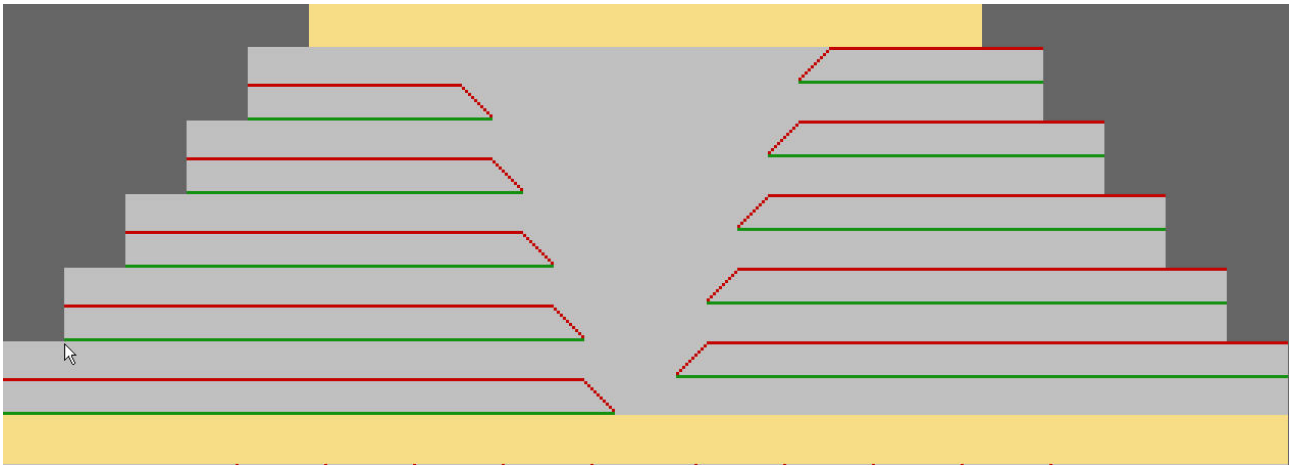
▶ The shape will be saved in the shp format.

17.Close the M1plus Shape Editor with .

Presentation of the fading-out and narrowing distances



Overview presentation for plissee transferring



II. Placing the shape in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".

▶ The "Open" dialog box will be displayed.

2. Specify the path and select the desired shape in the shp format.
3. Click the "Open" button.

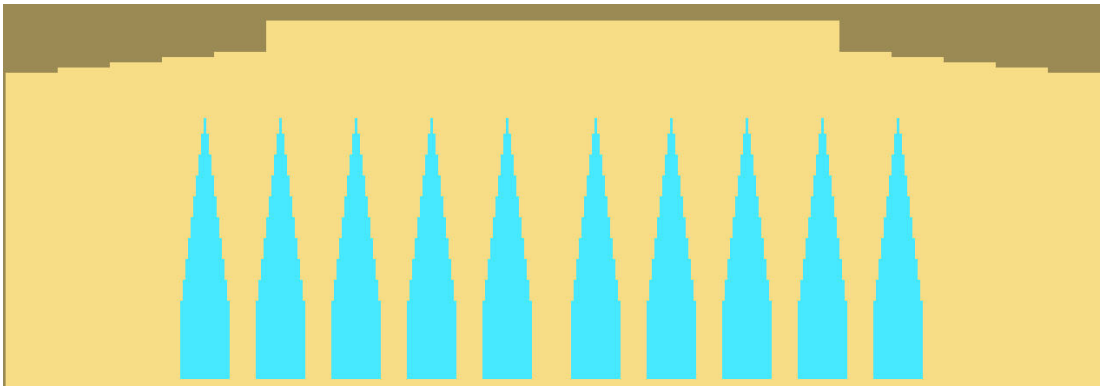
▶ The shape is laid on the pattern.

21.2.1 Generate motif and length cycles

Generate the motif:

✓ The shape is positioned on the basic pattern.

1. Below the plissee it is possible to draw-in structure steps by the  needle action, if necessary. This way the pleat effect is supported.



Inserting cycles:

By transferring the pleats, the fabric width is reduced and the tension in the fabric is increased. Therefore, the fabric needs a minimum length between the fabric beginning and the pleat transfer.

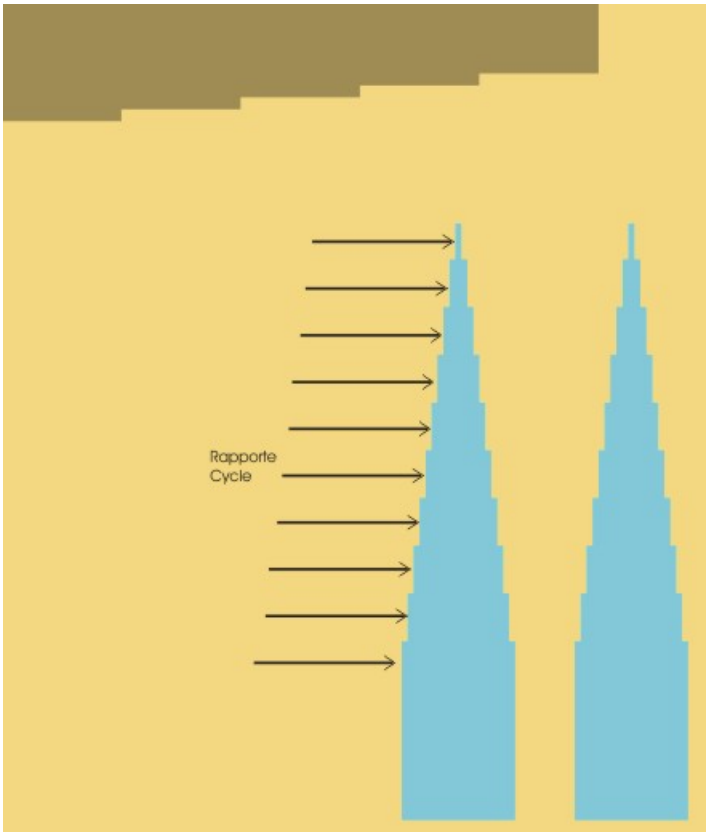
i	Cycles have to be inserted in the basic pattern for the length control.

✓ The fabric has to be grasped by the main take-down when the pleats are transferred.

1. In the area of the structure steps select rows, which are to build a cycle.
2. Call up the "Cycles" dialog box with the "Pattern Parameters" / "Cycles..." menu.
   - or -
   Press the key combination "Ctrl" + "R".

▶ The "Cycles" dialog box is opened.

3. Use a common cycle counter.
   - or -
   Use a separate cycle counter for each stepping.



4. Select rows also above the pleats and insert a cycle, if necessary.

21.2.2 Complete the pattern

Complete the pattern:

1. Cut-out the shape with the  button in the "Steps of Processing" toolbar.
2. Expand the pattern with  icon of the "Steps of Processing" toolbar.
3. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral Check" via the "MC Program / Conduct Sintral Check..." menu.

21.3 Version 3: Skirt with plissee

i	The plissee is generated starting in the pattern center with the narrowing technique Fair isle and arranged curved by several rows of intermediate knitting.

I. Generate pattern and shape for a plissee skirt with Fair Isle narrowing technique:

1. Generate a "New pattern" via "File" / "New" menu bar.
2. Select machine type.
3. Select **Basic pattern (pattern without shape)** and "Design Pattern".
4. Set pattern size and select the "Front stitch" basic pattern.
5. Select the start "Tubular with draw thread end" for the beginning.
6. Confirm the settings with "Generate Design Pattern".

II. Create shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.
   ▷ The dialog box will be opened.
2. Generate a new shape in the shp format via "File" / "New".
   - or -
   Click the  icon.
3. Create a "basic shape" element:

■ The "Mirrored" checkbox is activated.

Example:

Specifications for a total knitting width of 300 needles for 4 pleats with plissee module 16 needles wide and pleats with 8 needles overlapping.

Basic element

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function
1		0	-500	0	-150	0	-150	1	0	0			Basis
2		500	0	150	0	150	0	1	0	0		0	
3		3	53	1	16	1	16	1	0	0		0	Narrowing M
4		33	0	10	0	10	0	1	0	0		0	
5		3	53	1	16	1	16	1	0	0		0	Narrowing M
6		33	0	10	0	10	0	1	0	0		0	
7		3	53	1	16	1	16	1	0	0		0	Narrowing M
8		33	0	10	0	10	0	1	0	0		0	
9		3	53	1	16	1	16	1	0	0		0	Narrowing M
10		33	0	10	0	10	0	1	0	0		0	
11		266	0	80	0	80	0	1	0	0		0	
12		0	286	0	86	0	86	1	0	0			

4. Allocate **multi-step narrowing** and the following settings to the edge lines.

Line of edge number	General tab	Tab Narrowing	Tab Fading-out
3, 5, 7, 9	**Narrowing**	◆ multi-step **Module allocation:** ◆ underneath **Module:** ◆ Fair Isle + Doubling_Stitch v	No fading-out required

5. Call-up the shape attributes "Narrowing" of the shape edges.
6. Under the general tab: adjust "Narrowing".
7. Select the narrowing cycle "multi-step" and "underneath".
8. Under module select: "Fair Isle + Doubling_Stitch v"
9. Save the shape via the "File" / "Save" or "Save As…" menu.
   ▷ The shape will be saved in the **shp** format.
10. Close the M1plus Shape Editor with  .

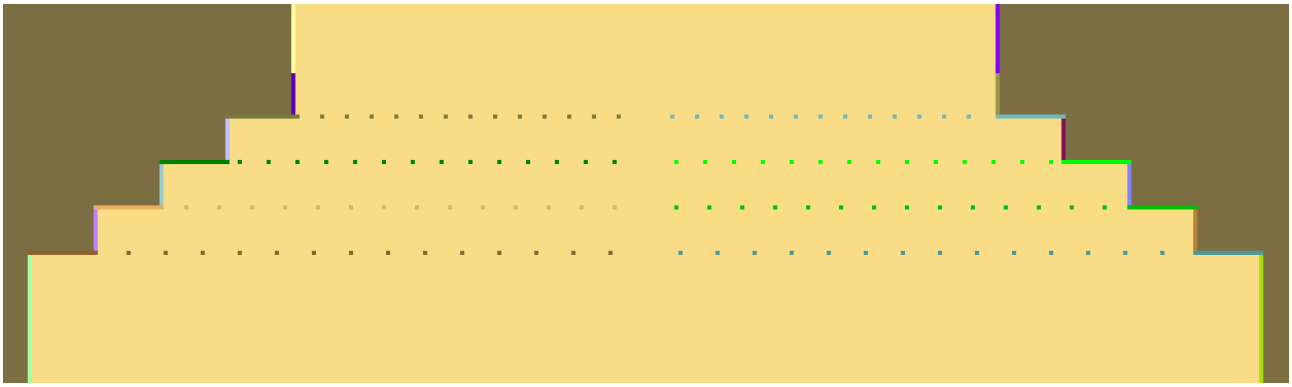
III. Placing the shape in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".

▶ The "Open" dialog box will be displayed.

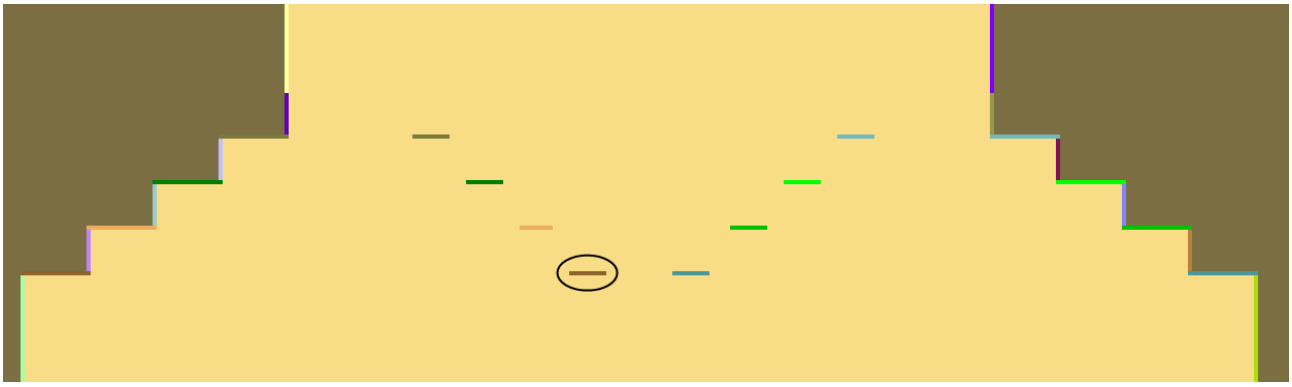
2. Specify path and select the desired **shp** shape.
3. Click the "Open" button.

▶ The shape is laid on the pattern. The narrowing markings for multi-step narrowing are arranged according to the narrowing step width.

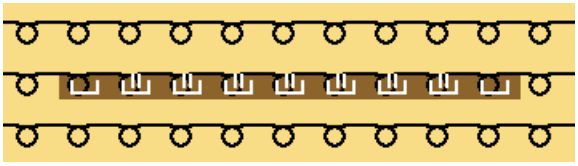


IV. Correcting narrowing markings:

1. Correct the narrowing markings positioned in the shape.
2. Use the tools and  to arrange manually the narrowing markings for multi-step narrowing next to one another. The cover width has to correspond to the narrowing step width.



Example:
The defined step width in the shape amounts to 16 stitches, the cover width of the narrowing marking multi-step is 16 stitches as well.



3. Adjust the cover width 1 for the first and the last narrowing, for all the other narrowings adjust the cover width 2.

- Version 3: Skirt with plissee [🗋 154]
- Generate length cycles [🗋 148]

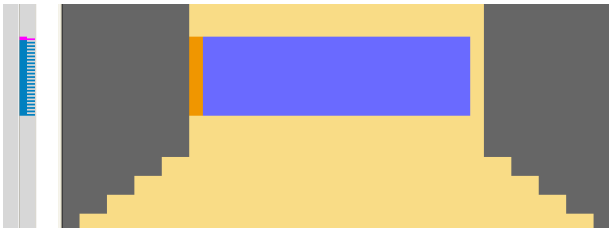
21.3.1 Further possibility: Knitting-in elastic yarn

Knitting-in the elastic thread:

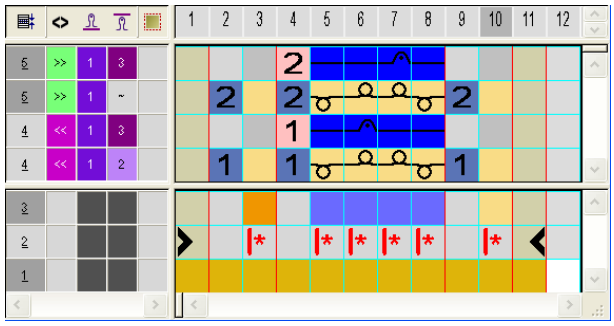
It is possible to knit-in a elastic yarn in the waistband in a 2x2 rib above the plissee.

✓ The shape is positioned on the basic pattern.

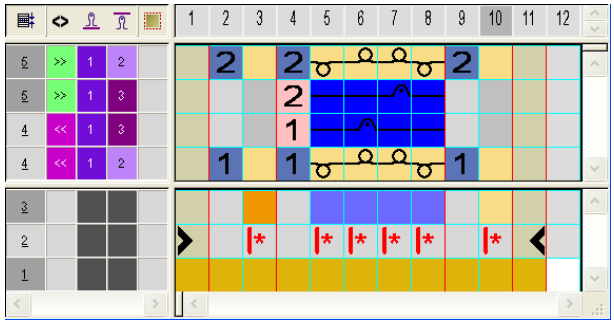
1. Draw-in neighboring two different colors in the waistband so that a 2X2 rib is generated with a CA and a elastic yarn can be knitted in.



2. Select two pattern rows in the row list and generate a CA with  .
3. Draw-in a 2X2 rib and additional rows for knitting-in an elastic yarn.



4. Draw-in the CA in the control column of the symbol view over the height of the colors drawn-in.
5. Generate another CA for the elastic yarn end.



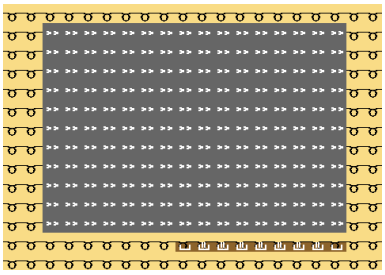
6. Draw-in the end CA in the two last rows of the colors drawn-in in the control column.

21.3.2 Complete the pattern

Complete the pattern:

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

   ▷ The "Aligning within shape part"  symbols will be inserted above the Fair Isle narrowing markings.

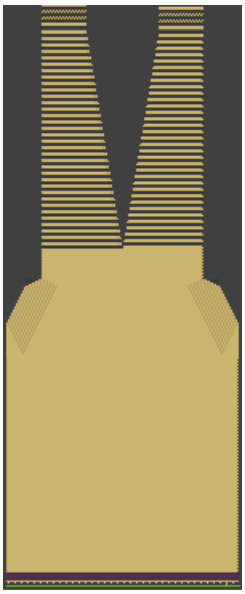


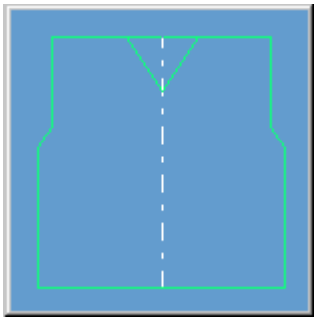
2. Expand the pattern with  icon of the "Steps of Processing" toolbar.
3. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Call-up "Sintral Check" via the "MC Program / Conduct Sintral Check..." menu.

22 Fully Fashion-Pattern: Knitting mode Double Jersey with 1x1 Selvedge



Pattern name	RR- Rand 1x1.mdv	
Pattern size	Width:	150
	Height:	270
Machine type:	**CMS 530**	
Setup Type	Setup2	
Gauge	8	
Start	Tubular	
Basic pattern	Front stitch – Rear stitch.	
Shape	 2_set-in-front-v-neck-38.**shv**	

knitting technique	 Front stitch – Rear stitch.
Pattern description	Fully fashion pattern with double jersey knitting mode, selvedge and narrowing in 1x1.

