STOLL

Stoll Pattern Software M1Plus handling and Programming Additional Topics

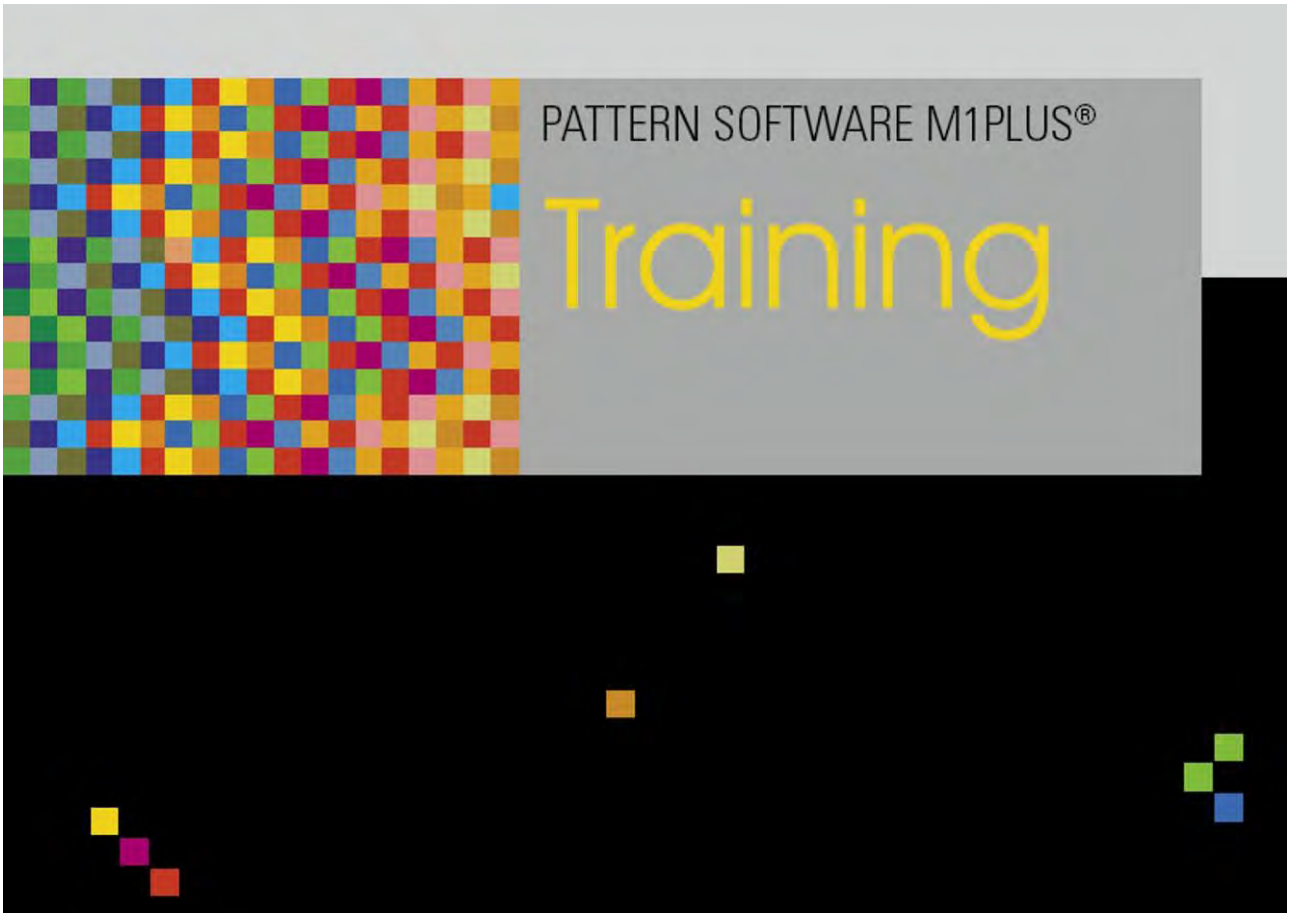

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Table of Contents

1 Picture import

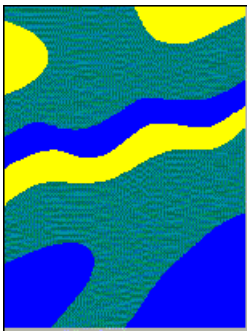
Pattern name	Bild Import.mdv	
Pattern size	Width:	315
	Height:	230
Machine type	CMS 530	
Gauge	8	
Setup Type	Setup2	
Start	2x1	
Description of pattern	Picture import in the format: ◆ **tif** ◆ **bmp** ◆ **pcx**	

1.1 Save the M1plus View as Picture

Possibilities to save the M1plus view as a picture:

- As pattern or module
- As a selection

Example:



I. Save the whole pattern as picture:

1. Select the lowest zoom level.
2. Call up the "File" / "Save Fabric or Symbol View as Picture" / "Pattern / Module…" menu.
3. Specify path and format (bmp or tif) in the "Save as" dialog box.

⇨ The picture file will be save under the defined path.

II. Save an area as picture:

1. Select the lowest zoom level.
2. Select the desired area in the Fabric or Symbol View.
3. Call up the "File" / "Save Fabric or Symbol View as Picture" / "Selection…" menu.
4. Specify path and format (bmp or tif) in the "Save as" dialog box.

⇨ The area will be saved as picture file under the defined path.

1.2 How to Import a Picture into the M1plus

You can edit the picture before the import with the picture processing program.

You can call up the picture processing program by the "Tools" / "Edit Picture…" menu.

Processing of all picture formats is possible.

	Meaning
Import as pattern element	Import picture and save as a local pattern element under  . **i:** Not for the import of shapes.
Import as pattern	Import a picture and generate a new pattern. ◆ **Technical Pattern:** Picture will be displayed in the "Symbol View [Expanded]". ◆ **Design Pattern:** Picture will be displayed in the "Symbol View [Basic]".

Resolution: One pixel (color dot) of the picture file corresponds to one stitch in the pattern.

1.3 Step 1: Picture Selection

Loading a picture file:

i	You can import pictures in the bmp, tif and pcx formats.

1. Open M1plus.
2. Open the "File" / "Import" / "Picture as Pattern…" or "Picture as Pattern Element…" menu.

⇨ The "Step 1: Picture Selection" dialog box appears.

3. Set the corresponding specifications for the import under "Settings…" before **loading** a picture file.

Default settings for the picture import dialog box

Element	Meaning
Pattern section	
"Pure Jacquard"	A color jacquard pattern with reverse side(s) and the necessary jacquard transitions is generated from the picture.
"Structure/Intarsia"	A structure or intarsia pattern is generated from the picture.
"Shape"	The picture is changed to a shape with "within or outside shape".
Target colors section	
Selection list	Reduce the picture to the specified number of target colors. i: The value range is between 2 and 32.
Jacquard section	
List field "Rear side"	Select module for the jacquard back.
Structure / Intarsia section	
Module positioning	
"Grid"	Fill modules in an imagined grid in the color area. The starting point of the grid is the bottom left color point. i: Only important for modules larger than one stitch.
"Grid"	Module positioning deactivated
Fill areas	Specify fill-in mode. i: Only available if the "Grid" checkbox is active.
"Border free"	Do not overwrite border of color area.
"Border exact"	Cut-off modules overlapping the edge.
"Border covered"	Overwrite border of color area.
List field "Basic pattern"	Select the knitting mode (module) for the basic pattern.

4. Activate the "Structure / Intarsia" option in the "Pattern" section.
5. Specify the number of target colors in the "Target colors" section.
   ⇨ These settings will affect the import of the picture.
6. Open the dialog box for the import of a picture with the "Load..." button.
   ⇨ Picture will be loaded and displayed in the preview pane.
7. Make the settings for further image editing:

Possibilities	Function	
Picture size by stitches section		
Width	Quantify the needles of the picture width (=pattern width).	
Height	Quantify the needles of the picture height (=pattern height).	
Keep aspect ratio	☑	Standard setting Keep the existing ratio when changing width or height.
	☐	Width and height can be changed independently.
"Convert"	Generate picture according to the settings and display it	
Presentation section		
◉ "All needles"	Retain number of needles in the width.	
◉ "1:1-Technique"	Double the number of needles in the width.	
◉ "Pattern rows per picture line"	Select factor for the picture height.	
Design Pattern	☐	Picture will be displayed as "Technical pattern" in the "Symbol View [Expanded]".
	☑	Picture will be displayed as "Design pattern" in the "Symbol View [Basic]".
MC Jacquard	☐	Picture will be displayed as "Technical pattern" in the "Symbol View [Expanded]".
	☑	**i: Design pattern** is also activated automatically . Picture will be displayed as **Design Pattern** and **MC-Jacquard** in the "Symbol View [Basic]".
Picture section		
"Load"	Call up the dialog box to load a new picture.	
"Save"	Call up the dialog box to save the loaded picture.	