22.1 Rules for double jersey fabrics with 1x1 selvedge

I. Rules for a shape in the stitch-stitch knitting mode with 1x1 edge:

i	The modules for narrowing the DJ fabrics with 1x1 edge are in the "Module Explorer of Database" under "Stoll" / "DJ with 1x1 edge" / "..." .

Shape Attributes	Rules / possible settings	
Knitting mode	**Stitch stitch with 1x1 edge**	
Widening Width	1 Stitch	
Widening height	as desired	
Narrowing step	Module depending	1 - 2 needles
Narrowing Width	Module depending	2 - 12 needles
Narrowing height	Module and shape depending	

22.2 Fade-out and narrowing modules for 1x1 selvedge

- The narrowing procedure for the 1x1 selvedge consist of three build on each other modules.
- For narrowing widths of 2-12 stitches various module groups are available.

I. Module groups in the module explorer database:

- You will find the modules for the 1x1 selvedge in the "Module Explorer Database..." under "Stoll" / "DJ with 1x1 border" / "xx stitches".

Module group	Function
DJ ==> 1x1	Transfering from DJ to 1x1 selvedge
Narrowing 1x1	Narrowing module for 1x1 selvedge
Widening 1x1	Widening (transferring outward) for 1x1 selvedge
1x1 ==> DJ	Transferring from 1x1 selvedge to DJ
1x1 rib	Knitting of 1x1 selvedge
DJ ==> 1x1_fast	Transferring from DJ to 1x1 selvedge (distribute)

II. Some examples of fade-out and narrowing modules and the label:

- Due to the name the function of the module is recognizable.
  - The module group "10 stitches" is shown as an example.

Module group	Module Names	Function
DJ ==> 1x1	10N_5C_DJ>1x1_L	Selvedge width DJ 10 needles 5 knitting rows Transferring to 20 needles 1x1 selvedge Left fabric selvedge
	10N_5C_DJ>1x1_R	Right fabric selvedge
	10N_20R_DJ>1x1_right_above	Selvedge width DJ 10 needles 20 knitting rows Transferring to 20 needles 1x1 selvedge Left fabric selvedge overlying
	10N_20R_DJ>1x1_left_under-neath	Left fabric selvedge underneath
Narrowing 1x1	10N_1C_><_NF_L	Selvedge width 10 needles 1x1 selvedge 1 knitting row Narrowing overlying Left fabric selvedge
	10N_2C_><_NR_R	Selvedge width 10 needles 1x1 selvedge 2 knitting rows Narrowing underneath Right fabric selvedge
1x1 ==> DJ	10N_2C_1x1>DJ _L	Selvedge width 10 needles 1x1 selvedge 2 knitting rows transferring from 1x1 to DJ Left fabric selvedge
	10N_5R_1x1>RR_R	Selvedge width 10 needles 1x1 selvedge 5 knitting rows transferring from 1x1 to DJ Right fabric selvedge
1x1 rib	10N_1x1_L	Selvedge width 10 needles 1x1 selvedge Knitting only

Module group	Module Names	Function
		Left fabric selvedge
DJ ==> 1x1_fast	10N_20R_DJ>1x1_left_under-neath	Selvedge width DJ 20 needles 20 knitting rows Transferring (distribute) to 10 needles 1x1 selvedge Left fabric selvedge

22.3 Creating shape

I. Generate shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.

▶ The dialog box will be opened.

2. Open an existing shape via the "File" / "Open .shv shape [mm] …" menu.
3. **Example:**D:\Stoll\M1plus\Versions\Form\2_set-in-front-v-neck-38.shv**.**
   - or -
   Create a new shape via the button.
4. Create the element for the basic element.

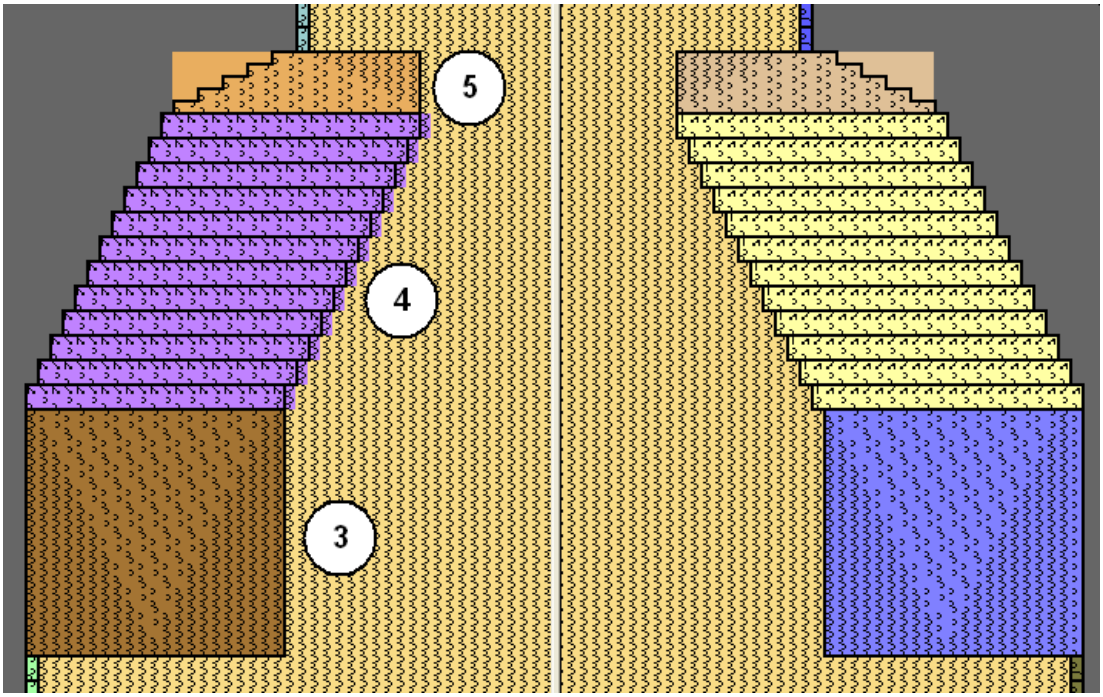
Basic element Front Left Edge:

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function	Group	Comment
1		0	-266	0	-72	0	-72	1	0	0			Basis	0	
2		352	0	134	0	134	0	1	0	0				0	
3		52		20	0	20	0	1	0	0		21		0	CMS >6< /
4				24	12	2	1	12	0	0			Narrowing	0	
5				5	10	5	10	1	0	0		20		0	CMS >6< /
6		228	0	87	0	87	0	1	0	0				0	
7		0	185	0	50	0	50	1	0	0				0	

5. The height of stepping of the shape edge must match to the to the corresponding modules.

Edge no.	Height of stitches	Width of stitches	Height of steps	Width of steps
No. 5	20	0	20	0
No. 4	24	12	2	1
No. 2	5	10	5	10

✓ In order to simplify the shape creation some examples for modules for the 1x1 selvedge in the shape view are shown.



6. Deactivate the "Mirrored" checkbox and create the right side table.
7. Create element for the opening.

Element Neck opening:

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function	Group	Comment
1		173	-81	66	-22	3	-1	22	0	0			Narrowing	0	
2		5	0	2	0	2	0	1	0	0				0	CMS >6< /
3		0	81	0	22	0	22	1	0	0				0	

8. Select the basic element and set the **Distance of the shape halves** to **1**.

▶ The V-neck will be started with one needle.

9. Select the **Neck opening** element.
10. Click on the button in the toolbar.

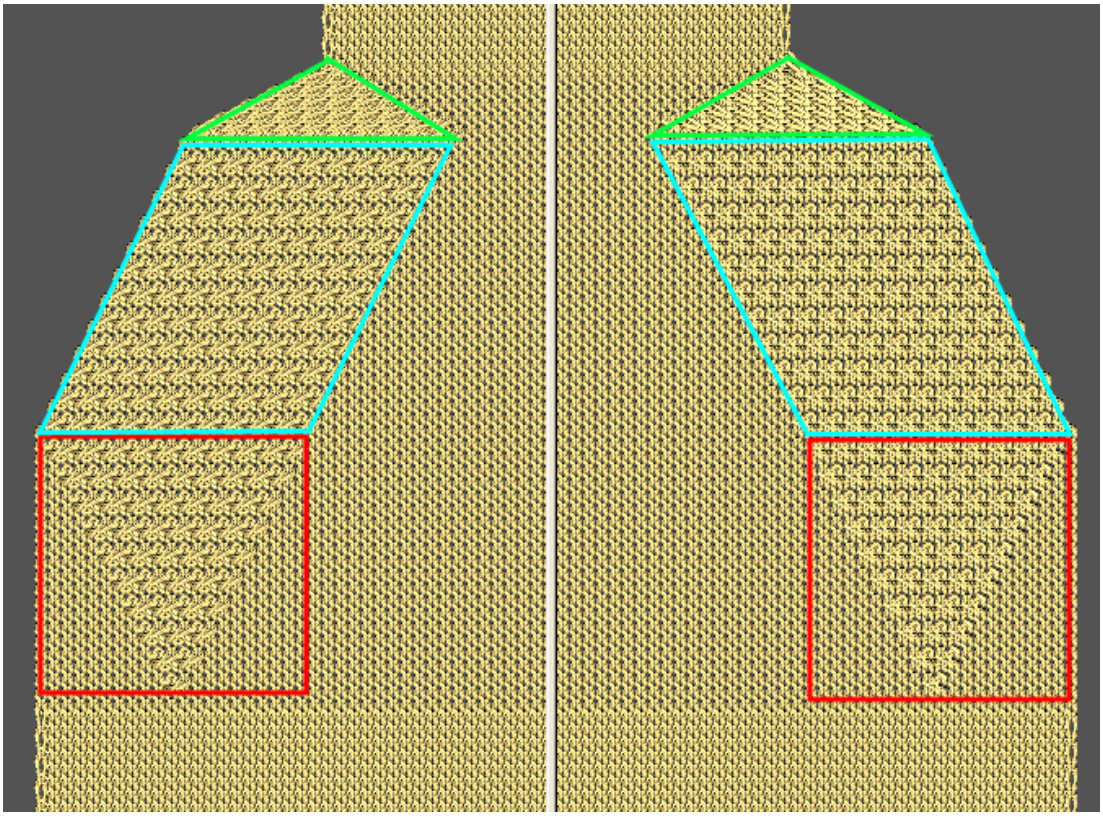
▶ The "Left lines No.: 1" dialog box is opened.

11. Under module allocation click on "Structure double jersey" and in the selection list select "Structure double jersey V1" for the start of the V-neck.
12. Define the horizontal and vertical position via "Offset".
13. Allocate fade-out modules to the edges of the **basic elements** and to the element **Neck opening**.
14. Use the fade-out modules from the "Module Explorer of Database".
    - or -
    Generate your own fade-out modules.

22.4 Allocate modules for the selvedge

Allocate modules for the 1x1 edge to the selvedges:

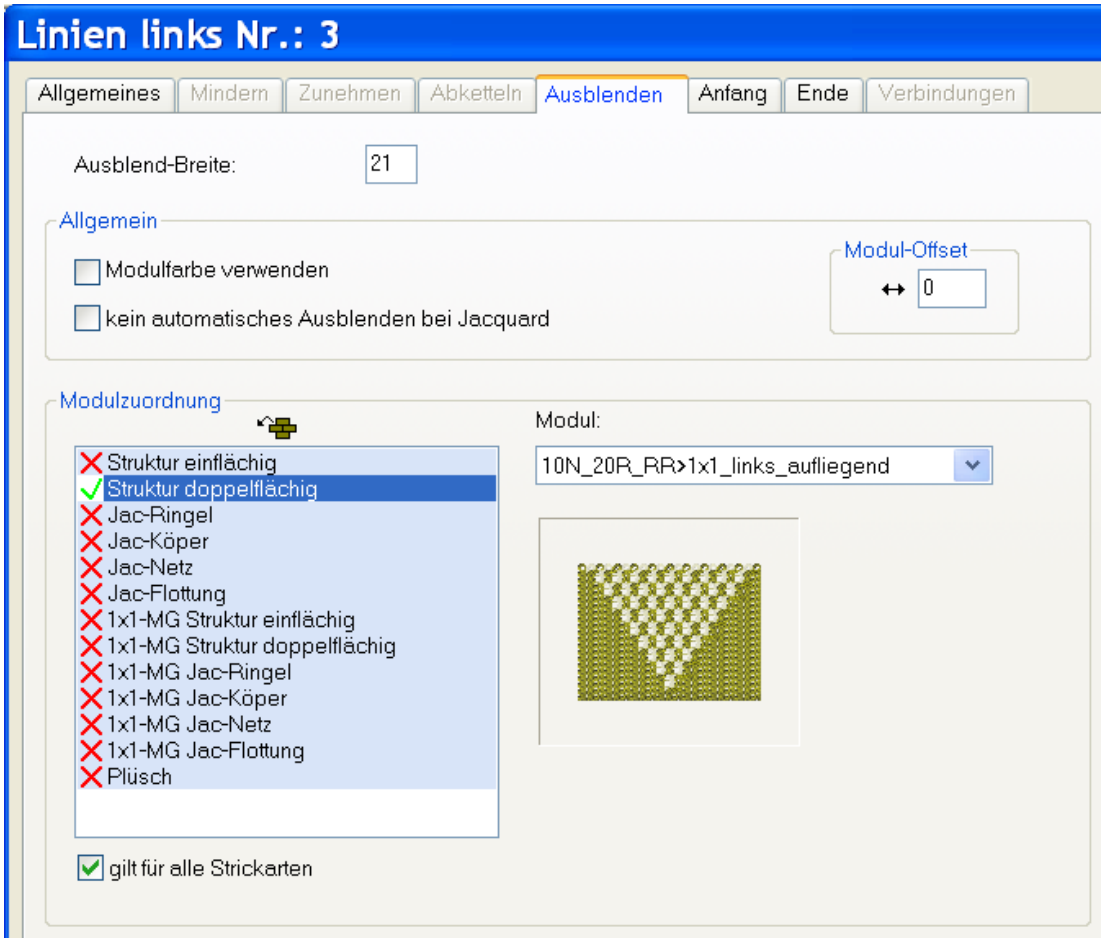
1. Allocate the modules for the 1x1 edge to the left and right selvedges of the **basic elements** no. 3, 4, 5.



Left edge		
Edge: no.	**Module name**	**Function**
3	10N_20R_RR>1x1_left _above	Fading-out
4	10N_2C_><_NF_L	Narrowing
5	10N_5R_1x1>RR_L	Fading-out

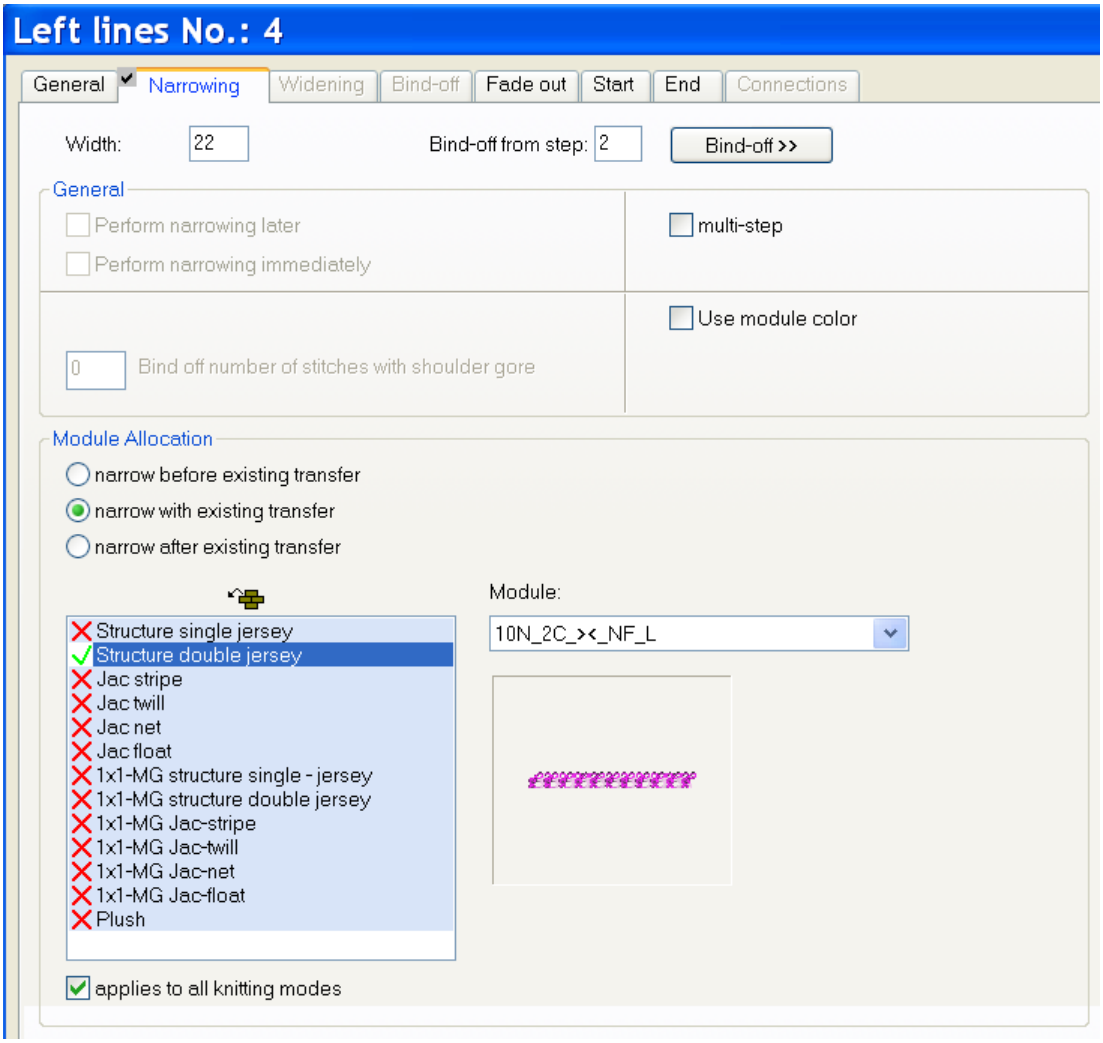
2. Allocate the module to the edge no. 3 under fade-out with drag-and-drop.

✓ the fade-out width will be entered automatically.



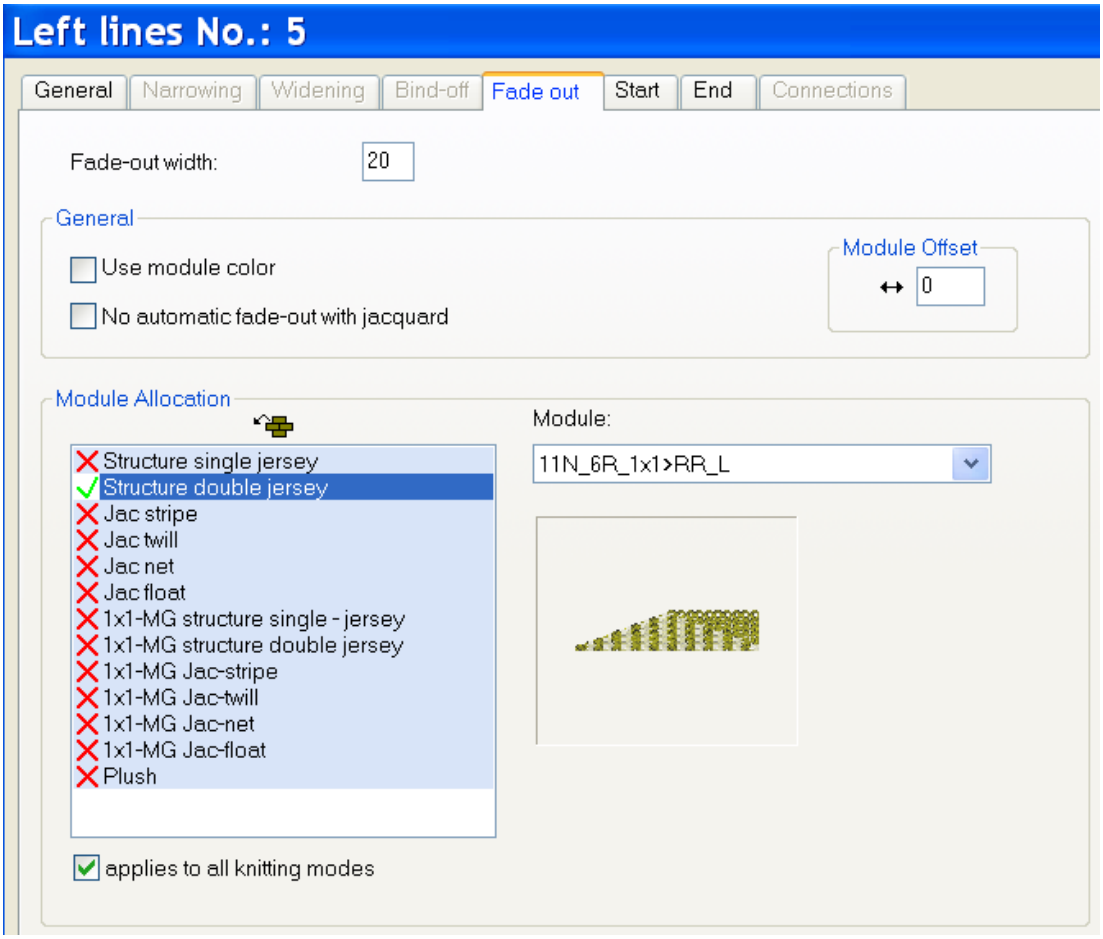
3. Allocate the module under narrowing to the edge no. 4.

✓ The width will be entered automatically.



4. Allocate the module under fade-out to the edge no. 5.

✓ the fade-out width will be entered automatically.



5. Allocate the fade-out and narrowing modules of the right side to the right side edges of the **basic elements** no. 3, 4, 5.

Left edge		
Edge: no.	**Module name**	**Function**
3	10N_20R_RR>1x1_right_above	Fading-out
4	10N_2C_><_NF_R	Narrowing
5	10N_5R_1x1>RR_R	Fading-out

6. Save the shape via the "File" / "Save" or "Save As…" menu.

▶ The shape will be saved in the shp format.

7. Close the "Shape Editor" with .

22.5 Generate pattern without shape and position shape

I. Generate pattern without shape:

1. Call up the "File" / "New" menu
   - or -
   Click  .
2. Enter a Pattern name.
3. Select the machine type and the desired setup type.
4. Select **Basic pattern (pattern without shape)** and "Design Pattern".
5. Set pattern size and select the "Front stitch - Rear stitch" basic knitting mode.
6. Select a start.
7. Confirm the settings with "Generate Design Pattern".

▶ The "Symbol view [Basic]" will be opened.

II. Open the shape and position it in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".

▶ The "Open" dialog box will be displayed.

2. Specify path and select the desired **shp** shape.
3. Click the "Open" button.

▶ The shape will be laid on the pattern in the **shp** format.

22.6 Complete the Pattern

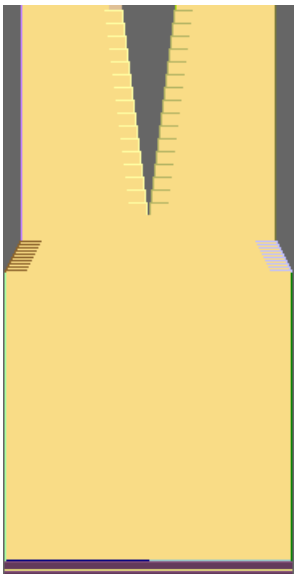
Complete the pattern:

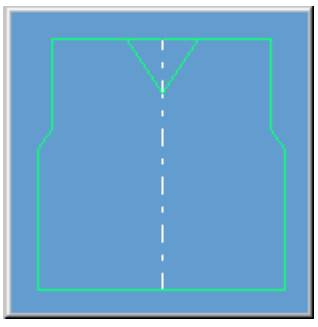
1. Cut-out the shape with the  button in the "Steps of Processing" toolbar.
2. Expand the pattern with  icon of the "Steps of Processing" toolbar.
3. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Run the "Sintral Check" via the Steps of Processing  toolbar.

23 Fully Fashion-Pattern: Narrowing with Additional Beds



Pattern name	FF-RR-530T.mdv	
Pattern size	Width:	200
	Height:	360
Machine type:	**CMS 530 T**	
Setup Type	Setup2	
Gauge	8	
Start	Tubular	
Basic pattern	Front stitch – Rear stitch.	
Shape	 2_set-in-front-v-neck-38.**shv**	

knitting technique	 Front stitch – Rear stitch.
Pattern description	Fully Fashion pattern for machines with additional beds ◆ Narrowing of several needles

23.1 Rules for the creation of double jersey fabrics with additional beds

Shape Attributes	Rules / possible settings
Knitting mode	**Stitch-Stitch**
Widening Width	1 Stitch
Widening height	as desired
Narrowing step	1 - 2 needles
Narrowing Width	As desired
Narrowing height	As desired
Binding-off	Narrowing step higher than 2 needles
Binding-off methods	BO-TC4-DJ-01 BO-TC-R-DJ-01 BO-TC-T-DJ-01

i You will find the modules for the narrowing of double jersey fabrics under "Technique" / "Narrowing " / "Structure double jersey".

Machines with additional beds and module groups

Various module groups are available for machines with additional beds in the "Module Explorer Database" under "Technique " / "Narrowing".

MC	Module group-Narrowing modules
CMS330 TC4	TC4
CMS330 TC R	TC-R
CMS330 TC T	TC-R
CMS 530 T	TC-R
CMS 730 T	TC-T

23.2 Create the shape in the M1plus Shape Editor

I. Generate shape:

1. Call up the "M1plus Shape Editor" via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu.

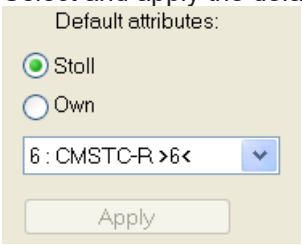
▶ The dialog box will be opened.

2. Open an existing shape via the "File" / "Open .shv shape [mm] …" menu.
   - or -
   Click .
   Example:D:\Stoll\M1plus\Versions\Form\2_set-in-front-v-neck-38.shv**.**
   - or -
   Create a new shape via the button.
3. Convert the *.shv shape into the *.shp format via the "File" / "Convert and Save As…" menu.
4. Change basic element.

Basic element Front:

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width 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	

5. Select the edge lines 2 – 4 in the basic element.
6. Select and apply the default attribute **No.6: TC-R>6<**.



7. Select the basic element and set the **Distance of the shape halves** to **1**.

▶ The V-neck will be started with one needle.

8. Select and change the **Neck opening** element.

Element Neck opening:

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		304	-47	128	-16	8	-1	16	0	0	0	0	Narrowing
2		9	0	4	0	4	0	1	0	0	0	0	
3		0	47	0	16	0	16	1	0	0	0	0	

9. Click on the button in the toolbar.

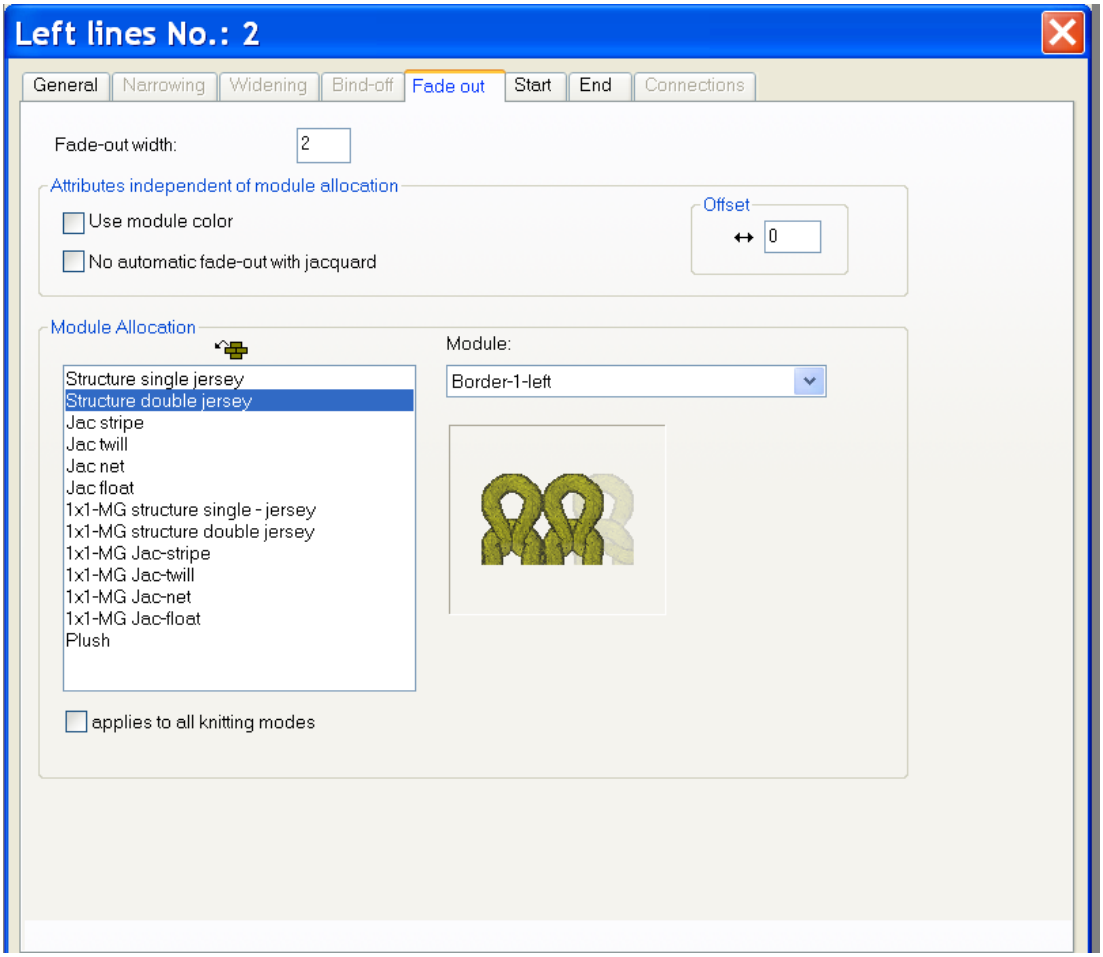
▶ The "Left lines No.: 1" dialog box is opened.

10. Under module allocation click on "Structure double jersey" and in the selection list select "Structure double jersey V1" for the start of the V-neck.
11. Define the horizontal and vertical position via "Offset".
12. Select the edge lines 1 - 2 in the **Neck opening** element.
13. Select and apply the default attribute **No.7: CMS TC-R-V**.

i	The narrowings in the neck opening elements are positioned at the same height.

14. Allocate fade-out modules to the edges of the **basic elements** and to the element **Neck opening**.

i	Based on the allocation of the default attributes it will be hidden with "Front stitch – Rear stitch"

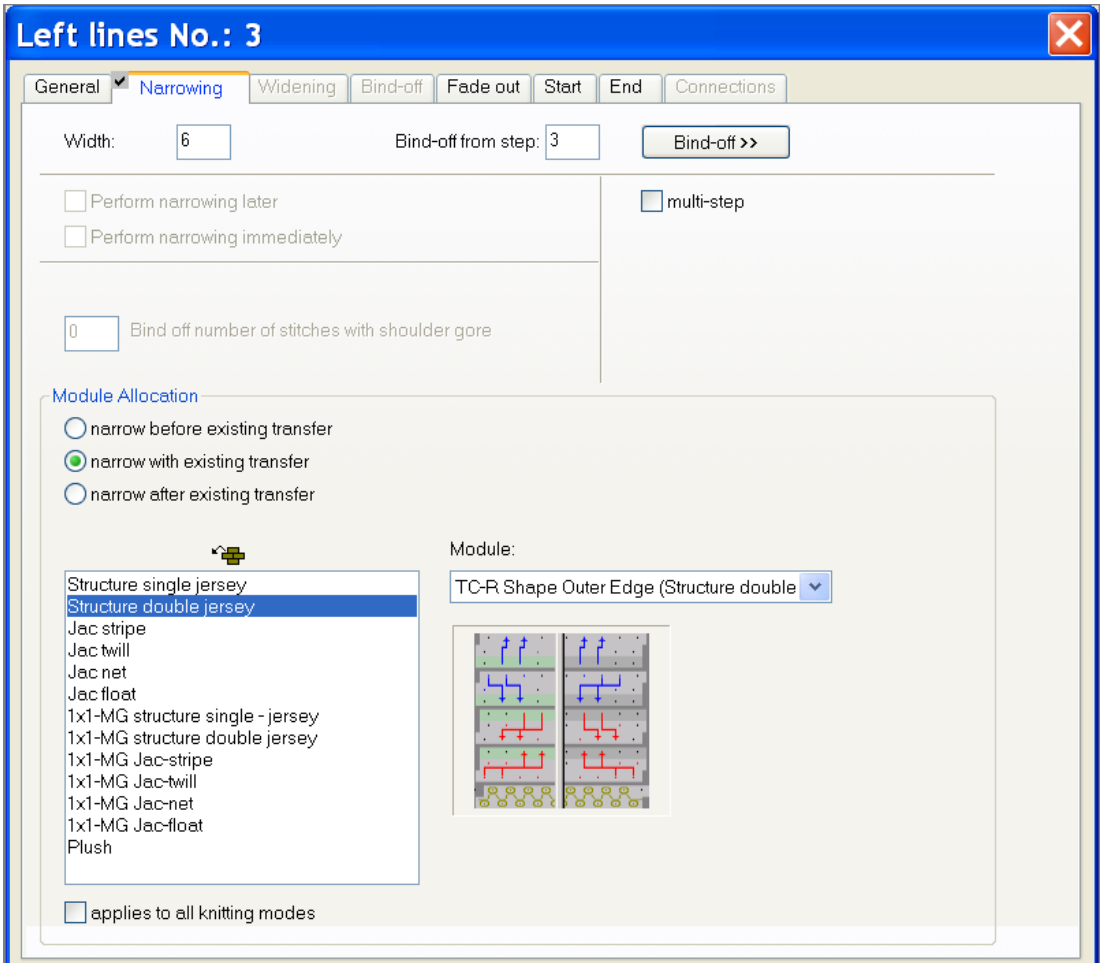


15. Use the fade-out modules from the "Module Explorer of Database".

- "Left Rolling Edge"/"Right Rolling Edge"
- "RR left edge" / "RR right edge"
- Generate your own fade-out modules:

Left fade-out edge	Right fade-out edge
	

16. Allocate the desired narrowing width to the edges of the **basic element** and the **Neck opening** element.



Narrowing methods for TC-R double jersey structure knitting mode:

Narrowing module	Function
Standard	Narrowing without additional beds
TC-R Shape Edge	Common narrowing at the outer edge of the shape
TC-R Shape Outer Edge without combination transfer	Separated narrowing at the outer edge of the shape

Narrowing module	Function
TC-R-V	Common narrowing in the V-neck
TC-R-V without combination transfer	Separated narrowing in the V-neck

17. Save the shape via the "File" / "Save" or "Save As…" menu.

▶ The shape will be saved in the shp format.

18. Close the "Shape Editor" with  .

II. Generate a neck-opening element with narrowings displaced in the height:

1. Select the **Neck opening** element.
2. Deactivate the **Mirrored** checkbox.

▶ The table "Right lines" can be displayed.