8. Select the desired settings under "Presentation".
9. Select the desired machine type und the "Machine".
10. Select the desired start under the "Start".

1.4 Step 2: Color Selection

Reduce the number of colors:

1. Switch to "Step 2: Color Selection" with the "Continue" button.

⇨ The target colours are displayed in the **Reduced** column and the original colors in the **Allocated colors** column.

2. Select desired number of colors for color reduction in the selection field.

   Example: 6

3. Press the "<<Color reduction" key.

⇨ The picture is reduced to 6 colors and displayed in the preview.

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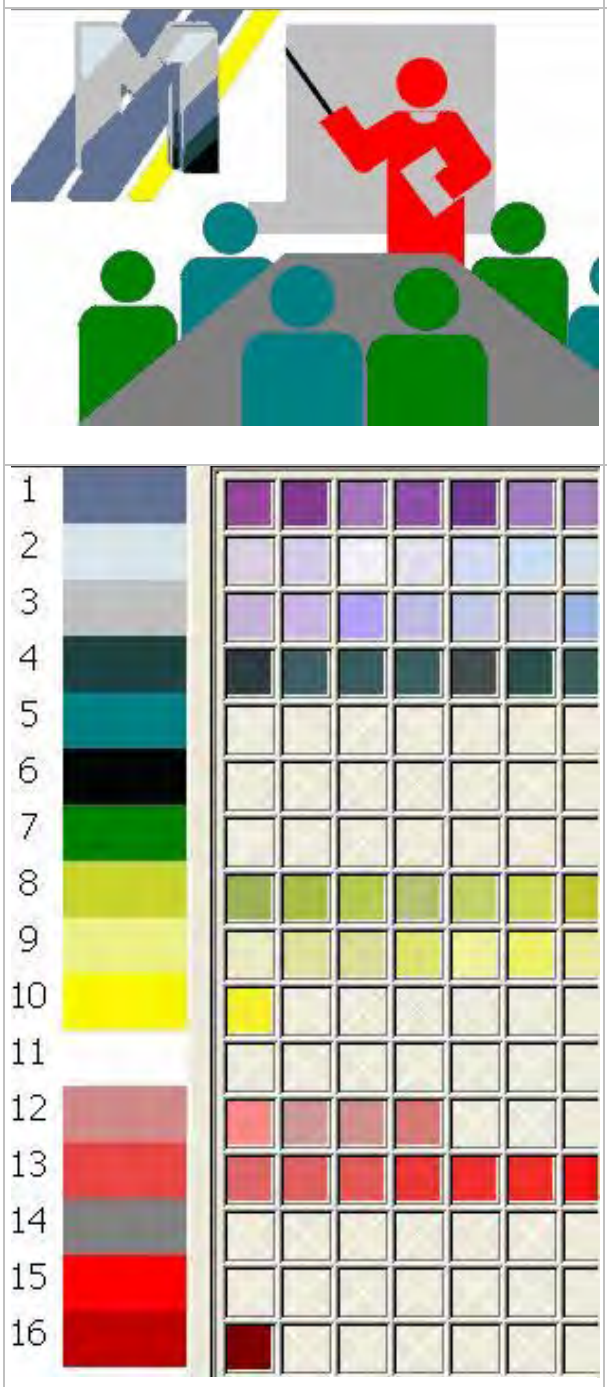
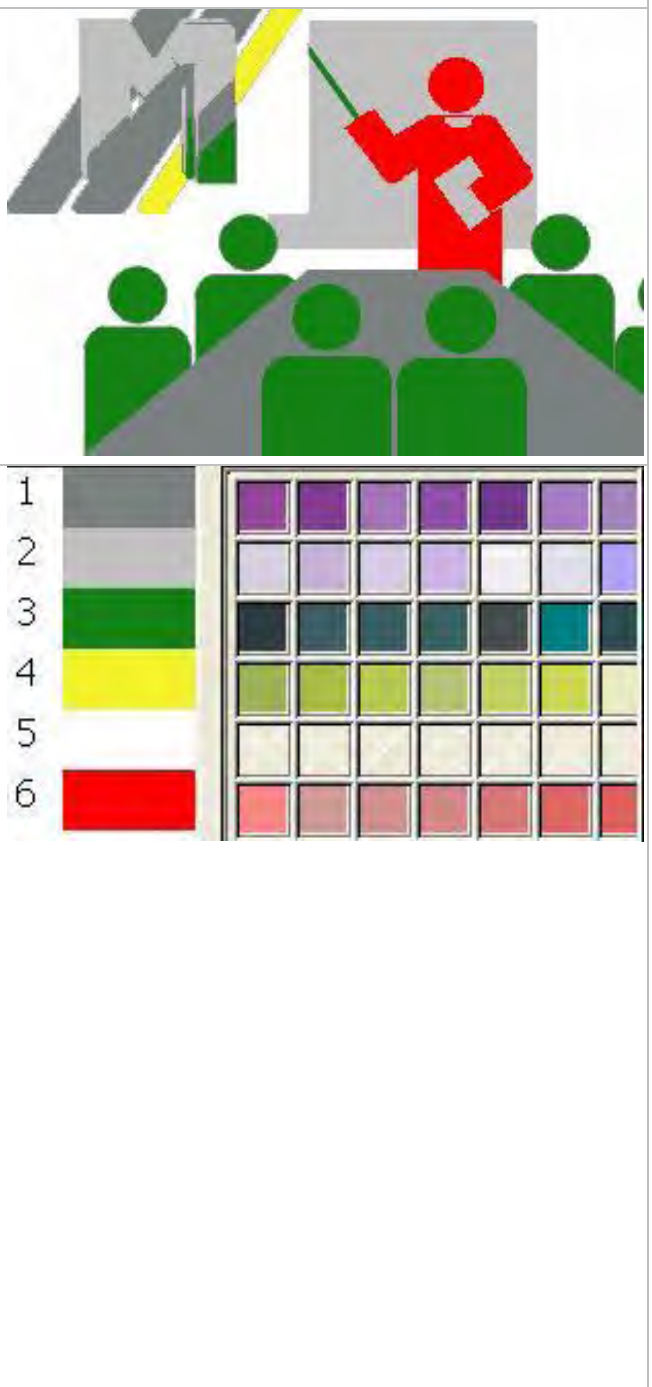
i Identifying a color in the pattern
Clicking on a picture dot of the display will frame the corresponding original color in the color table in red. With it you can modify the allocation manually.

Number of colors of the imported colors with Standard setting: 16 colors	Number of colors after color reduction down to 6 colors
	

You can drag a color from the one field to another by drag & drop.

4. Change to the next editing step with the "Continue>" button.

- or -

➜ Import the picture with the "Complete" key and open it in the symbol view.

i	All following editing steps are skipped with "Complete" (Quick mode).

1.5 Step 3: Structure / Intarsia / Jacquard

I. Procedure with the Structure / Intarsia selection:

▷ On "Step 1" ☑ "Structure / Intarsia" was activated.

1. In the "Module name" column allocate other modules to the target colors with Drag & Drop, if necessary.
2. Allocate an other yarn color or yarn number via the displayed color palette in the "Yarn" or "Target colors" column.
3. Import the picture with the "Complete" key and open it in the symbol view.

- or -

➜ Change to the next editing step with the "Continue>" button.

⇨ You can place allocated modules on a grid.

In every editing step one can return to the last editing step by "<Back".

II. Procedure with Pure Jacquard selected:

▷ ☑ "Pure Jacquard" is active in "Step 1".

1. In the "Jacquard areas (xx)" column with all the existing jacquard areas select the area to be changed.
2. Select the required back under "Jacquard (selected area)".
3. Make further settings:
   - No. of colors per row
   - No. of colors per group
   - No. of colors throughout
4. Import the picture with the "Complete" key and open it in the symbol view.