3. Open and change the table "Right lines" for the neck 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		2	0	1	0	1	0	1	0	0	0	0	
2		304	47	128	16	8	1	16	0	0	0	0	Narrowing
3		7	0	3	0	3	0	1	0	0	0	0	
4		0	-47	0	-16	0	-16	1	0	0	0	0	

4. Insert a new line no.1 and enter the value 1 at "Height stitches".

▶ The right V-neck edge will be placed one row higher.

5. Reduce the number by one row in line no. 3.

▶ Compensation of the total height of the **left lines** and the **right lines**.

6. Allocate shape attributes to the new line no. 1.

■ Default attributes **No.7: CMSTC-R-V**

■ Fading-out

■ Type of narrowing

7. Save the shape under a new name via the "File" / "Save As…" menu.

▶ The shape will be saved in the shp format.

8. Close the "Shape Editor" with  .

23.3 Create the pattern and position the shape

I. Generate pattern without shape:

1. Call up the "File" / "New" menu.
   - or -
   Click  .
2. Enter a Pattern name.
3. Select the machine type **CMS 530T** and the setup type.

4. Select **Basic pattern (pattern without shape)** and "Design Pattern".
5. Set pattern size and select the "Front stitch - Rear stitch" basic knitting mode.
6. Select a start.
7. Confirm the settings with "Generate Design Pattern".

▶ The "Symbol view [Basic]" will be opened.

II. Open the shape and position it in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".

▶ The "Open" dialog box will be displayed.

2. Specify path and select the desired **shp** shape.
3. Click the "Open" button.

▶ The shape will be laid on the pattern in the **shp** format.

23.4 Complete the Pattern

Complete the pattern:

1. Cut-out the shape with the  button in the "Steps of Processing" toolbar.
2. Expand the pattern with  icon of the "Steps of Processing" toolbar.
3. Start the technical processing with the  icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Click "Sintral Check" in the Steps of Processing  toolbar.

24 Intarsia pattern: Own Modules for Binding / Knots

Pattern name	17_Intarsia-Eigen Knoten.mdv	
Pattern size	Width:	50
	Height:	50
Machine type:	CMS 530	
Gauge	8	
Setup Type	Setup2	
Start	1x1	
Basic pattern:	Front stitch with transfer	
knitting technique	Single jersey Intarsia	
Pattern description	Generating own modules as ◆ Knots ◆ Structure ◆ **i**: Direct allocation in the Yarn Field Allocation dialog box	

24.1 Generate own binding/ knots modules

I. Generate own modules:

1. Call up the "New Module" dialog box via the "Module" / "New" / "Module..." menu.
2. Define the following in the dialog box:

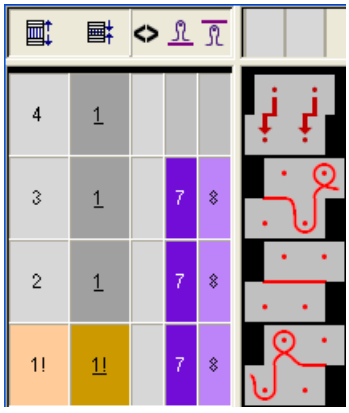
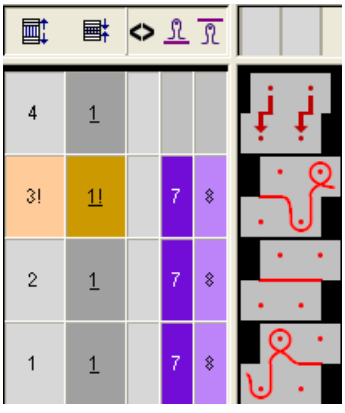
- Module name
- Type of Pattern
- Width and height of the module
- Basic structure of the module

3. Close the dialog box with "OK".

▶ The Module Editor appears.

4. Create the knitting sequence for your own knots in the "Module Editor".

- Module height odd-numbered
- Group the technical rows to one pattern row
- Insert reference rows

Module as knots for knitting-in	Module as knots for knitting-out
	

5. Close the Module Editor with  .

▶ The module will be saved.

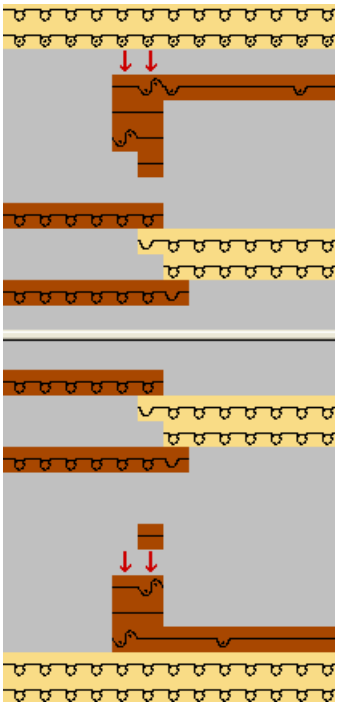
II. Allocate own modules:

1. Click on the  icon in the "Pattern Presentation" toolbar for opening the yarn field view.
2. Select the yarn field in the  column of the yarn field table.
3. Drag and drop the module knots from the Module Explorer Database to the selected row of the  column.
4. Call up the context menu and select the desired procedure.

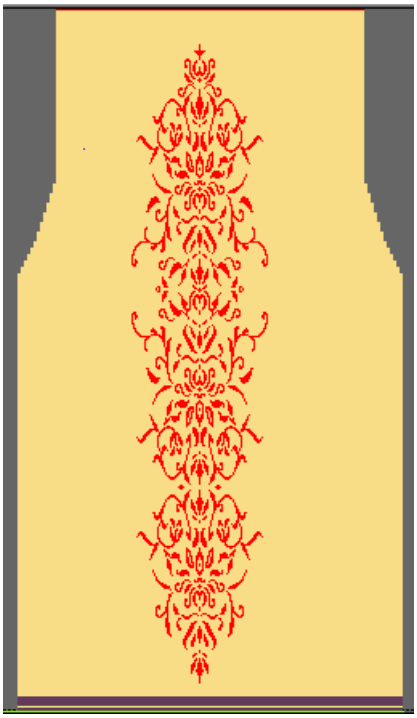
- Define module as knot
- Define module as binding

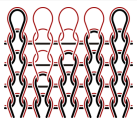
5. Click on the inserted module in order to transfer the selecting.

Result after expanding:



25 Stoll-devoré knit® with Fully Fashion



Pattern name	Devoré Fully-Fashion.mdv	
Pattern size	Width:	250
	Height:	420
Machine type	CMS 530 HP	
Gauge	12	
Setup Type	Setup2	
Start	Tubular - 1 system	
Basic pattern:	Front stitch with transfer	
knitting technique	 Stoll-devoré knit®knitting technique	
Pattern description	Stoll-devoré knit® with Fully Fashion	

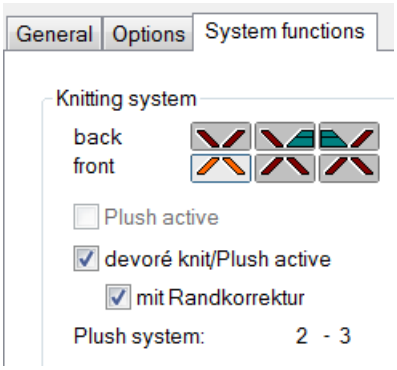
25.1 System default and settings for devoré

For processing devoré patterns, machine-related data settings are necessary on the M1plus

System defaults

✓ A machine with minimum 3 systems has to be selected.

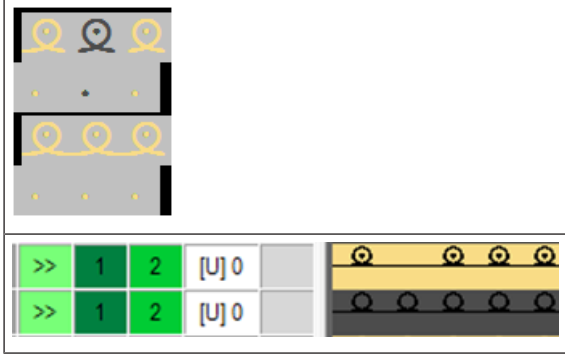
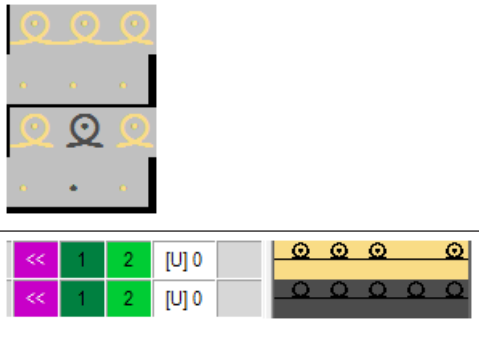
1. Call up the "MC Attributes" dialog box via the "Pattern Parameters" / "Machine Attributes..." menu.
2. Activate the "devoré knit/plush active" check box in the "System functions" tab of the "Knitting system" section.



Function of the selvedge correction

It is possible to work "with selvedge correction" if necessary.

1. When applying the selvedge correction, the motif yarn floats over the 2nd needle from outside in the selvedge area, which is 2 needles wide, alternately according to the carriage stroke. The binding thread knits on all needles.

Module and knitting sequence on the left selvedge	Module and knitting sequence on the left selvedge
	

25.2 Generate motif and shape

Generate the motif:

1. Select **Basic pattern (pattern without shape)** and "Design Pattern".

2. Select the desired start.
3. Confirm the settings with "Generate Design Pattern".
4. Draw the pattern for devoré with two different yarn colors or yarn carrier colors.

Create shape:

1. Generate a shape in the Shape Editor.

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function
1		0	-400	0	-120	0	-120	1	0	0			Basis
2		866	0	260	0	260	0	1	0	0		0	
3		80	40	24	12	4	2	6	0	0	8	0	Narrowing
4		120	40	36	12	6	2	6	0	0	8	0	Narrowing
5		333	0	100	0	100	0	1	0	0		0	
6		0	320	0	96	0	96	1	0	0			

2. Settings for the fade-out function

- No special settings necessary if yarn color #31 is used in the pattern (basic color / motif thread).
- If another color than yarn color #31 is used for the motif thread, then a private fade-out module is to be created and allocated to the shape edges.

3. Save the shape via the "File" / "Save" or "Save As…" menu.
4. Exit the "M1plus Shape Editor" by .

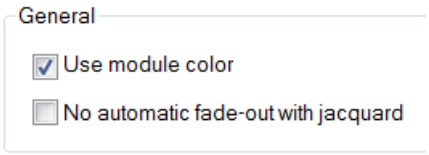
25.2.1 Generate a fade-out module

If another color than the default color (#31) is used for the basic color = motif thread, then a private fade-out module is to be created with the used color and it is to be allocated to the shape edges.

Generate module:

1. Position the cursor in the motif on the basic color (motif color) and select a stitch.
2. In the Module toolbar "Standard" click the key and Neues Modul aus Selektion erstellen.
3. Save the module to the database.
   "Save in Database" context menu

4. In the shape editor, in the "Fade-out" tabs allocate the module of the "Module Explorer of Database" to the shape edges using drag-and-drop.
5. Under General set "Use module color".



> **i** The module color for the fade-out and the motif thread color have to be identical.

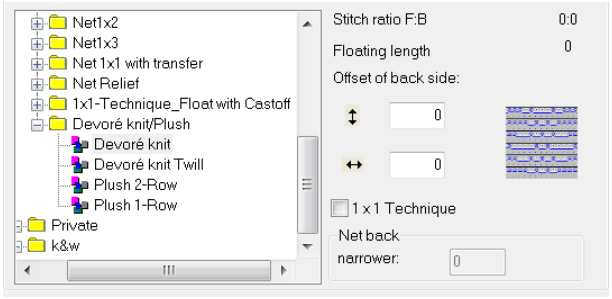
25.3 Apply shape and insert Jacquard

I. Placing the shape in the pattern:

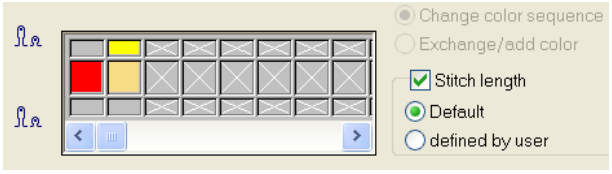
1. Load shape via "Shape" / "Open and Position Shape...".
2. Activate the  symbol and position the shape if required.

II. Cut out shape and insert Jacquard .

1. Cut-out the shape with the  button in the "Steps of Processing" toolbar.
2. Call up the "Jacquards" dialog box via the "Edit" / "Generate or Edit Jacquard..." menu.
3. Create a row selection of the motif height.
4. Select the jacquard generator "Devoré knit" under the section "Jacquard " / "Stoll" and insert with "Apply".



5. Change the color sequence if necessary.



> **i** The color for the binding thread has to be the leading in the color sequence.

6. Activate the "Stitch length" checkbox.

▷ Thereby the stitch length available in the Jacquard module will be applied to the pattern.

7. Close the dialog box with "OK".

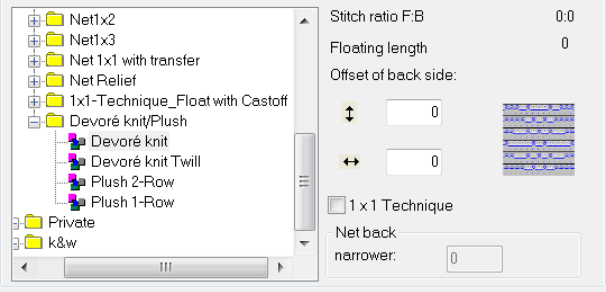
> **i** The Devoré knit Jacquard module causes the pattern to be processed on the rear needle bed only. The front knitting systems can execute all the standard functions.

25.4 Possible jacquard selection with 2-colored motifs (devoré knit / plush)

Insert different jacquards with 2-colored motifs:

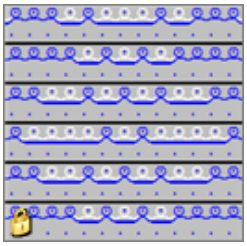
✓ The motif is drawn with **2 colors**, the shape is positioned and cut-out.

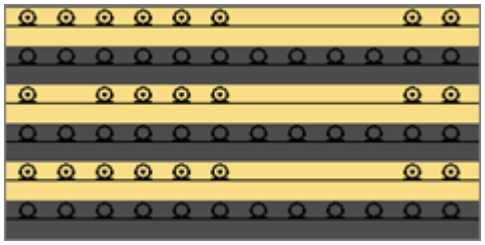
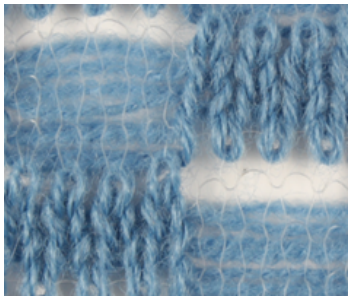
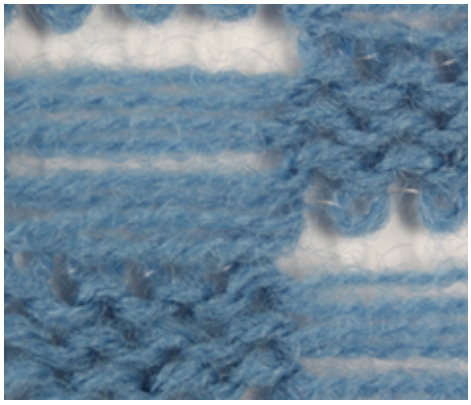
1. Call up the "Jacquards" dialog box via the "Edit" / "Generate or Edit Jacquard..." menu.
2. Select the desired jacquard generator under the "Jacquard " / "Stoll" section and insert.