1.6 Step 4: Module positioning

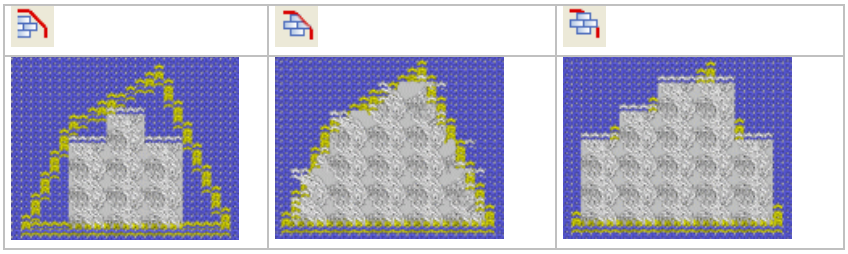
Specify the behavior of the modules:

▷ On "Step 1" "Structure / Intarsia" was activated.

▷ On "Step 3" modules greater than 1x1 pixel are allocated

1. Select the modules in the section "Grid" which are to be inserted with a defined insertion pattern.
2. Select the desired insertion mode under "Edge".

Section	Setting	Function
Grid		Modules are positioned unconformable in the area of the target color.
		Modules are positioned in the area of the target color corresponding to the setting under "Edge".
Edge	**Border free**	Modules are placed in the area of the target color complete only.
	Border exact	Modules are filled until the color edge of the target color.
	Border covered	Modules are filled beyond the color edge of the target color.



3. Make further settings.

Section	Setting	Function
Grid origin	"different per color"	An individual starting point of the module positioning will be specified for each color of the motif.
	"same for all colors"	An common starting point of the module positioning will be specified for all colors of the motif.

Key	Function
"Recalculate module positions"	Fill in the modules in the color, taking the filling settings into account. The module filled in will be displayed in the target color. Areas of the target color not filled in are shown in gray. i: The color of the grid line changes where the module overwrites the color edge.
"Apply standard"	The default settings will be entered for the inserted modules.

4. Click "Recalculate module positions".

⇨ The changes are displayed in the window.

5. Close the "Picture Import" dialog box with "Finish".

⇨ The picture will be imported into the M1plus and displayed in the Symbol View.

i **Resolution:** One pixel (color dot) of the picture file corresponds to one stitch in the pattern.

1.7 Further Possibilities

1:1 Technique:

i	Do not compare this function to the conversion of a pattern into 1x1 technique.

1. Select in "Step 1: Color selection" under Presentation "1:1-Technique".

⇨ The motif will be doubled in the width.

	This function is helpful for the creation of k&w patterns.

2 Pattern in 1x1 technique

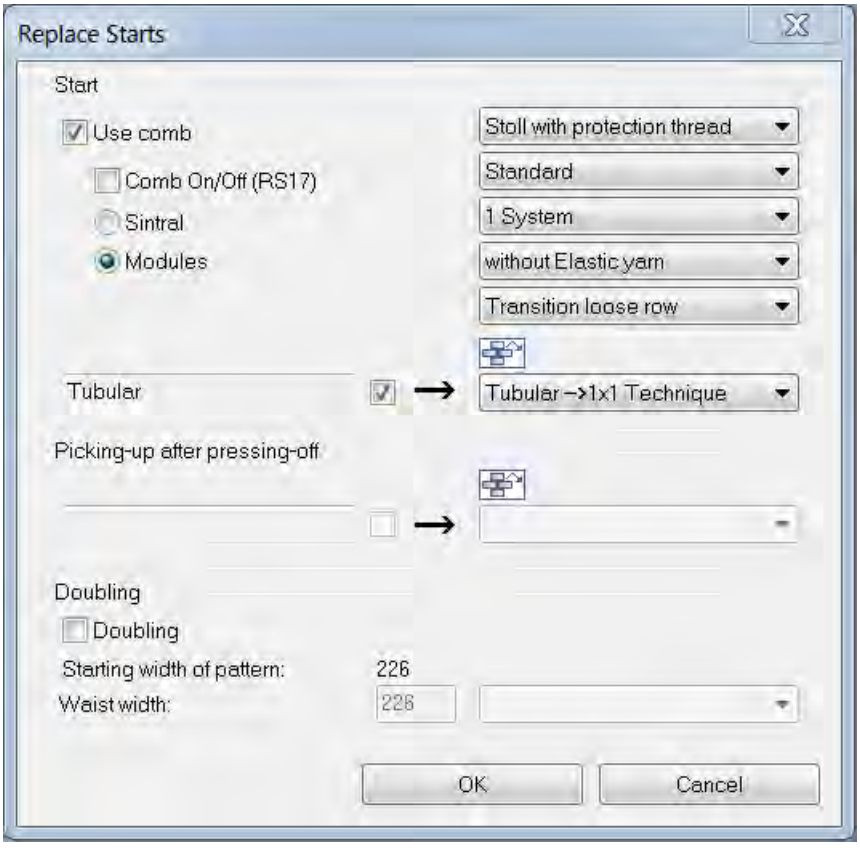
Pattern name	13_1x1-Technik.mdv	
Pattern size	Width:	120
	Height:	120
Machine type	CMS 530	
Gauge	8	
Setup Type	Setup2	
Start	Tubular	
Basic pattern:	Front stitch with transfer	
Knitting technique	Structure Jacquard	
Description of pattern	Rework a Structure-Jacquard Pattern into 1X1 Technique	

2.1 Create pattern and draw structure

Generate pattern and rework it into 1x1 technique.

1. Generate new pattern.
2. Draw the desired motif and the structure with the usual needle actions and modules.
3. Insert a jacquard generator in the motif.
4. Rework the pattern into 1x1 technique, call up "Edit" / "1x1 technique" for this.

⇨ The "Replace start" dialog box appears.



5. Make changes in the "Replace starts" dialog box if necessary:

◆ Select the desired start.

6. Close the dialog box with the "OK" button.

⇨ The selected start will be inserted.

i **When switching to 1x1 technique, floats will be inserted between the wales, the pattern width and the racking courses will be doubled. Modules, which have a link to 1x1 modules will be replaced.**

II. Create a link to modules in 1x1 technique.

You will find the modules for 1x1 in the Module Explorer Database under Stoll / Standard / 1x1 Technique.

1. Modul-Explorer Datenbankhard disk.
2. Select the desired module under STOLL / Standard / 1x1 Technik / "1x1-Aran" or "1x1 Cables, Single-sided Float" .
3. Call up the menu with the right mouse button and select "Create 1x1 link module -> Clipboard".
4. Modul-Explorer Musterhard disk.
5. In the Modul-Explorer Muster, under Musternamе / select the module, to which the link is to be created.
6. Call up the menu with the right mouse button and select "Create 1x1 link module <- Clipboard".

A link between the Module / Standard and the module for 1x1 technique is successfully created.

7. Create links with the corresponding 1x1 Technik modules for the "Aran 2x1<L" and "Aran 2x1>L" as well as "Aran2x1><L" modules and for further modules if necessary.

III. Display and remove links of modules.

An existing link to 1x1 modules can be displayed.

1. Open Module Explorer of Database.
2. Select a module under STOLL / Standard / "Cables, Single-sided float" or "1x1-Aran" .
3. Call up the menu with the right mouse button and select "Properties".

⇨ The name of the linked module is displayed in the "Description" tab, under "1x1 Module".

4. If a linking is to be removed, press the "Delete" key.

IV.IV. Further possibility of creating a link to the modules in 1x1 technique.

The existing write protection is canceled by copying a module in the Modul-Explorer Datenbank and thus a link can be created.

1. In the Modul-Explorer Datenbank copy the module, which is to be drawn-in in the motif.
2. Draw the copied module into the motif.
3. In the Modul-Explorer Datenbank under STOLL / Standard / 1x1 Technik / "1x1-Aran" or "1x1 Cables, Single-sided Float" select the desired module.

4. Call up the menu with the right mouse button and select "Create 1x1 link module -> Clipboard".
5. In the Modul-Explorer Datenbank, under STOLL / Standard / select the module copied and used in the motif.
6. Call up the menu with the right mouse button and select "Create 1x1 link module <- Clipboard".

A link is created between the copy of Module / Standard and the module for 1x1 technique.

Module groups with existing links to 1x1 technique modules:

Between the module groups / Standard and the module groups for 1x1 technique there exist links.

- Stoll/Standard/Pointelle - Stoll/1x1-Technique/1x1-Pointelle
- Stoll/Standard/Pointelle Closing Split - Stoll/1x1-Technique/1x1 Pointelle Closing Split
- Stoll/Standard/Aran - Stoll/1x1-Technique/1x1-Aran
- Stoll/Standard/Cables single sided float - Stoll/1x1-Technique/1x1 Cables single sided float
- Stoll/Standard/Cables double-sided float - Stoll/1x1-Technique/1x1 Cables double-sided float

2.2 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".
4. Run the "Sintral Check" via the "Steps of Processing" toolbar  .

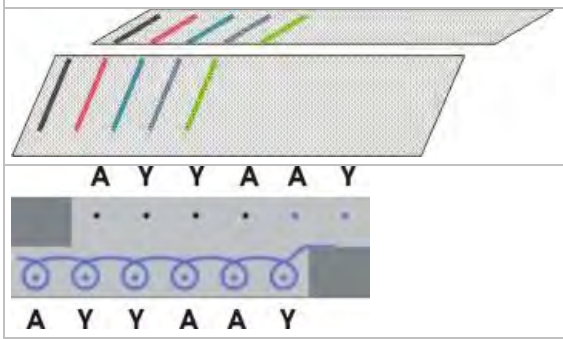
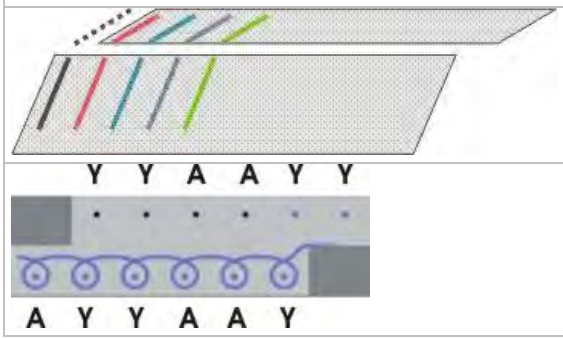
3 Petinet and Split Technique without Empty Rows

Pattern name:	14_Petinet-Split-o-Leer.mdv	
Pattern size:	Width:	186
	Height:	150
Machine type:	CMS 530	
Gauge:	8	
Setup Type	Setup2	
Start:	2x2	
Basic pattern:	Rear stitch with transfer	
Knitting technique:	Petinet Technique Split-stitch technique	
Pattern description:	Knitting technique **with empty rows** **Result: Increase of the production**	

3.1 Behavior of the Jacquard selection in the rear needle bed

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

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

3.2 Create and draw a pattern

Create and draw a pattern with petinet and split:

1. Generate new pattern.

   "File " / "New Pattern..." menu.

   - or -

➜ Click the icon.

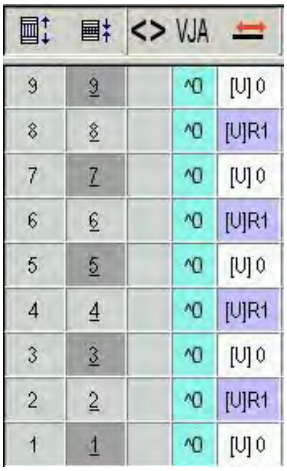
2. Select a machine with the allocated **Split** attributes from the "Machine Explorer".

   - or -

➜ Make the pattern specific setting via "Pattern Parameters" / "Machine Attributes...".

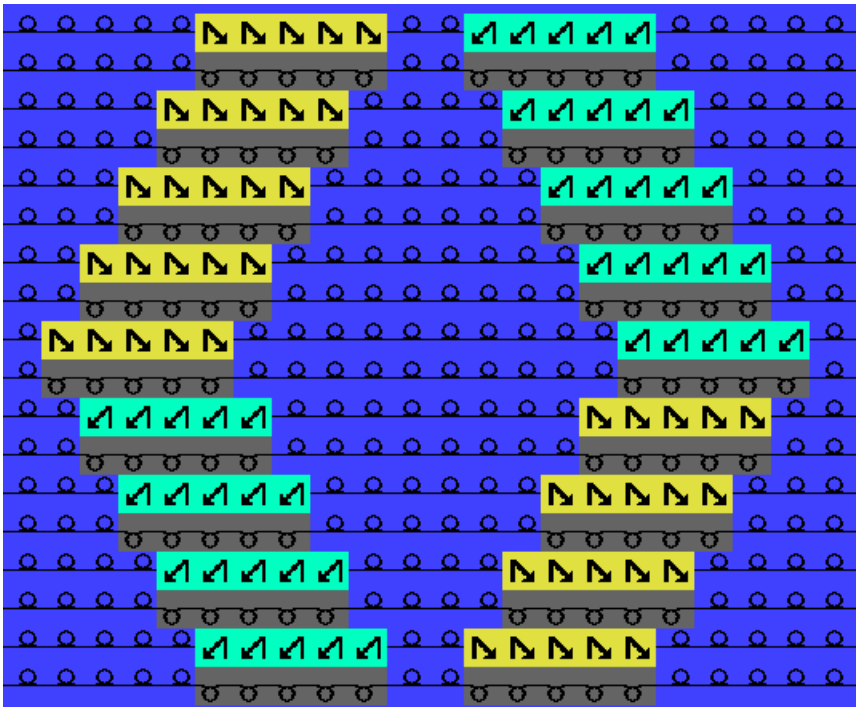
Caution:
Tuck and R-R are not allowed in the same technical row when you use split!

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



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

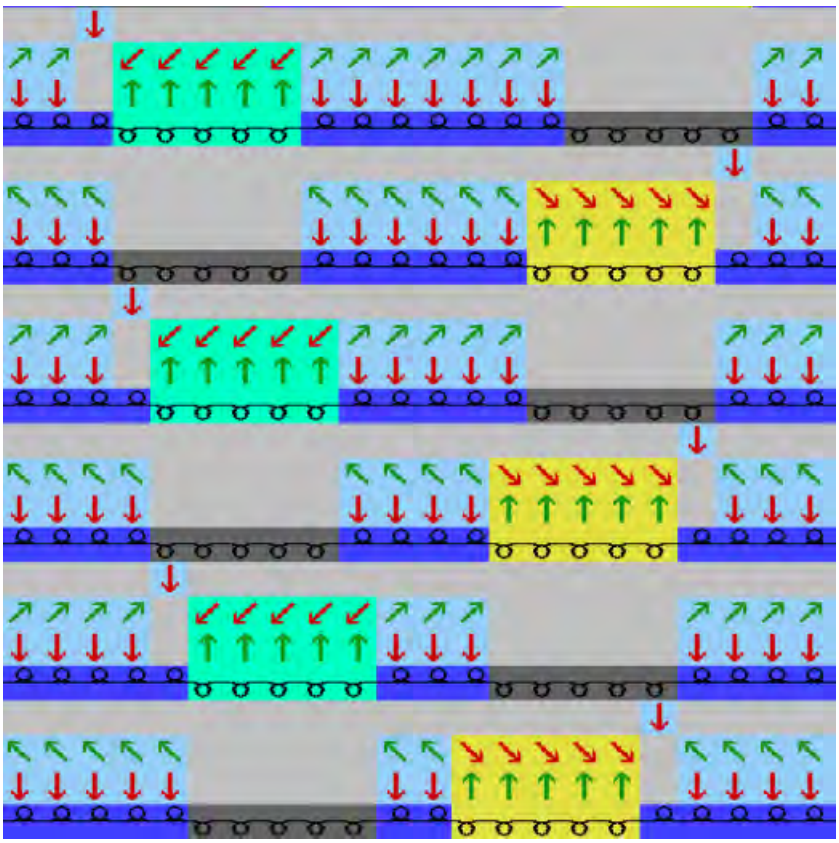
Switch from "Enter Module Racking" to "Retain Pattern Racking" in the "Module" / "Insert Modules (Settings)" menu for drawing-in the modules.



An additional system for transferring is necessary for the reverse jersey in the basic pattern.

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

Result after expanding:



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 VJA^0 the edge stitches will get outside the knitting area and therefore they will not be knitted or transferred.