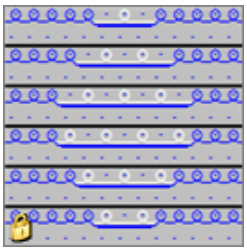
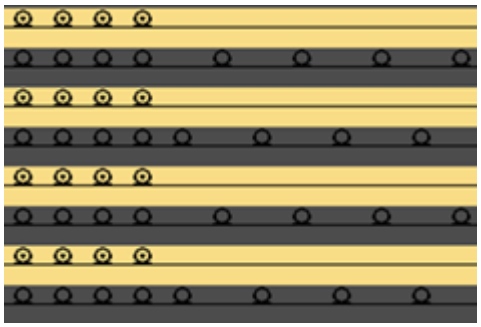
- Selection options:
  - Devoré knit
  - Devoré knit Twill
  - Plush 2-row
  - Plush 1-row

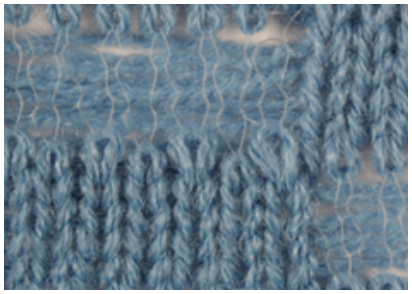
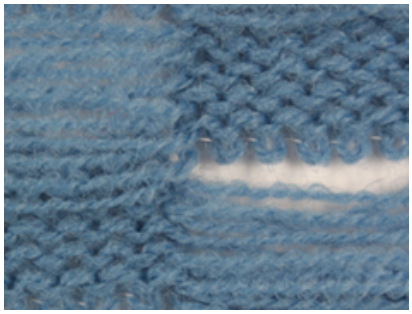
Devoré knit:

Representation of the module	Function		
	◆ The binding thread works leading on all needles. ◆ The motif thread works following according to the Motif with stitch and float at the back.		
		**1**	Selection motif thread and binding thread stitch - stitch
		2	Selection motif thread and binding thread float - stitch

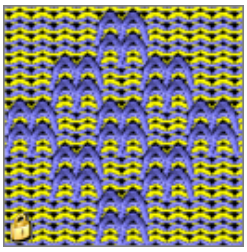
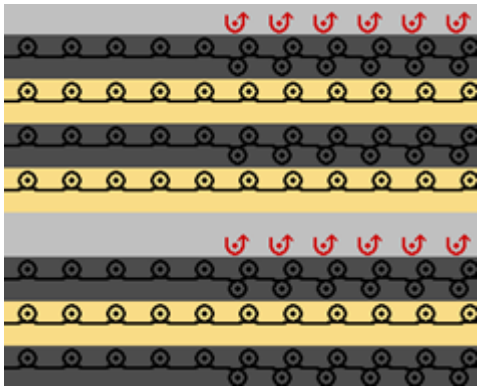
Representation of the module	Function	
Stitch line		
Fabric View	**Front**	**Rear**
		

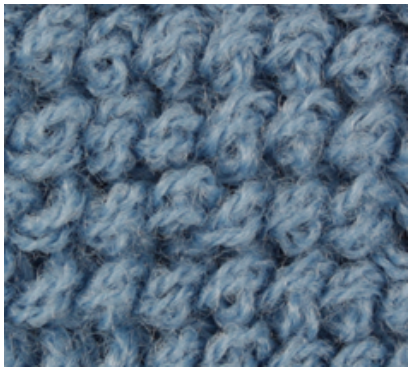
Devoré knit Twill:

Representation of the module	Function	
	◆ The binding thread works leading in the twill. ◆ The motif thread works following according to the Motif with stitch and float.	
Stitch line		
Fabric View	**Front**	**Rear**

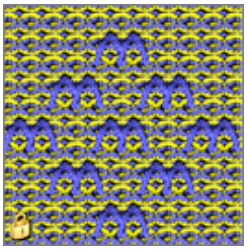
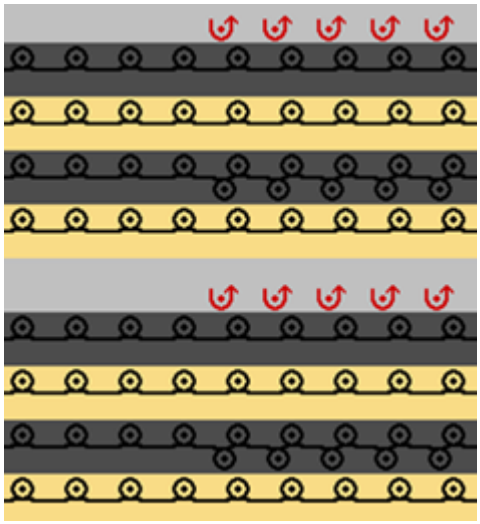
Representation of the module	Function	
		

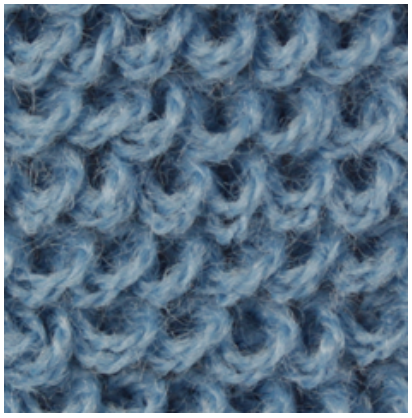
Plush 2-row:

Representation of the module	Function	
	The binding thread works on all needles and binds the plush loops formed in every row. Two plush loops formed consecutively are cast-off afterwards. **i** An outline change of the motif is possible only after 2 rows.	
Stitch line		
Fabric View	**Front**	**Rear**

Representation of the module	Function	
		

Plush 1-row:

Representation of the module	Function	
	◆ The binding thread works on all needles. ◆ The motif thread works according to the motif with front / rear stitch in every second row. The front stitch is cast-off and forms the plush loop.	
Stitch line		
Fabric View	**Front**	**Rear**

Representation of the module	Function	
		

25.5 Complete the Pattern

I. Complete the pattern:

➔ Expand the pattern with the button of the "Steps of Processing" toolbar.

> **i** When expanding the marking for the binding thread and the motif yarn is entered in the "System function" control column.

➔ The following functions are included in the "System function" control column:

Symbol	Function
"devoré knit/plush binding thread"	Use the system function for binding thread.
"devoré knit/plush motif thread"	Use the system function for motif thread.

➔ Start the technical processing with the icon.

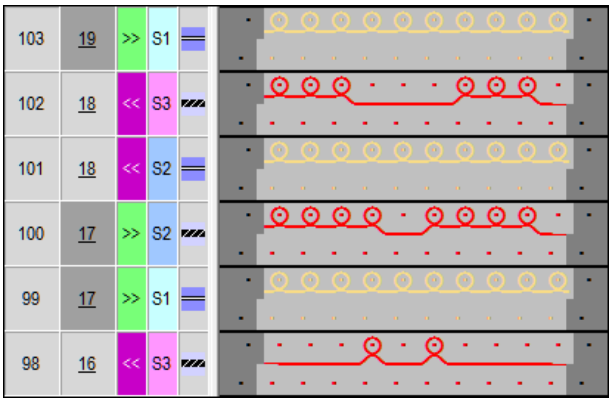
▶ In the Technical Assistant dialog the following message appears often: "The system S1 cannot be used in technical row xx".

➔ Select the option "Determine the knitting system automatically".

> **i** The option "Prompt no longer" can be activated after message appesrs for the first time.

➔ Confirm the message with "Continue" repeatedly.

▶ The stitch notation for devoré is displayed



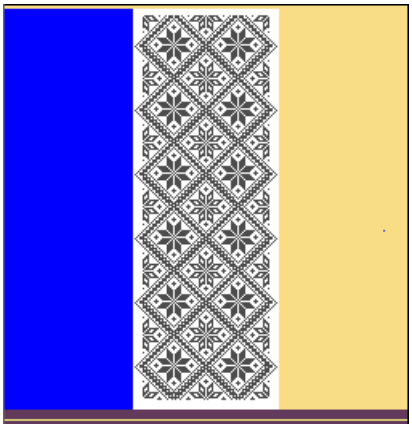
1. The query "Generate MC Program" appears.
2. Confirm the query with "OK".

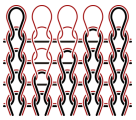
▶ The following instruction is entered in the "MC Programm".

i	Pattern with Stoll-devoré knit® knitting technique are executed according to the possibilities of the systems usage.

➔ Run the Sintral-CheckSintral Check via the "Steps of Processing"  toolbar.

26 Stoll-devoré knit® - knitting technique with Intarsia



Pattern name	Devoré Intarsia.mdv	
Pattern size	Width:	250
	Height:	240
Machine type	CMS 530 HP	
Gauge	12	
Setup Type	Setup2	
Start	1 system 1x1	
Basic pattern:	Front stitch with transfer	
knitting technique	 Stoll-devoré knit®knitting technique	
Pattern description	Stoll-devoré knit® with intarsia	

i

For the production of Stoll Devoré knit® special cams must be installed in the machine.
The machine in use has to have minimum 3 knitting systems.

Please find additional information in the installation instructions for Stoll-devoré knit®.

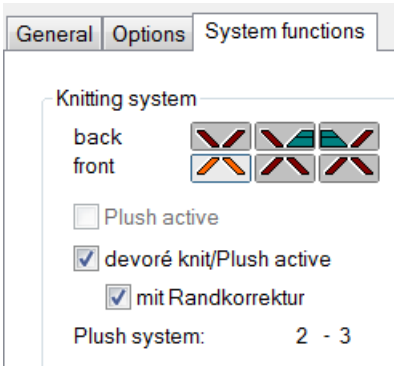
26.1 System default and settings for devoré

For processing devoré patterns, machine-related data settings are necessary on the M1plus

System defaults

✓ A machine with minimum 3 systems has to be selected.

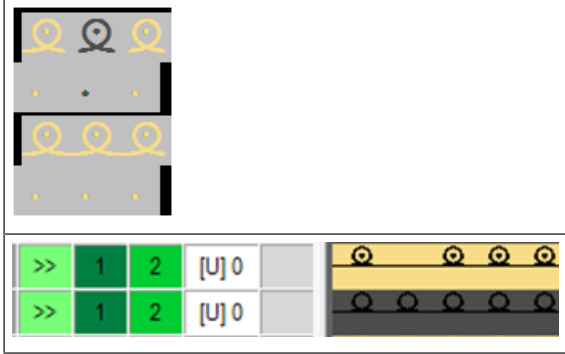
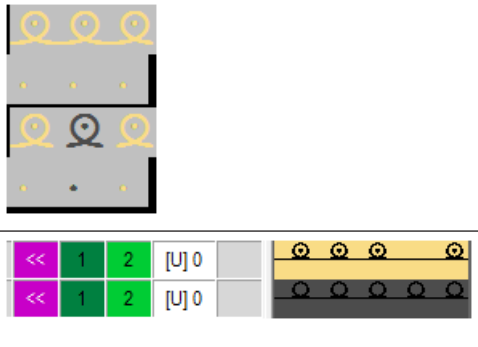
1. Call up the "MC Attributes" dialog box via the "Pattern Parameters" / "Machine Attributes..." menu.
2. Activate the "devoré knit/plush active" check box in the "System functions" tab of the "Knitting system" section.



Function of the selvedge correction

It is possible to work "with selvedge correction" if necessary.

1. When applying the selvedge correction, the motif yarn floats over the 2nd needle from outside in the selvedge area, which is 2 needles wide, alternately according to the carriage stroke. The binding thread knits on all needles.

Module and knitting sequence on the left selvedge	Module and knitting sequence on the left selvedge
	

26.2 Generate devoré motif with intarsia:

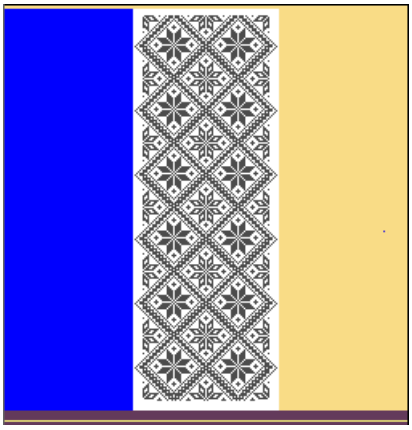
✓ Generate **pattern without shape**

1. Select the desired start.

i	Different starts are available for the pattern with Stoll-devoré knit® knitting technique. If a start with elastic yarn is desired, then make sure that the elastic yarn knits on the front needle bed (back of the product).

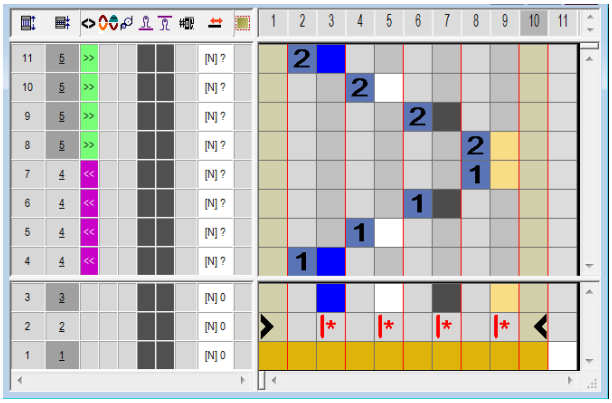
2. Draw intarsia motif with devoré by two different yarn colors.
3. Insert a separate yarn color for each left and right side beside the motif.

Pattern example:



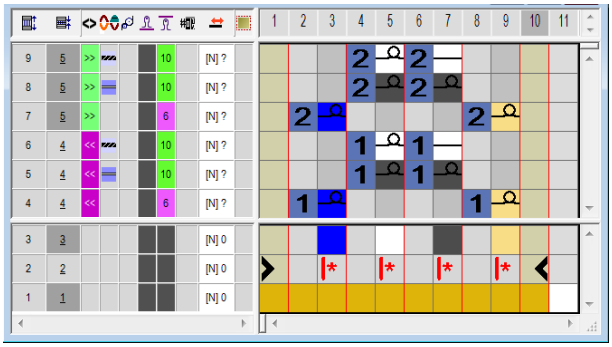
26.3 Generate Color Arrangement for Devoré- Intarsia

1. Select two pattern rows of the intarsia motif via the row selection bar.
2. Click the  icon in the "Default" toolbar.



▶ The color sequence of the selection will be displayed in the "Color Arrangement Editor".

3. Insert the corresponding number of rows and columns in the CA.
4. Draw-in the devoré knit knitting sequence with the corresponding colors and needle actions in the inserted rows and columns.



5. Draw-in the symbols for the binding- and motif thread in the control column "System function".

Symbol	Function
devoré knit/plush binding thread	Use the system function binding thread
devoré knit/plush motif thread	Use the system function motif thread.

6. Enter stitch length for devoré.
7. Close the CA Editor with "X".
8. In the pattern, draw-in the Color Arrangement in the control column of the pattern in the height of the intarsia motif.

26.4 Settings in the Yarn Field Allocation dialog box

Settings for intarsia:

1. Click on the symbol in the "Pattern Presentation" toolbar to open the Yarn Field Allocation dialog box.

the pattern can be knitted with normal yarn carriers.

2. Switch off the intarsia binding on both sides of the Devoré knit knitting area.

Intarsia Border Processing	Function
	Switch off the binding on the left border of the devoré yarn field
	Switch off the binding on the right border of the devoré yarn field

i The knitting-in and out of the yarn carriers of the binding- and motif thread can be processed only in the left system. When running this in the center or right system a error message appears.

3. Move the knitting-in and out of the yarn carriers for the binding thread and the motif thread with the offset if required. Thereby the knitting-in and out is processed in the left system.
   - or -
   Instead of an offset value you can use also a CA for knitting-in and out the yarn carriers.

Offset for knitting-in and out	Function
Knitting-in 	Knitting-in of the yarn carrier by x rows before the beginning of the yarn field ◆ referring to pattern rows (default setting) ◆ referring to technical rows
Knitting-out 	Knitting-out of the yarn carrier by x rows after the end of the yarn field ◆ referring to pattern rows (default setting) ◆ referring to technical rows

26.5 Complete the Pattern

I. Complete the pattern:

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

i	When expanding the marking for the binding thread and the motif thread is entered in the  "System function" control column.

2. Start the technical processing with the  button.

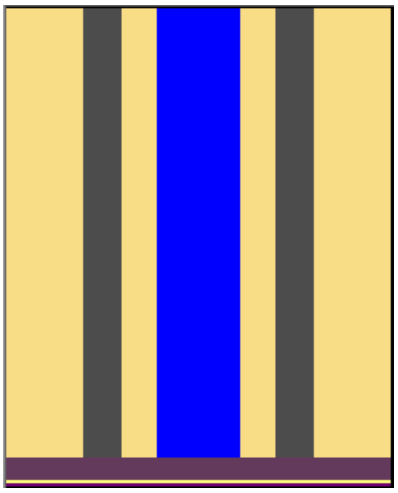
▶ In the Technical Assistant dialog the following message appears often: "The system S1 cannot be used in technical row xx".

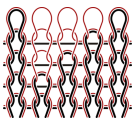
3. Select the option "Determine the knitting system automatically".
4. Confirm the message with "Continue" repeatedly.

i	The option "Prompt no longer" can be activated after the message appears for the first time.

i	With patterns with Stoll-devoré knit® knitting technique, the knitting rows are executed according to the possibilities of the systems usage.

27 Stoll-devoré knit® with twill and plush



Pattern name	Devoré-Köper-Plüsch.mdv	
Pattern size	Width:	120
	Height:	140
Machine type	CMS 530 HP	
Gauge	12	
Setup Type	Setup2	
Start	Tubular - 1 system	
Basic Pattern:	Front Stitch with Transfer	
Knitting Technique	 Stoll-devoré knit®Knitting Technique	
Pattern description	Stoll-devoré knit® with twill and with plush	

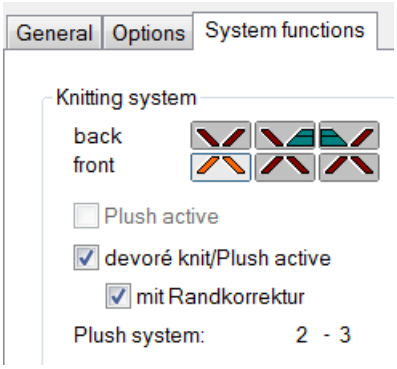
27.1 System default and settings for devoré and plush

For processing devoré patterns, machine-related data settings are necessary on the M1plus.

System defaults

✓ A machine with minimum 3 systems has to be selected.

1. Call up the "MC Attributes" dialog box via the "Pattern Parameters" / "Machine Attributes..." menu.
2. Activate the "devoré knit/plush active" check box in the "System functions" tab of the "Knitting system" section.
3. Activate the "with selvedge correction" function.

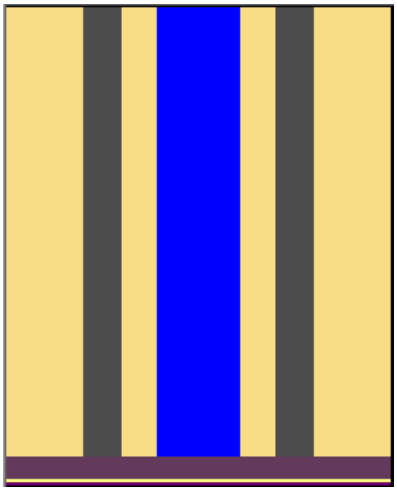


27.2 Generate devoré motif with plush

Draw the motif:

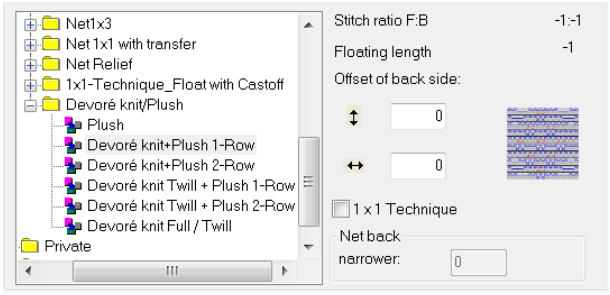
1. Select **Basic pattern (pattern without shape)** and "Design Pattern".

2. Select the desired start.
3. Confirm the settings with "Generate Design Pattern".
4. Draw devoré and plush motif with three different yarn colors or yarn carrier colors.



II. Insert the Jacquard:

1. Call up the "Jacquards" dialog box via the "Edit" / "Generate or Edit Jacquard..." menu.
2. Create a row selection of the motif height.
3. Select the jacquard type "Devoré knit + Plush 1-Row" under the "Jacquard " / "Stoll" section and confirm with "OK".
4. More options:



5. Change color sequence

- 1st color = binding thread
- 2nd color = motif thread
- 3 rd color = cast-off (color is omitted by technical processing)

> **i** The color for the binding thread has to be the leading in the color sequence. Activate the "Stitch length" checkbox. Thereby the stitch length available in the Jacquard module will be applied to the pattern.

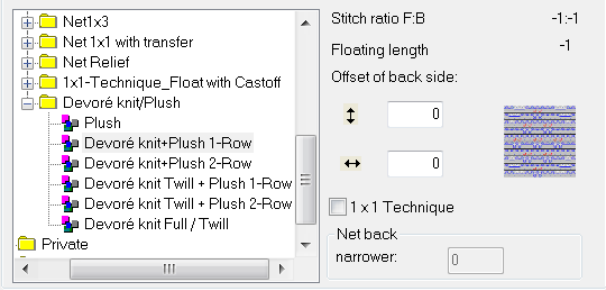
6. Close the dialog box with "OK".

27.3 Possible jacquard selection with 3-colored motifs (devoré knit / plush)

Insert different jacquards.

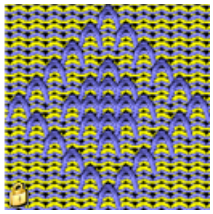
✓ The motif is drawn with **3 colors**.

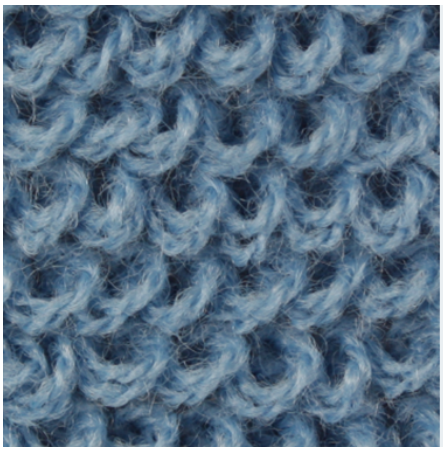
1. Call up the "Jacquards" dialog box via the "Edit" / "Generate or Edit Jacquard..." menu.
2. Select the desired jacquard generator under the "Jacquard " / "Stoll" section and insert.



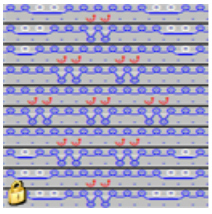
- Selection options:
  - Plush
  - Devoré knit + Plush 1-Row
  - Devoré knit + Plush 2-Row
  - Devoré knit Twill + Plush 1-Row
  - Devoré knit Twill + Plush 2-Row
  - Devoré knit Full / Twill

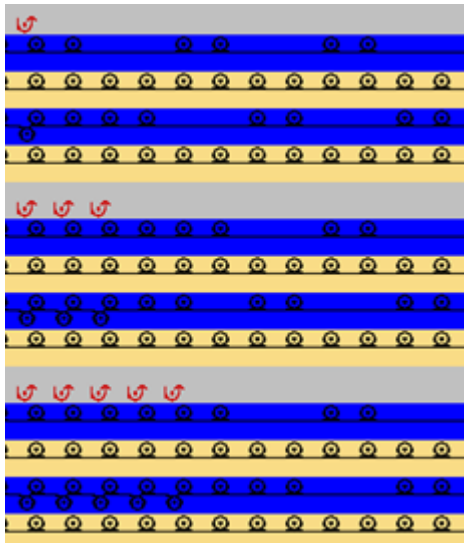
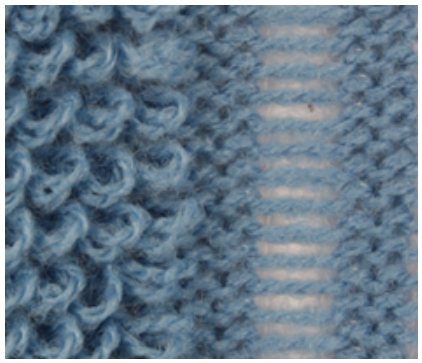
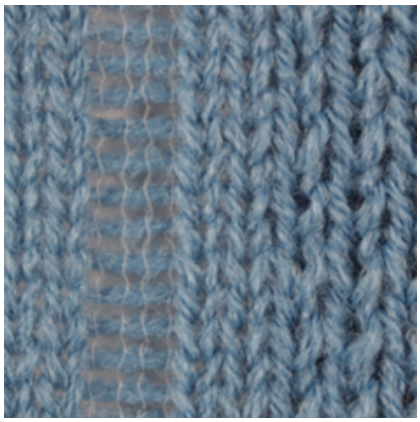
Plush:

Representation of the module	Function
	The binding thread works on all needles leading on the back and binds the plush loops formed in every row following in the front and which are cast-off then. • **i** Only one plush loop is formed at the selvedge of the motif.

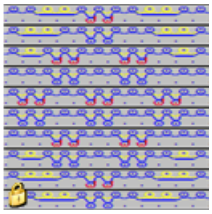
Representation of the module	Function	
Stitch line		
Fabric View	**Front**	**Rear**
		

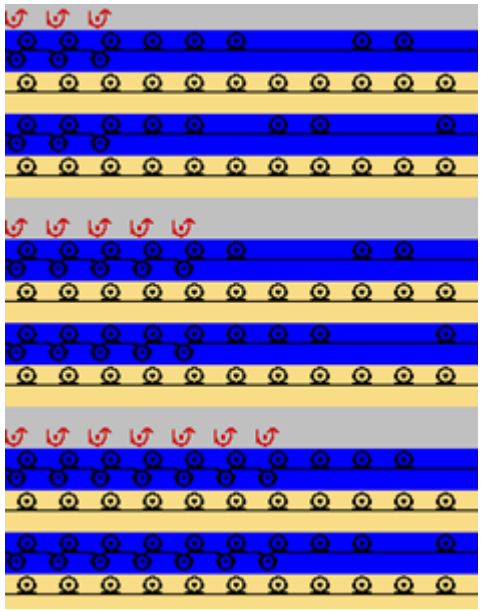
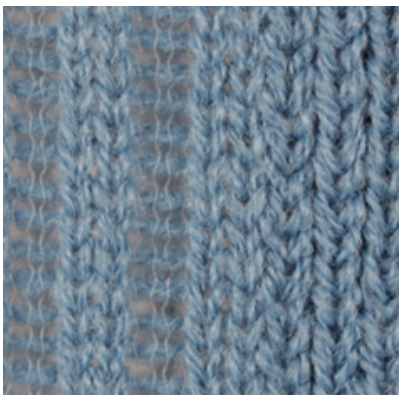
Devoré knit + Plush 1-Row:

Representation of the module	Function
	The binding thread works on all needles leading on the back and binds the plush loops formed in every second row following in the front and which are cast-off then.

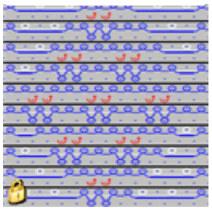
Representation of the module	Function	
Stitch line		
Fabric View	**Front**	**Rear**
		

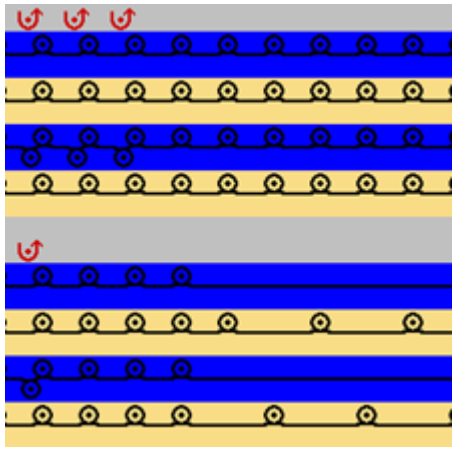
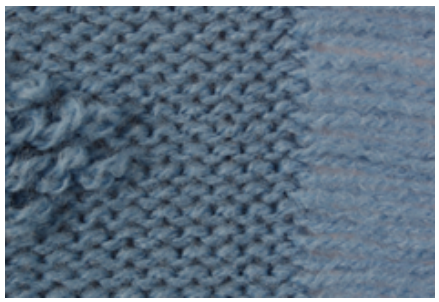
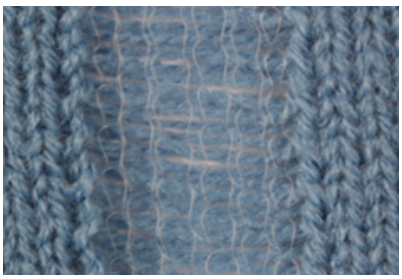
Devoré knit + Plush 2-Row:

Representation of the module	Function
	The binding thread works on all needles and binds the plush loops formed in every row. Both the plush loops formed consecutively are cast-off afterwards. **i** An outline change of the motif is possible only after 2 rows.

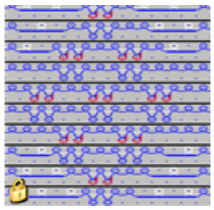
Representation of the module	Function	
Stitch line		
Fabric View	**Front**	**Rear**
		

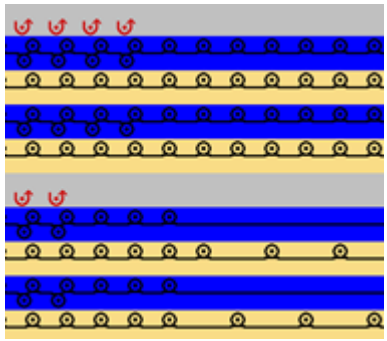
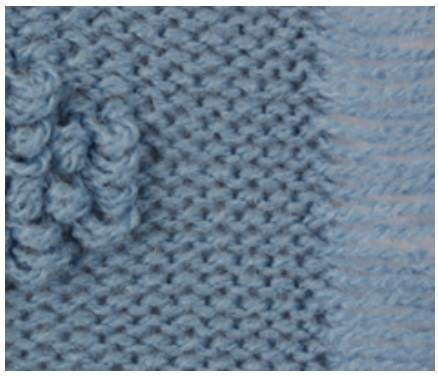
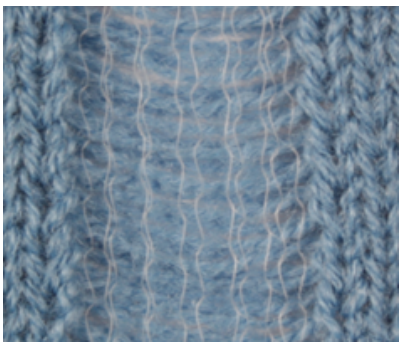
Devoré knit Twill + Plush 1-Row:

Representation of the module	Function
	The binding thread works the areas for devoré within twill and binds the plush loops formed in every second row following in the front and which are cast-off then.

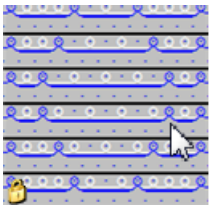
Representation of the module	Function	
Stitch line		
Fabric View	**Front**	**Rear**
		

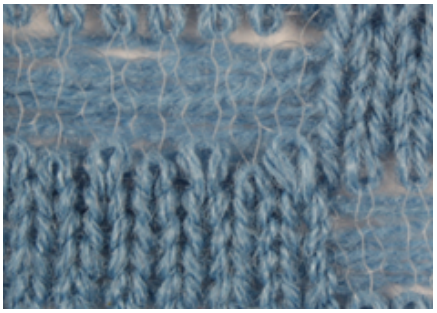
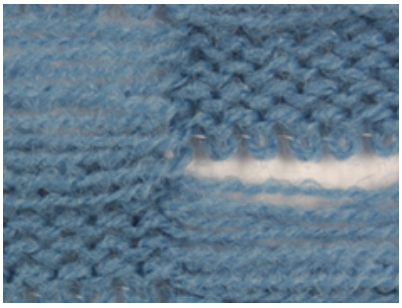
Devoré knit Twill + Plush 2-Row:

Representation of the module	Function
	The binding thread works the areas for devoré within twill and binds the plush loops formed in every row. Only one tuck loop is formed at the edge of the motif. **i** An outline change of the motif is possible only after 2 rows.

Representation of the module	Function	
Stitch line		
Fabric View	**Front**	**Rear**
		

Devoré knit Full / Twill:

Representation of the module	Function	
	The binding thread works on all needles the areas for devoré within twill and the area of the motif thread.	
Stitch line		
Fabric View	**Front**	**Rear**

Representation of the module	Function	
		

27.4 Complete the Pattern

I. Complete the pattern:

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

> **i** When expanding the marking for the binding thread and the motif yarn is entered in the "System function" control column.

2. The following functions are included in the "System function" control column:

Symbol	Function
devoré knit/plush binding thread	Use the system function binding thread.
devoré knit/plush motif thread	Use the system function motif thread.

3. Start the technical processing with the icon.

▶ In the Technical Assistant dialog the following message appears often: "The system S1 cannot be used in technical row xx".

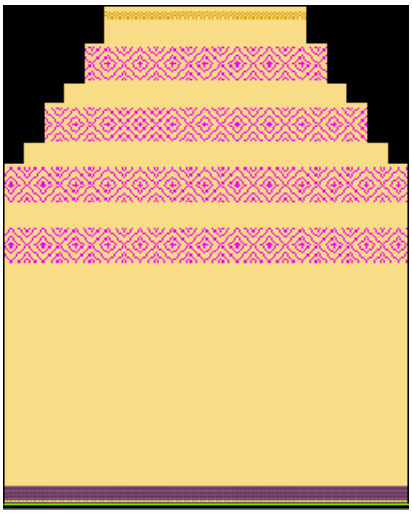
4. Select the option "Determine the knitting system automatically".
5. Confirm the message with "Continue" repeatedly.

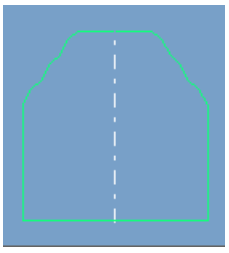
> **i** The option "Prompt no longer" can be activated after message appesrs for the first time.

6. The query "Generate MC Program" appears.
7. Confirm the query with "OK".

> **i** Pattern with Stoll-devoré knit® knitting technique are executed according to the possibilities of the systems usage.

28 Fully Fashion-Pattern: Fair Isle Narrowing with Float Jacquard



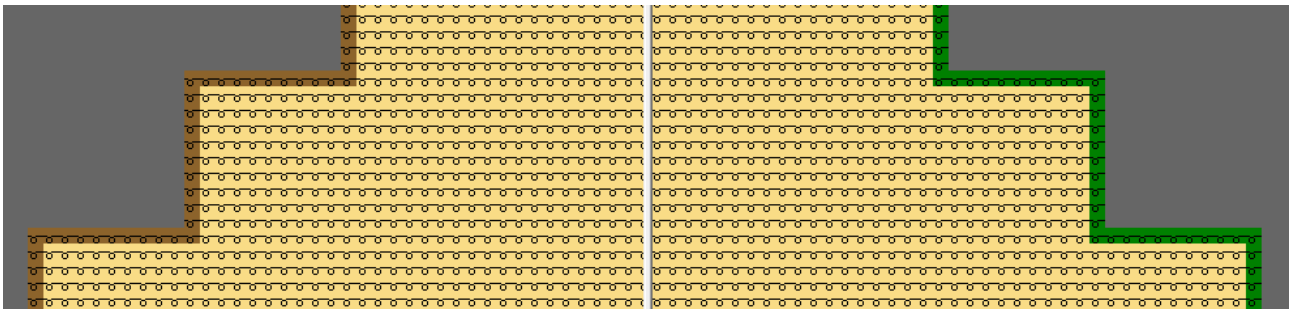
Pattern name	Fair Isle Muster Flottjac.mdv	
Pattern size	Width:	200
	Height:	260
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	1x1	
Basic pattern	Front stitch with transfer	
Shape	 Shape for Fair Isle narrowing technique	
Knitting Technique	Structure SJ with float jacquard	
Pattern description	Fully Fashion front with Fair Isle Narrowing	

28.1 Fair Isle Narrowing

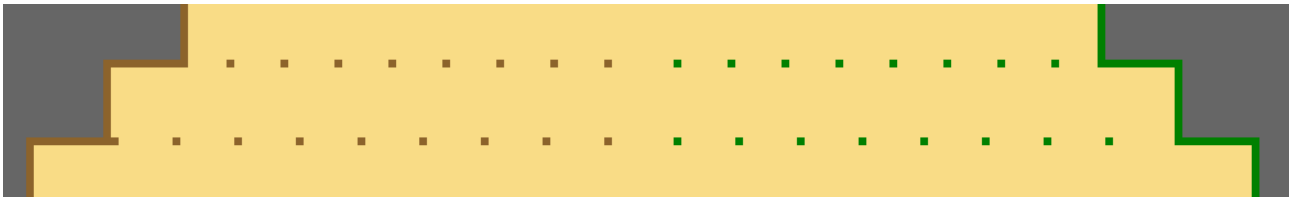
Fair Isle narrowing discription

Fair Isle Narrowing is a multi-step narrowing. The existing narrowing steps at the outside edges are spread over each half knitting width in equal distances and executed into individual transfer processes.