3.3 Complete the Pattern

Complete the pattern:

1. Expand the pattern with  icon 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. Run the "Sintral Check" via the "Steps of Processing" toolbar  .

4 Pattern with Intarsia Yarn Carrier Type 2

Pattern name	15_Intarsiafadenführer Typ2.mdv	
Pattern size	Width:	370
	Height:	200
Machine type:	CMS 822 ◆ with 2x16 clamping/cutting points	
Gauge	E 6.2	
Setup Type	Setup2	
Start	1x1	
Basic pattern	Front stitch with transfer	
Knitting technique	Intarsia Pattern with 29 intarsia yarn carriers	
Description	Intarsia pattern with intarsia yarn carrier type 2 ◆ **Embroidery stitch with stretched stitches** = knit one stitch and float then	

4.1 Create the pattern in the Design Mode

Create a new pattern:

1. Click the "File" / "New" menu.

   - or -

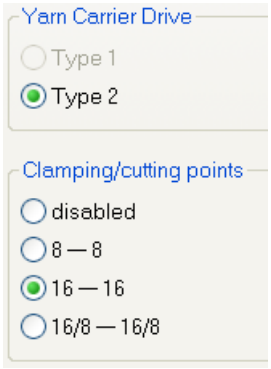
➜ Click the  icon.

⇨ The "New Pattern" dialog box appears.

2. Enter a pattern name.
3. Select machine type.
4. Select **Basic pattern (pattern without shape)** and "Design Pattern".
5. Define the pattern size and the basic knitting mode.
6. Select **no** start.
7. Confirm the settings with "Generate Design Pattern".

⇨ The pattern will be opened in the Symbol View [Basic].

8. Via "Pattern parameters" / "Machine Attributes..." call up the "MC-Attributes" dialog box.
9. Specify the machine model in the "Options" tab.



10. Close the dialog box with "OK".

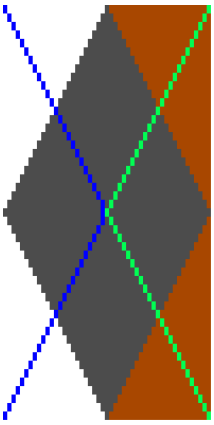
4.2 Generate the motif

Generate intarsia motif:

▷ The **Pattern without shape** and the "Design Pattern" are generated.

1. Click the  "Argyle" icon of the "Drawing Tools" toolbar.

⇨ The "Argyle" dialog box appears.



2. Generate the diamond and make the following settings.

Section		Setting
Colors		**Different colors**
Size of repetitions		49

The minimum width (diamond size) corresponds with the distance of two yarn carriers on the same rail (4 inches).
Example: With the E 12 (6.2) gauge it equals 49 needles.

Section		Direction	Value	Direction	Value
Repetitions	**Number**		7		2
	Distance		-1		0

Section		Setting
Diamond		
		
	Type of diamond	Diamond Type1
Step		1:2
Embroidery Stitch		
Insert embroidery stitch		
Shift the embroidery stitch by		0  0
All		Stitch_Float
Interrupted embroidery stitch by		Interruption embroidery stitch

3. At the right border, replace the surrounding color of the diamond with the basic color (#31).

   For it, select the basic color (#31) and click on the corresponding width in the preview.

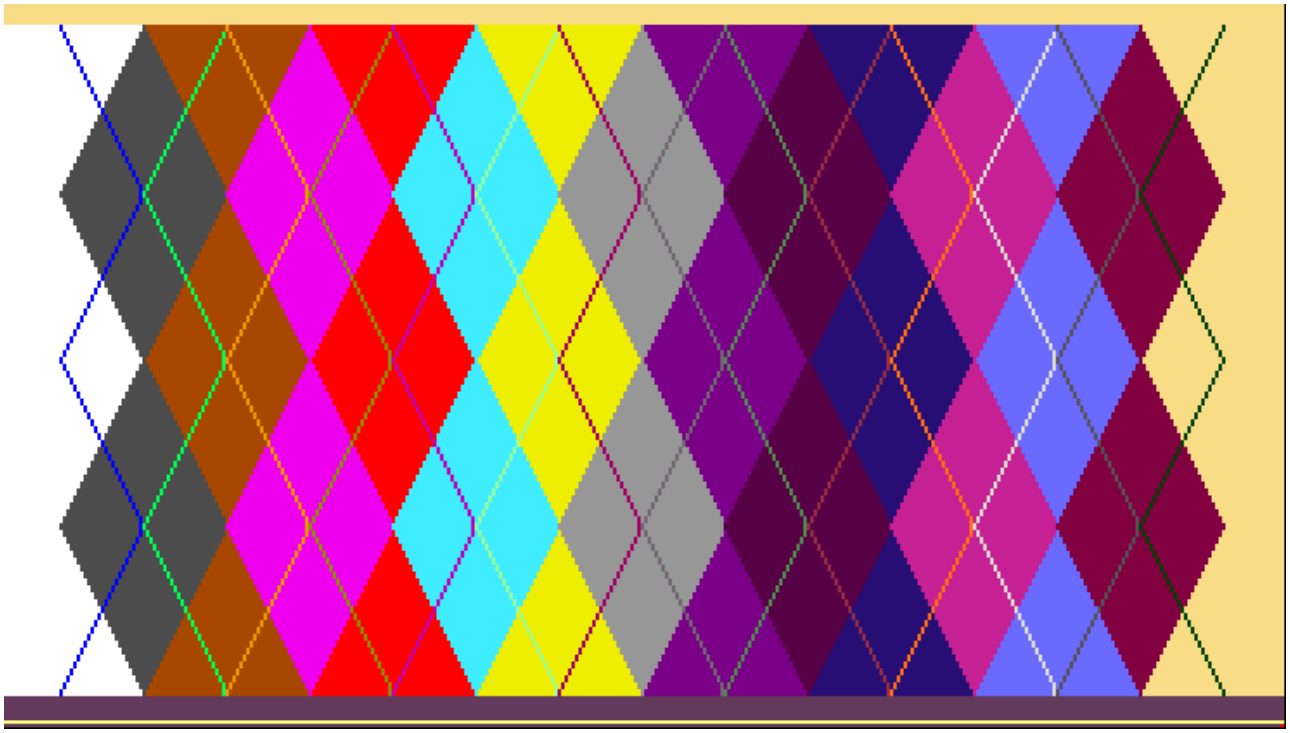
Result:

4. Finish the input with "Generate pattern element".

▷ The pattern element is at the cursor.

The pattern element will also be saved as **Local pattern element**.

5. Close dialog box.
6. Draw the pattern element in the basic pattern.
7. Replace the basic color (#31) at the pattern edge with the first color (#1) of the pattern element.



8. Insert the desired start via the "Edit" / "Replace Starts..." menu.

	Selecting an "1-system start without elastic thread" one can use more yarn carriers in the pattern.

4.3 Knitting-in yarn carrier

Activate the knitting-in of yarn carriers:

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

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

2. Select the necessary module under (2).

⇨ A special module will be used for knitting-in and locking the yarn carriers.

- **With activated clamping and cutting bed:** "Float and Lock (16-16)"

- or -

- **With deactivated clamping and cutting bed:** "Float and Lock Y-CR0 [16-16] "

i	Clamping and cutting must be deactivated if the yarn carrier stop position is located in the clamping and cutting bed based on the knitting width.

3. Select the "Comb thread 32" module under "Comb thread module" / "Piece1".
4. Close the dialog box with "OK".

4.4 Automatic determining of the Yarn Carrier Home Position

I. Determine the yarn carrier home positions automatically:

i	During the automatic determining of the yarn carrier home position the minimum distances are taken into account!