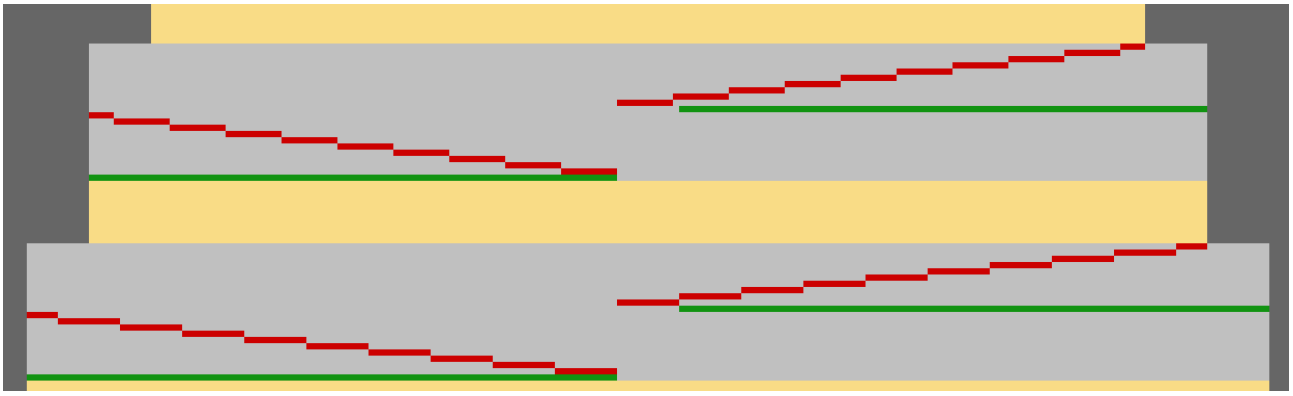
Example: narrowing steps of 10 needles at the outside edge



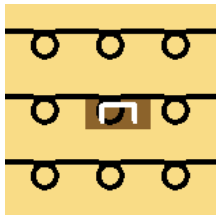
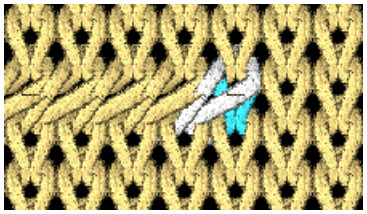
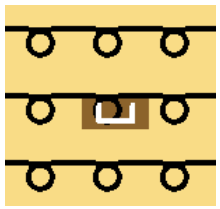
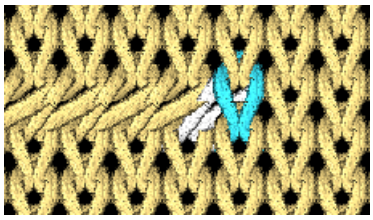
Multi-step narrowing: narrowing markings spread over the knitting width.



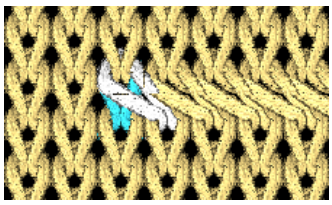
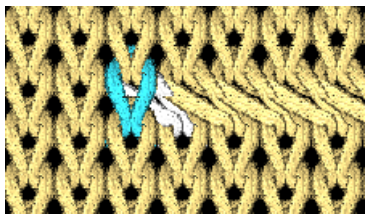
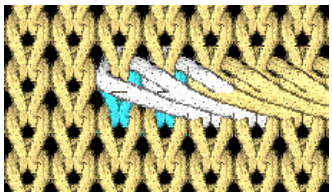
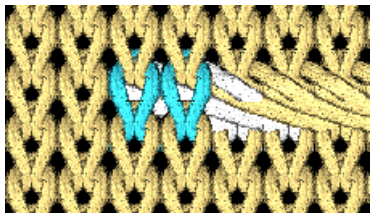
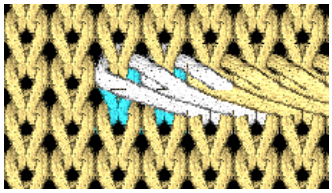
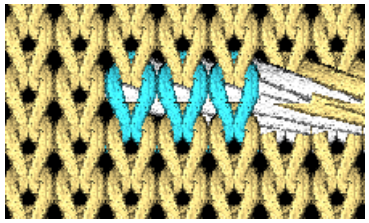
Result:



Multi-step narrowing selection possibilities:

narrowing variants		
above		
underneath		

Cover width selection possibilities:

Cover widths				
1				
2				
3				

28.2 Create the shape in the M1plus Shape Editor

Create shapes for Fair Isle Narrowing:

1. Via the "Shape" / "Shape Editor (Generate or Edit Shapes)..." menu call up the "M1plus Shape Editor" dialog box and create a new shape with .
2. Enter the values for the "Basic Shape" element in the table.

Basic element Front

No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function
1		0	-384	0	-100	0	-100	1	0	0			Basis
2		311	0	140	0	140	0	1	0	0			
3	✓	200	230	90	60	0	0	0	0	0			Narrowing M
4		0	153	0	40	0	40	1	0	0			

3. Create a line editor for the edge line No. 3

	Factor Grouped	Group	Height Steps	Width Steps	Factor	Width ---	Width \\\
			90	60			
	3	1	20	10	1		
	0	1	10	10	1		

4. Click on the edge line No. 3 of the Front basic element in the "Function" menu.
5. In the "General" tab set **Narrowing** under Function.
6. In the "Narrowing" tab activate **multi-step** under General.
7. Select in the Module allocation

- underneath
- above

8. In the picklist select the "Fair Isle + Doubling_Stitch v" module.
9. Save the shape via the "File" / "Save" menu.
10. Close the "M1plus Shape Editor" with .

28.3 Create the pattern and load the shape

I. Generate pattern without shape

1. Select "File" / "New" from the menu bar.
   - or -
   Click on the symbol.
2. Enter a Pattern name.
3. Select the machine type, setup type and gauge.
4. Select **Basic pattern (pattern without shape)** and "Design Pattern".
5. Set pattern size and select the "Front stitch" basic knitting mode.

6. Select a start.
7. Confirm the settings with "Generate Design Pattern".

▶ The "Symbol view [Basic]" will be opened.

II. Open the shape and position it in the pattern:

1. Load shape via "Shape" / "Open and Position Shape...".

▶ The "Open" dialog box will be displayed.

2. Specify path and select the desired shape.
3. Click the "Open" button.

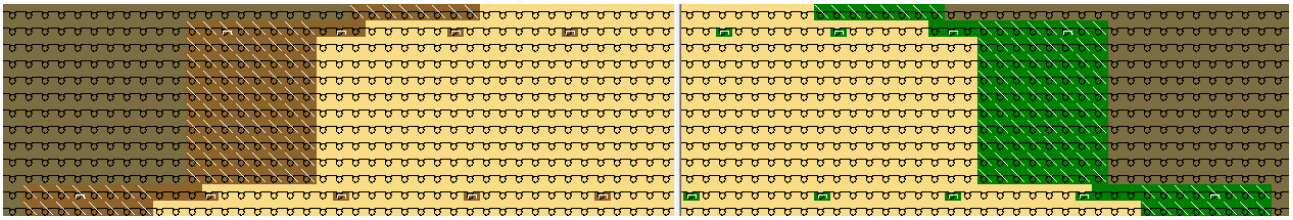
▶ The shape is laid on the pattern.

28.4 Draw the motif

✓ The shape is placed on the basic pattern.

1. Activate  and  after positioning the shape in the "Symbol View [Basic]".

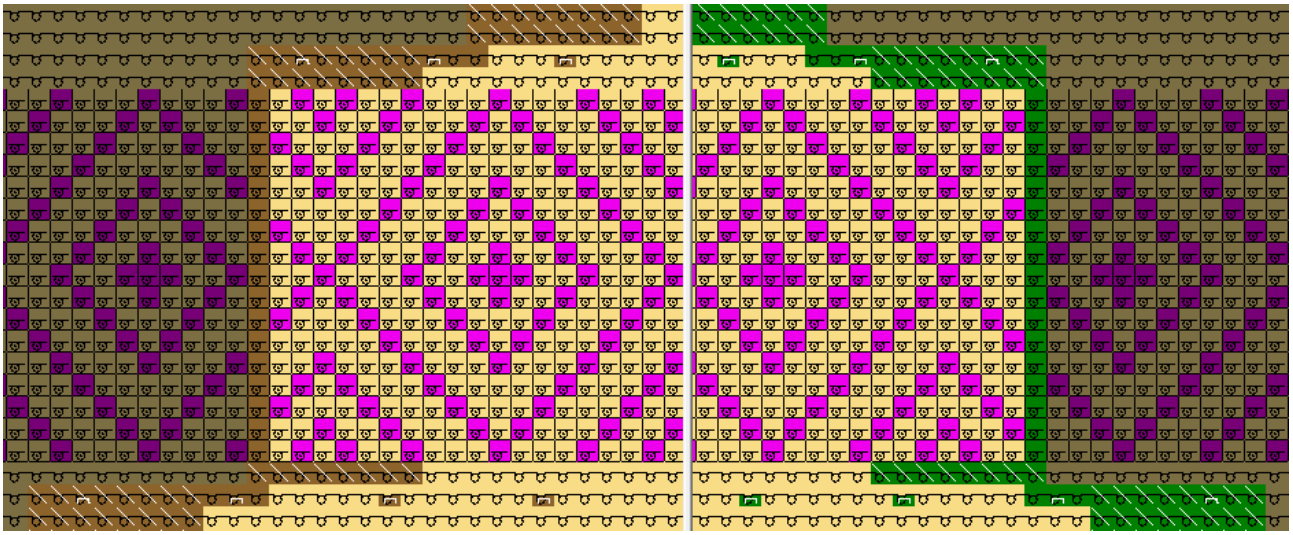
▶ The narrowing markings and edge colors are displayed.



2. Draw in a motif for the Float Jacquard.

> **i** When drawing the jacquard motif pay attention, that the narrowing markings are not located in the motif area. The narrowings in the jacquard area are causing the incompleteness of the motif.

3. Call up the "Jacquards" dialog box via the "Edit" / "Generate or Edit Jacquard..." menu.
4. Select the desired Jacquard generator and insert it via "Apply". A Jacquard "Float without Transfer" is inserted in the example.
5. Proceed in the same way in all further Jacquard areas.
6. Close the dialog box with "OK".



28.5 Complete the Pattern

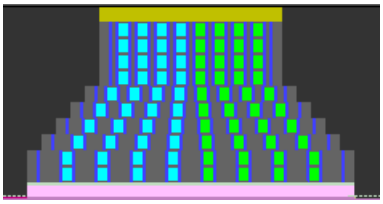
Complete the pattern:

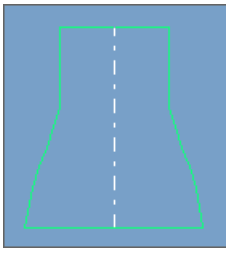
1. Cut-out the shape with the button in the "Steps of Processing" toolbar.
2. Expand the pattern with icon of the "Steps of Processing" toolbar.
3. Start the technical processing with the icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Run the "Sintral Check" with key in the "Steps of Processing" toolbar.

29 Fully Fashion: Fair Isle Narrowing with Structure



Pattern name	Fair Isle Struktur.mdv	
Pattern size	Width:	204
	Height:	100
Machine type:	CMS 530	
Setup Type	Setup2	
Gauge	E 8	
Start	1x1	
Basic pattern	Front stitch with transfer	
Shape		
Knitting Technique	Structure Sngle Jersey mit 3x3 Cable	
Pattern description	Fully Fashion front with Fair Isle Narrowing	

29.1 Create a pattern and draw the motif

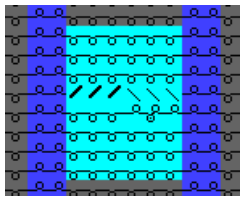
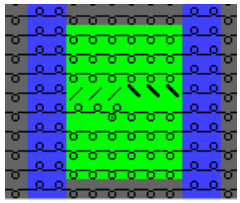
I. Generate pattern without shape

1. Select "File" / "New" from the menu bar.
   - or -
   Click on the  symbol.
2. Enter a Pattern name.
3. Select the machine type, setup type and gauge.
4. Select **Basic pattern (pattern without shape)** and "Design Pattern".
5. Set pattern size and select the "Front stitch" basic knitting mode.
6. Select a start.
7. Confirm the settings with "Generate Design Pattern".

▶ The "Symbol view [Basic]" will be opened.

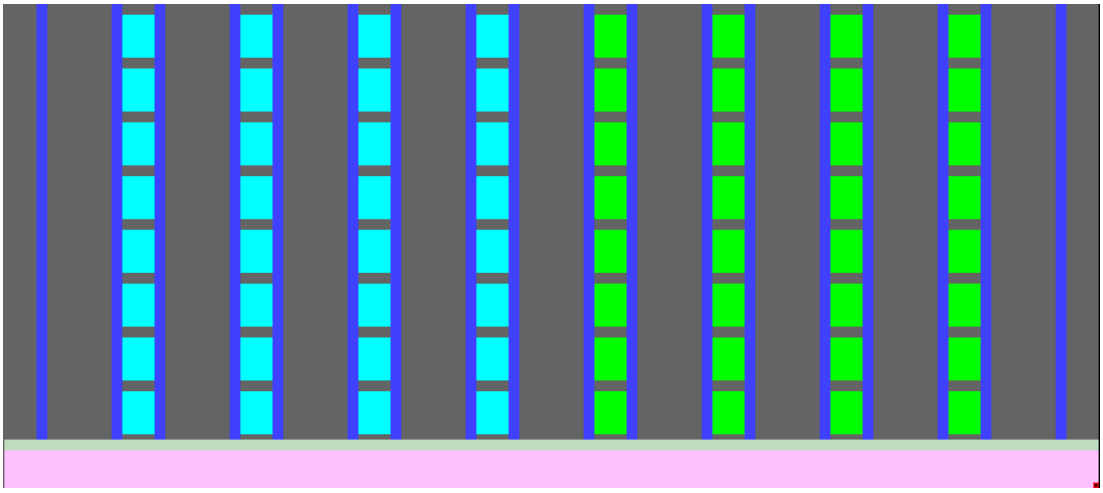
II. Draw the motif.

1. Select elements from "needle actions" and "Module Explorer of Database" toolbar and create the motif.

Module selection	Module Symbol View
Rear Stitch with Transfer	
Cable 3x3>	
Cable 3X3<	

Example for the motif:

■ Presentation by module color 

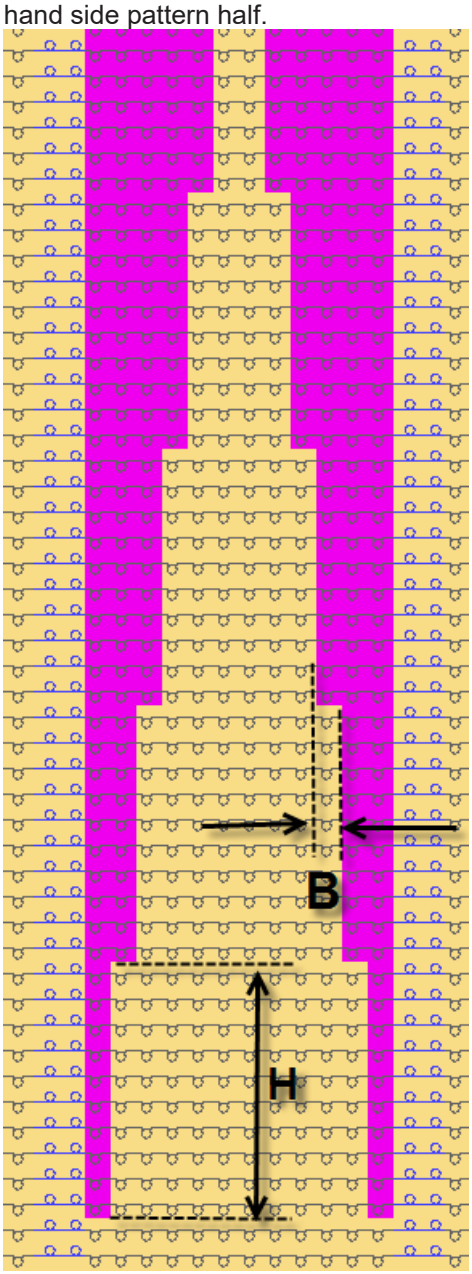


29.2 Draw-in and cut out narrowing steps

I. Draw-in narrowing steps in the basic pattern

✓ The basic pattern with structure is created.

1. Draw-in the narrowing steps with any desired yarn color between the cable ribs in the left hand side pattern half.

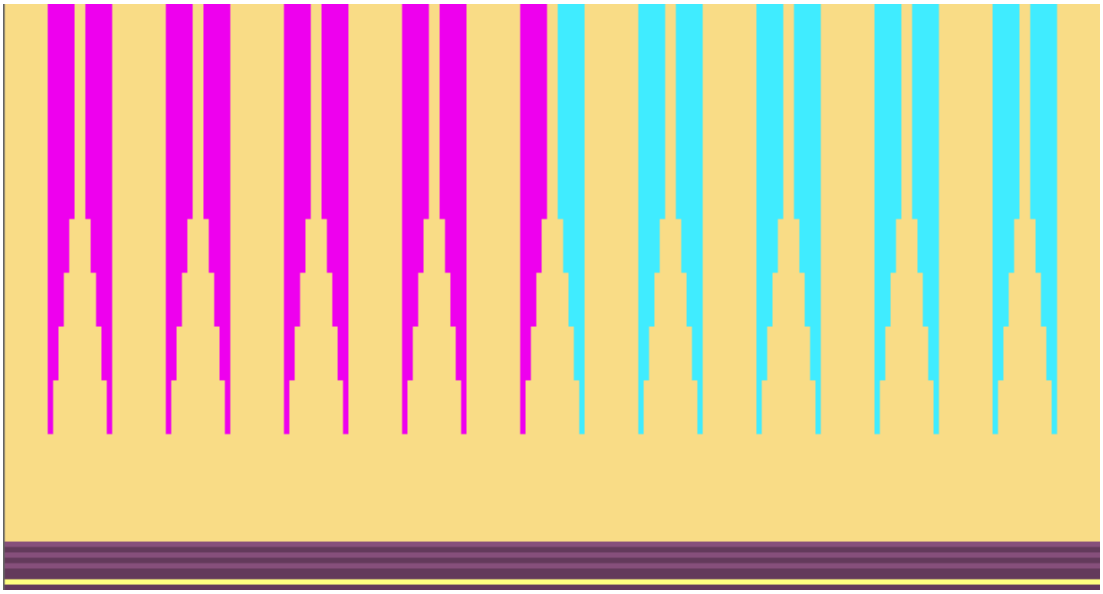


2. Please note when drawing-in:

- Draw-in the narrowing steps in the area without modules (cable).
- The amount of knitting rows to the next narrowing step (H).
- Narrowing width / cover width (B).