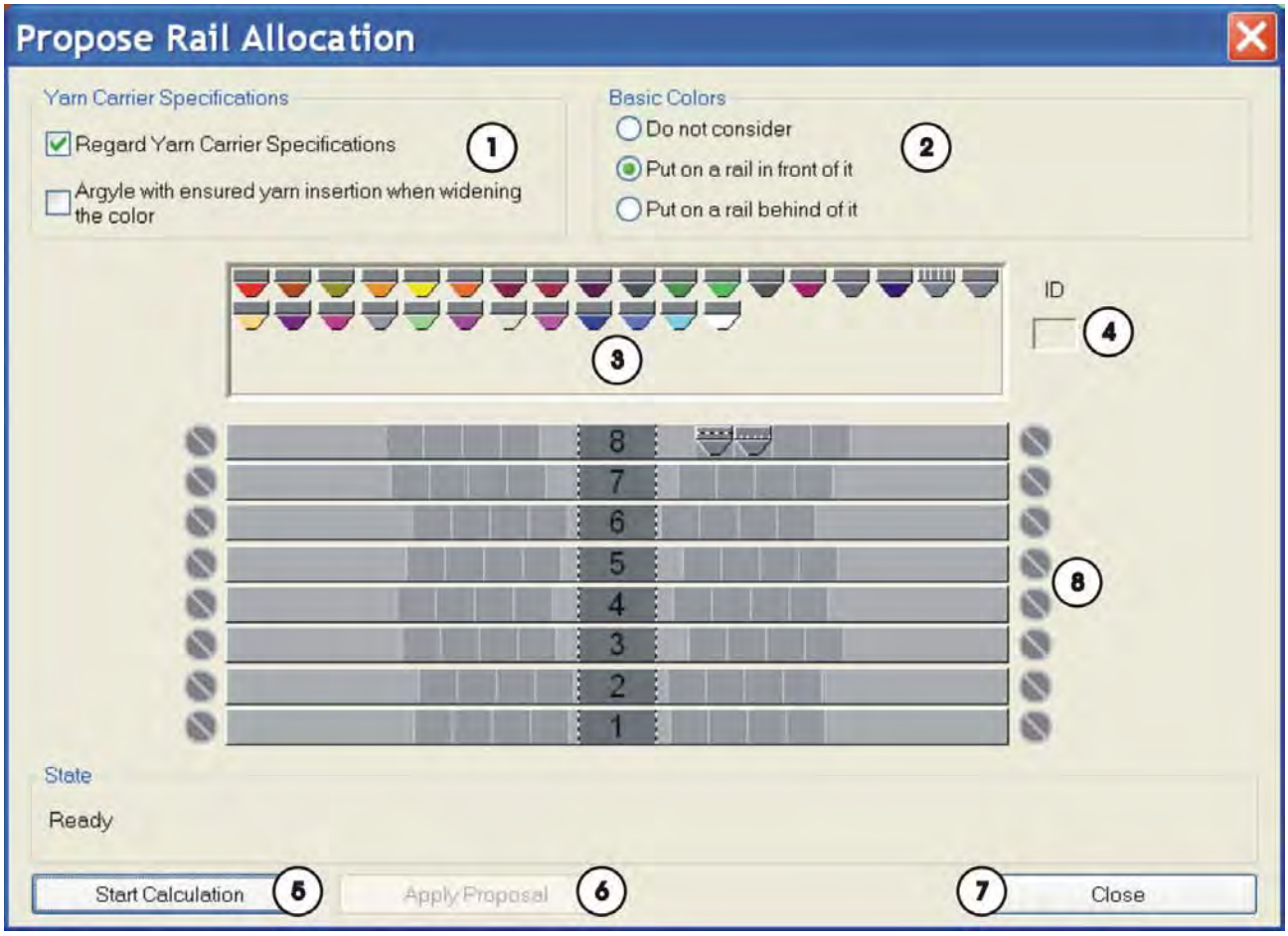
▷ The intarsia pattern as more than 16 colors.

1. Call up the  Yarn Field Allocation" dialog box with ".
2. Position the yarn carrier for the comb thread on the bar 8 (**8A** or **8D**).
3. Position the yarn carrier for the draw thread on the bar 8 (**8B** or **8C**).
   Both yarn carriers have to be positioned on bar 8 and on the same side.
   The comb thread outside, the draw thread inside
4. Set the yarn carrier for the start to **Undefined**.

⇨ The yarn carrier is on the right side in the **Undefined** magazine.

5. Allocate the yarn carrier for the start to a pattern color.
6. Press the "Propose Rail Allocation" key.

⇨ The "Propose Rail Allocation" dialog box will be opened.


Propose Rail Allocation
Yarn Carrier Specifications
Regard Yarn Carrier Specifications
1
Argyle with ensured yarn insertion when widening the color
Basic Colors
Do not consider
Put on a rail in front of it
2
Put on a rail behind of it
3
ID
4
8
7
6
5
4
3
2
1
8
State
Ready
Start Calculation
5
Apply Proposal
6
7
Close

No.			Function
1	**Yarn Carrier Specifications**		
	Regard Yarn Carrier Specifications	☑	Standard setting The yarn carriers defined and positioned in the "Yarn Field Allocation" dialog box will be taken into account when determining the yarn carrier home position.
		☐	The yarn carriers defined and positioned in the "Yarn Field Allocation" dialog box will **not** be taken into account when determining the yarn carrier home position. i: The determined yarn carrier home position does **not** match the "Comb thread 32" module.
	Argyle with secure yarn insertion when widening the color	☐	Determine the yarn carrier home positions **without** taking care of the rule for secure yarn insertion.
		☑	Take care of the rule for secure yarn insertion when determining the yarn carrier home positions. The determined yarn carrier home position influences the further processing with the settings of "Configuration" / "Further Settings" / "Combine yarn carriers" with ◉ "Secure yarn insertion at color widening". **Result:** Optimized knitting of the pattern. i: The calculation takes into account only the basic colors (rhombuses). The distance of two yarn carriers on the same rail of 6" will not be reached. With distances less than 6", the yarn carriers will be displaced leading to a longer running time.
2	**Basic Colors**		
	Do not consider	◉	The yarn carriers of the basic colors and the embroidery colors (diagonals) will be positioned as desired.
	Put on a rail in front of it	◉	**Standard setting** The yarn carriers of the basic colors will be positioned on the bars before the colors of the embroidery stitches.
	Put on a rail in behind of it	◉	The yarn carriers of the basic colors will be positioned on the bars behind the colors of the embroidery stitches. i: The basic color at the embroidery stitch is visible as 'filler yarn'.
3	Magazine with the used but still undefined yarn carriers. i: The left or right home position and the direction in the Knitting-in and Knitting-out section will not be taken into account.		
4	Yarn carrier number to identify an undefined yarn carrier		
5	"Start Calculation"		Start the automatic determining of the Yarn Carrier Home Position i: The dialog box remains open in order to restart calculating if necessary.
6	"Apply Proposal"		Apply the determined yarn carrier home position to the "Yarn Field Allocation" dialog box.
7	"Close"		Close the "Propose Rail Allocation" dialog box
8		▨	Yarn carrier rail may be used when calculating the yarn carrier home positions.

No.		Function
		Yarn carrier rail may **not** be used when calculating the yarn carrier home positions.

7. Start the rail allocation with the "Start Calculation" key.

▷ The yarn carriers are displayed allocated to the bars.

8. Apply the proposed allocation to the "Yarn Field Allocation" dialog box with "Apply Proposal".

⇨ The dialog box remains open in order to restart calculating if necessary.

9. Close the "Yarn Field Allocation" dialog box with "OK".

II. Rules for allocating the yarn carriers:

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

4.5 Determine the Yarn Carrier Home Positions Manually

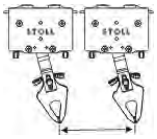
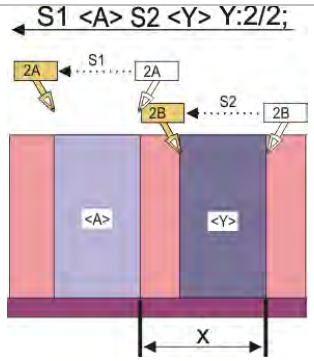
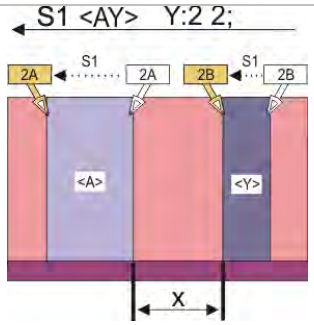
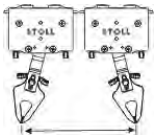
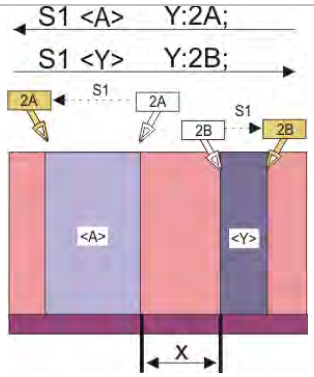
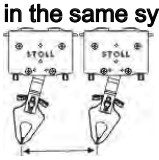
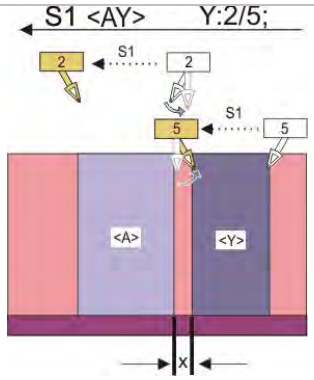
I. Allocate the yarn carriers to the yarn carrier rails manually:

i	With the "Technical Processing"  , the yarn carriers will be allocated automatically to the yarn carrier rails. With more than 16 yarn carriers it is useful to allocate them manually to the rails.