3. Draw-in more narrowing steps with another yarn color in the right hand side pattern half.

▶ Pattern with drawn in narrowing steps.



II. Select and cut out narrowing steps

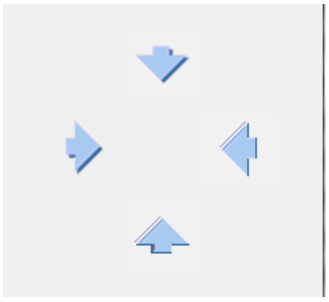
1. Select all drawn in narrowing steps in color in the left hand side pattern half with the drawing tool:

■  "Fill with the Magic Wand" and multiple selection "Ctrl".

– or -

■  Search and Select

2. Call up the "Delete area" dialog box with  .
3. Delete the selected narrowing steps with the left arrow key showing to the right



▶ The outer edge will be placed inwards.

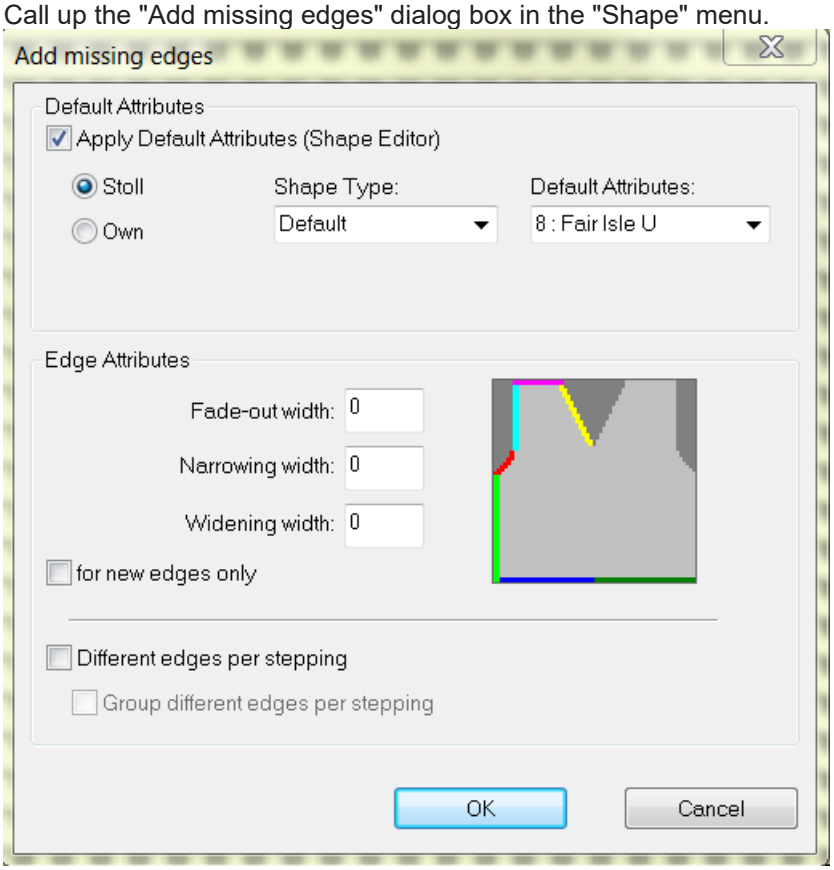
4. Select in the same way the drawn in narrowing steps in color in the right hand pattern half and delete them with right arrow key showing to the left.

▶ The narrowing steps are deleted and large stepping is resulting.

29.3 Create and load shape

I. Generate Pure Shape

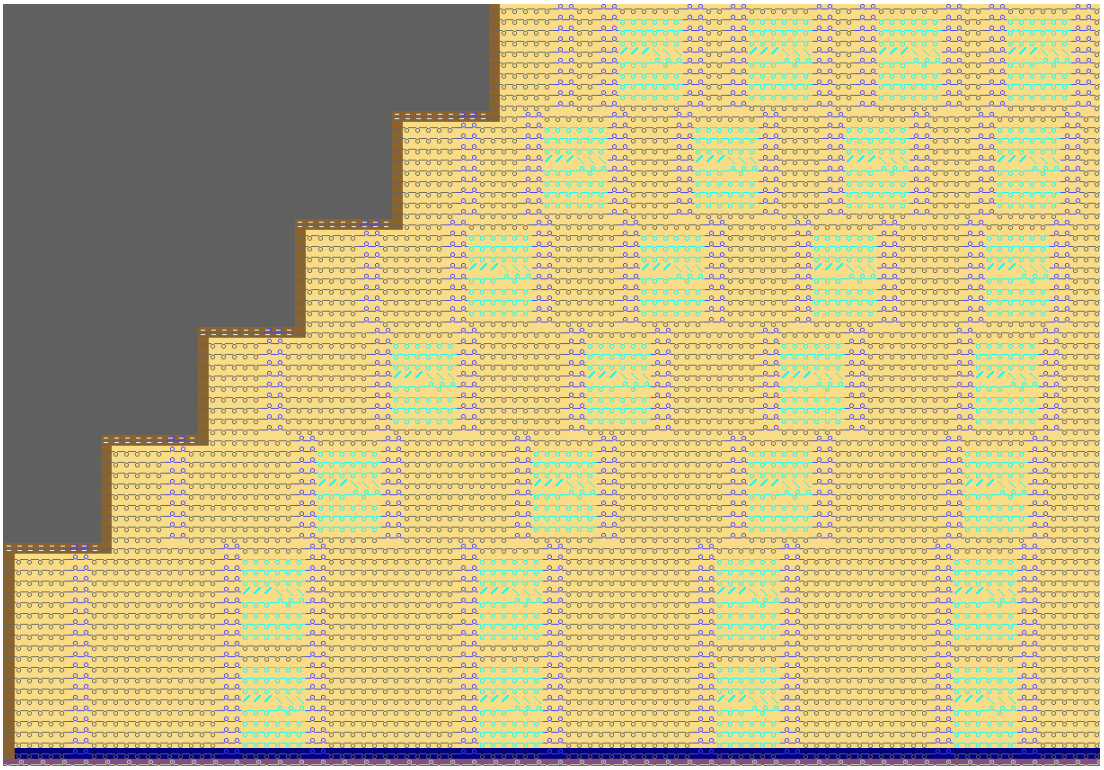
1. Run the "Generate Pure Shape" function in the "Shape" menu.
2. Select the left and right hand side areas of the fabric with **Outside shape** with the symbol  from the "Shape attributes" toolbar and the drawing tool  .
3. Call up the "Add missing edges" dialog box in the "Shape" menu.



4. Under the "Standard attribute" section "8: Fair Isle U" is set.
5. Close the dialog box with the "OK" button.

6. Activate  and  keys to display the shape edges.

▶ The edge colors are displayed.



II. Convert and Save Shape

1. Via the "Shape" menu select "Convert Shape (shr) -> Stitch Based Shape (shp)".
2. Close the "Conversion of shr. -> shp" dialog box with the "OK" button and save the shape.

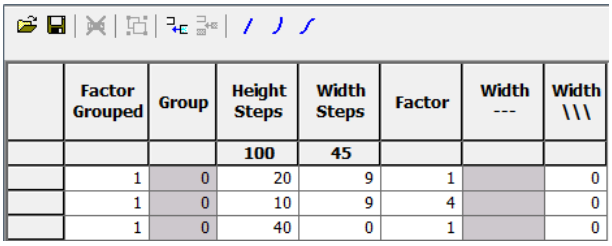
III. Correct the shape in the Shape Editor

1. Via the "Shape" menu open the "Shape Editor (Generate or Edit Shapes)..." and load the converted shape (.shp).

Basic element: Left lines

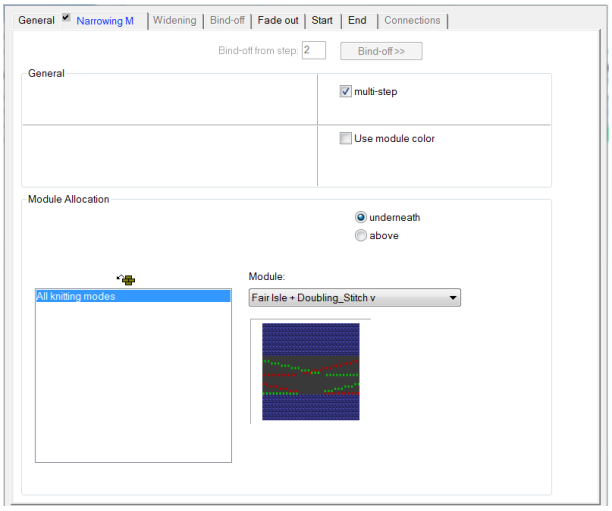
No.	Lines Editor	Height mm	Width mm	Height Stitches	Width Stitches	Height Steps	Width Steps	Factor	Height Remainder	Width Remainder	Width ---	Width \\\	Function
1		0	-340	0	-102	0	-102	1	0	0		0	Basis
2	✓	333	150	100	45	0	0	0	0	0		0	Narrowing
3		0	190	0	57	0	57	1	0	0		0	

Lines editor: Line 2 left



	Factor Grouped	Group	Height Steps	Width Steps	Factor	Width ---	Width \\\
			100	45			
	1	0	20	9	1		0
	1	0	10	9	4		0
	1	0	40	0	1		0

2. The **Mirrored** setting can be activated, as the left and right edge are identical.
3. Select edge line No. 2 in the table of the "Lines left" basic element under "Function".
4. In the dialog box open the "Narrowing" tab.
5. Under "General" select the ☑ multi-step check box.



▶ "Fair Isle + Doubling_Stitch v" is displayed under module.

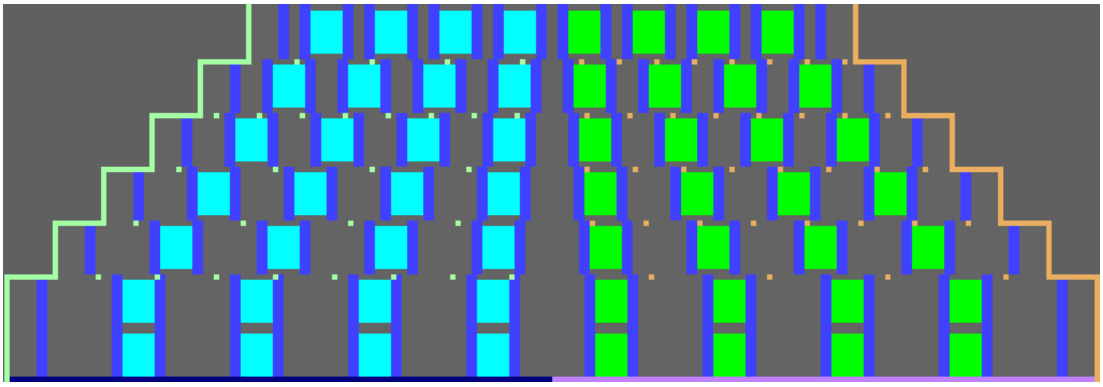
6. Close the dialog box with "OK" and save the shape.

IV.IV. Reposition the shape

✓ Remove the already positioned shape of the pattern via the "Shape" / "Remove shape" menu.

1. Place the shape (.shp), edited in the Shape Editor with the "Open and Position Shape" menu.

▶ The fair isle narrowing markings placed equally in the pattern are displayed if and are selected.



29.4 Correct narrowings

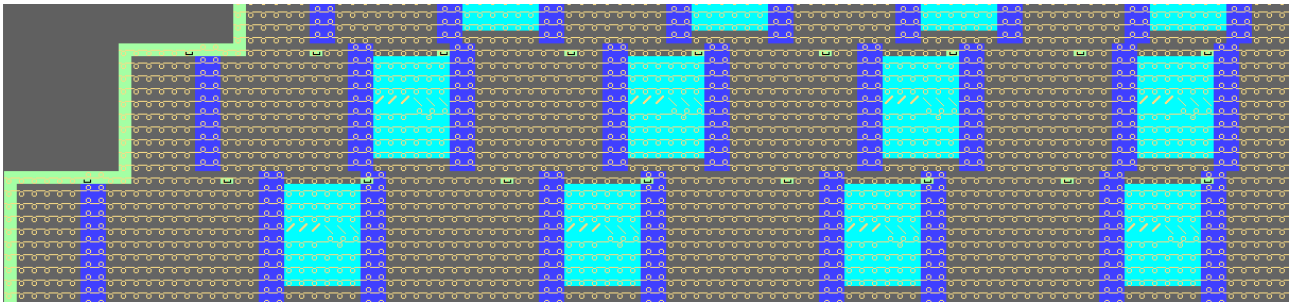
I. Correct the narrowing markings and adapt to the structure:

✓ The narrowing markings for Fair Isle are placed in equal distances and independently of the structure.

1. Please note while correcting:

- The narrowings are processed only in areas where no cable module is existing.
- The number of the narrowing markings remains unchanged, which corresponds to the narrowing step of the outer edge.

Narrowing markings of the left hand side pattern half before the correction



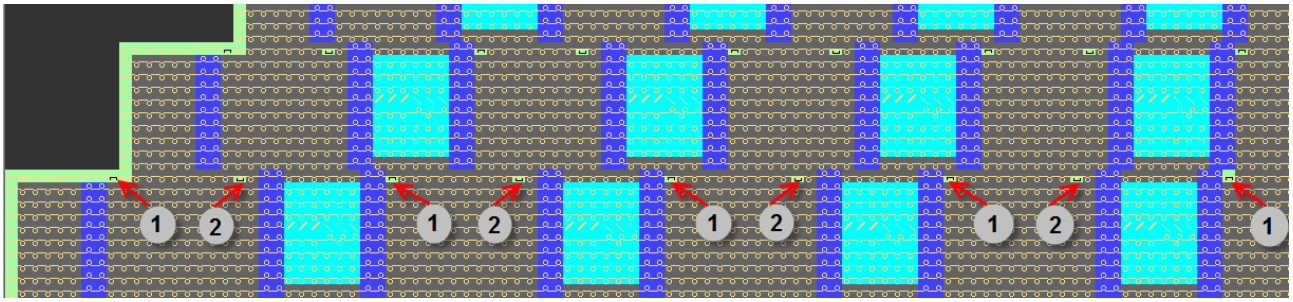
2. Position the narrowing markings so that no stitch crossing takes place between the 1st and 2nd (3rd and 4th) marking.

▶ This area gets continuously more narrow.

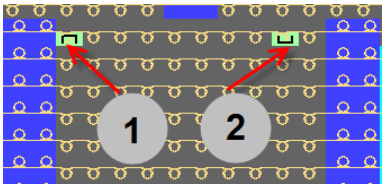
3. Pick-up with "F6" / "F7" the narrowing markings existing the pattern or select them in the "Shape Attribute" toolbar and position the selected newly.
With it, note that:

- "Multi-step narrowing above" (1)
- "Multi-step narrowing underneath" (2)

Narrowing markings after correction



Detailed presentation



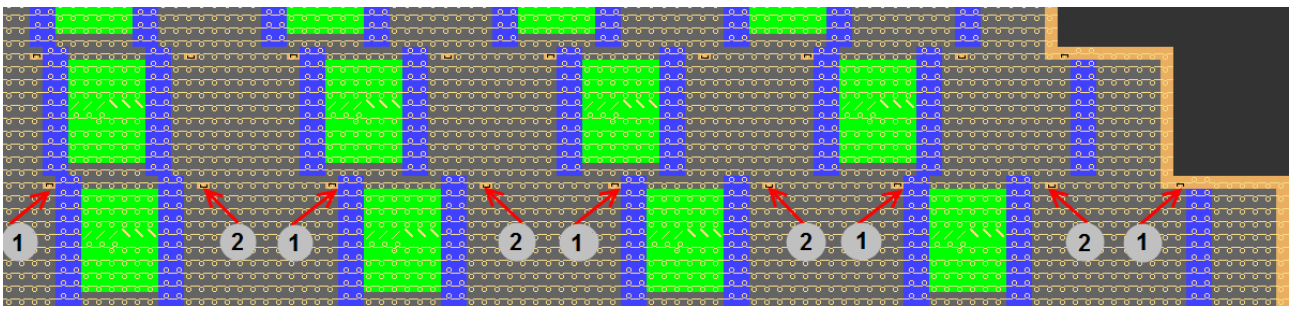
4. In the right hand side pattern, the narrowing markings have also to be positioned manually and adapted to the structure.

Narrowing markings of the right hand side pattern half before the correction

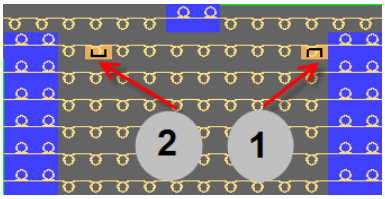
5. The narrowing markings have to be placed in the area of stitch front and the following has to be noted hereby:

- "Multi-step narrowing above" (1)
- "Multi-step narrowing underneath" (2)

Narrowing markings after correction



Detailed presentation



II. Additional possibilities of correcting narrowing markings

> **i** Instead of the usual narrowing markings with the cover width of 1 you can you narrowing markings with a cover width of 2 of 3.

1. Select 2 or 3 in the "Shape Attributes" toolbar and draw in the narrowing markings.
2. Please note, that the number has to be reduced accordingly. On the basis of the setting 2 only half of the markings are allowed to be used. If the setting 3 is selected, only one third of the markings is allowed.
3. Markings with different cover widths may be used in one row, too.

▶ The amount of markings in one row multiplied with the cover width, has to be equal to both narrowing steps of the outer edge.

29.5 Complete the Pattern

Complete the pattern:

> **i** Insert in the areas without narrowings cycles for an extension if required.

1. Cut-out the shape with the button in the "Steps of Processing" toolbar.
2. Expand the pattern with icon of the "Steps of Processing" toolbar.
3. Start the technical processing with the icon.

▶ The query "Generate MC Program" appears.

4. Confirm the query with "OK".
5. Run the "Sintral Check" with key in the "Steps of Processing" toolbar.