1. Allocate the yarn carriers of the diagonals to the yarn carrier rails with a higher number.
2. Allocate the yarn carriers of the diamonds to the yarn carriers rails with a low number.

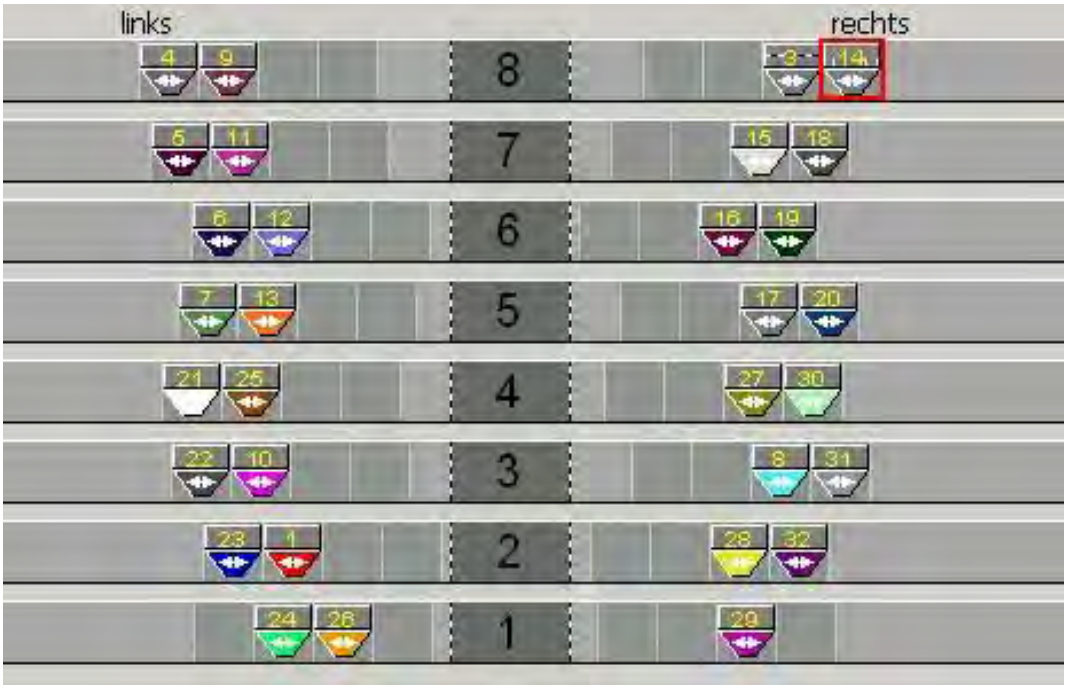
⇨ This leads to a better look.

i	Watch out the minimum distances when allocating manually!

			Intarsia yarn carrier type	Distance (x) by inches
Intarsia yarn carriers knitting in the same carriage direction 	with two systems		Intarsia yarn carrier **Type 2** (new intarsia yarn carrier)	4
			Intarsia yarn carrier **Type 1** (previous intarsia yarn carrier)	5,5
			Intarsia yarn carrier **Type 1** (CMS 520 C)	6
			Intarsia yarn carrier **Type 1** (CMS 830 C)	6
	with one system		Intarsia yarn carrier **Type 2**	6
			Intarsia yarn carrier **Type 1**	8,5
			Intarsia yarn carrier **Type 1** (CMS 520 C)	9,7
			Intarsia yarn carrier **Type 1** (CMS 830 C)	9,6
Intarsia yarn carriers work in the opposite carriage directions 			Intarsia yarn carrier **Type 2**	6
			Intarsia yarn carrier **Type 1**	8,5
			Intarsia yarn carrier **Type 1** (CMS 520 C)	9,7
			Intarsia yarn carrier **Type 1** (CMS 830 C)	9,6
Distance of colors that work in the same system.  **i**: The yarn carrier may not swivel into the color field knitted by the same system.			Intarsia yarn carrier **Type 2**	1
			Intarsia yarn carrier **Type 1**	2
			Intarsia yarn carrier **Type 1** (CMS 520 C)	2,7
			Intarsia yarn carrier **Type 1** (CMS 830 C)	2,0

i The table shows minimum distances of two intarsia yarn carriers.

Yarn carrier home position after the allocation:

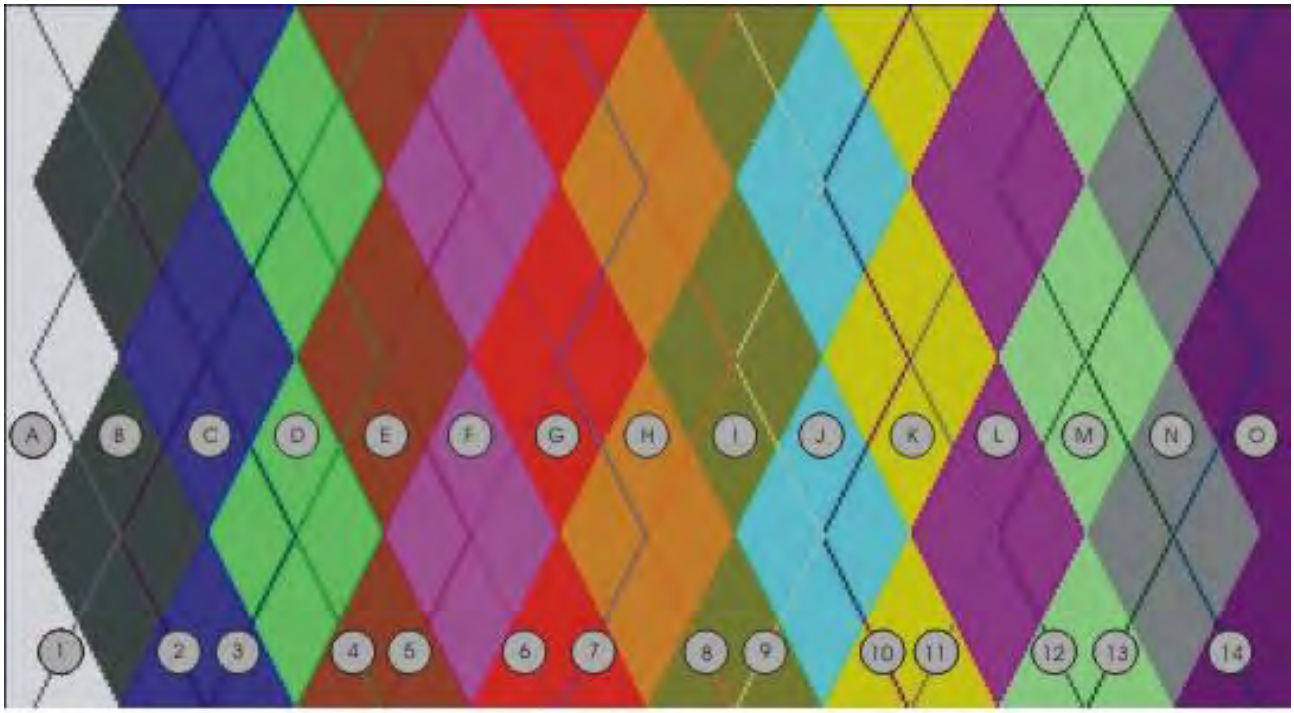


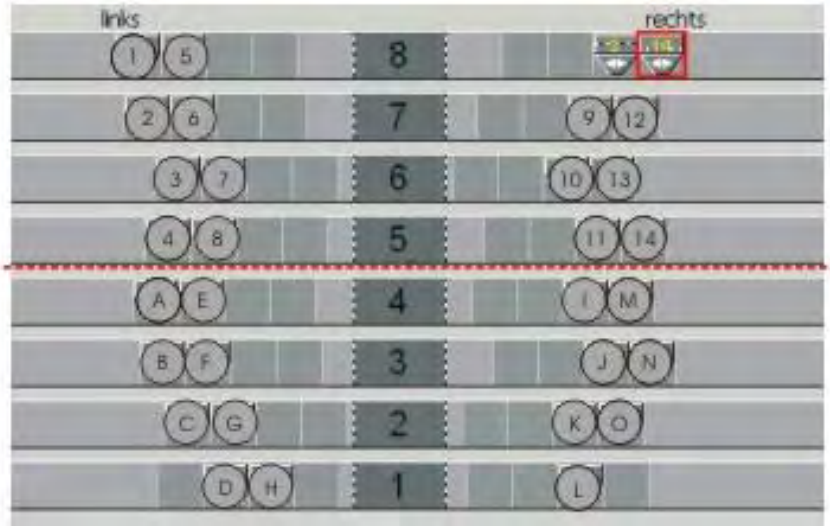
II. Rules for allocating the yarn carriers.

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

III. Example for allocating the yarn carriers to the yarn carrier rails.

i	The possible yarn carrier allocations are displayed here.





- The yarn carriers for the diagonals are positioned on the rails with a higher number. (1-14)
- The yarn carriers for the diamonds are positioned on the rails with a low number. (A-O)

4.6 Complete the Pattern

I. Complete the pattern:

1. Expand the pattern with  icon 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 the "Sintral Check" by  .

⇨ The "Sintral Check" appears.

II. Eliminate a yarn carrier collision:

Possible error message during the technical processing:

"The specified yarn carriers can not be laid on the same rail from technical row xx on, because the yarn carriers would collide!

The Technical Processing, however, can avoid this collision by relocating the yarn carriers."

 "Continue Technical Processing and relocate yarn carriers"

1. Confirm the message with "Continue".

"The yarn carrier xx collides in technical row xx with the yarn carrier yy"

 "Do not drive this yarn carrier to the SEN edge (delete ´!´)"

2. Confirm the message with "Continue".

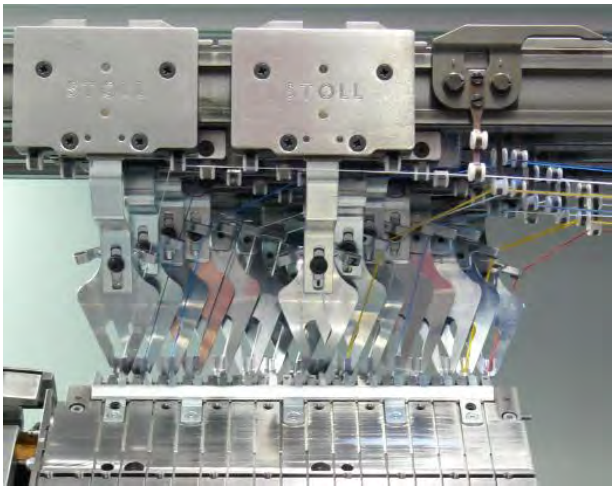
⇨ The technical processing will be continued and the prompt "Generate MC Program" appears.

3. Confirm the query with "OK".

4.7 M1plus settings for Intarsia yarn carriers

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

Depending on the equipment you have to make settings when generating patterns on the M1plus .



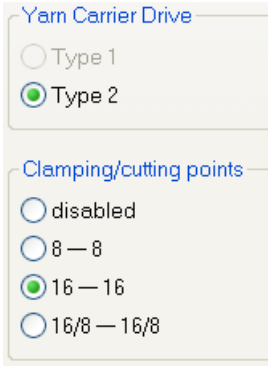
Settings on the M1plus:

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

   In the "MC Attributes" dialog box under "Options" via the "Pattern Parameters" / "Machine Attributes..." menu.

   - or -

➜ In the "Tools" / "Machine Explorer..." menu in the "Machine Explorer" / "My machines" / "Properties" dialog box under "Options" / "Clamping and cutting points".



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

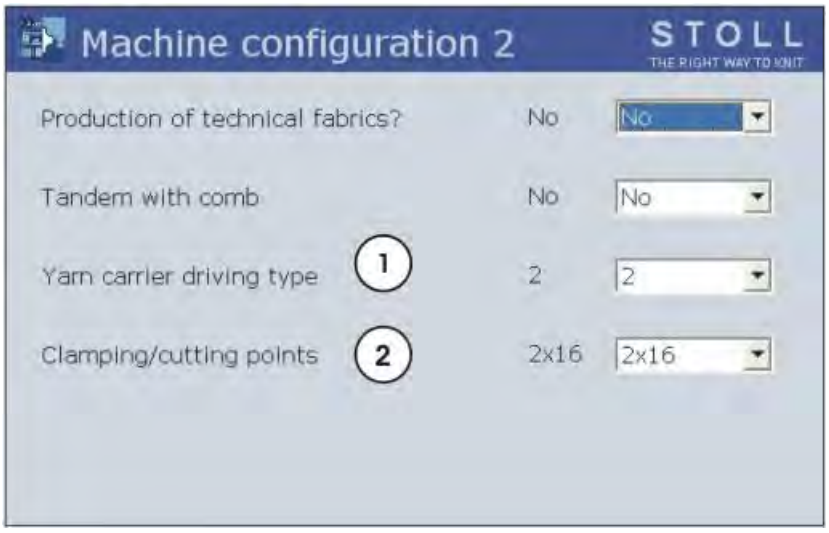
2. Close the dialog box with "OK".

4.8 CMS Settings for Intarsia Yarn Carriers

You have to make the corresponding settings once in the "Machine Configuration 2" window according to the equipment of the machine.

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

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



	Selection	Setting
1	Yarn carrier driving type	2
2	Clamping and cutting positions	2x16

4. Finish the installation and configuration.

4.9 Special Features with Intarsia Yarn Carrier Type 2 and Clamping and Cutting (2x16)

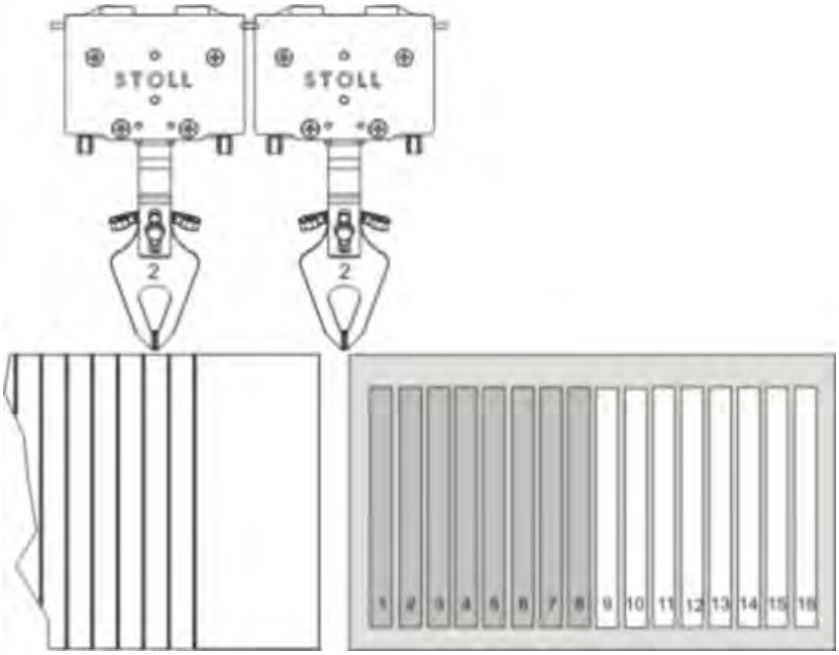
4.9.1 Knitting width in dependence on the yarn carrier allocation

I. Double assignment of yarn carriers on one side of the machine with the clamping and cutting bed active:

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

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

Stopping positions with the clamping-cutting bed active



i	You can deactivate the clamping and cutting function if the available knitting area is emerged as too little by the Technical Processing. The yarn carriers are then positioned outside the knitting area.

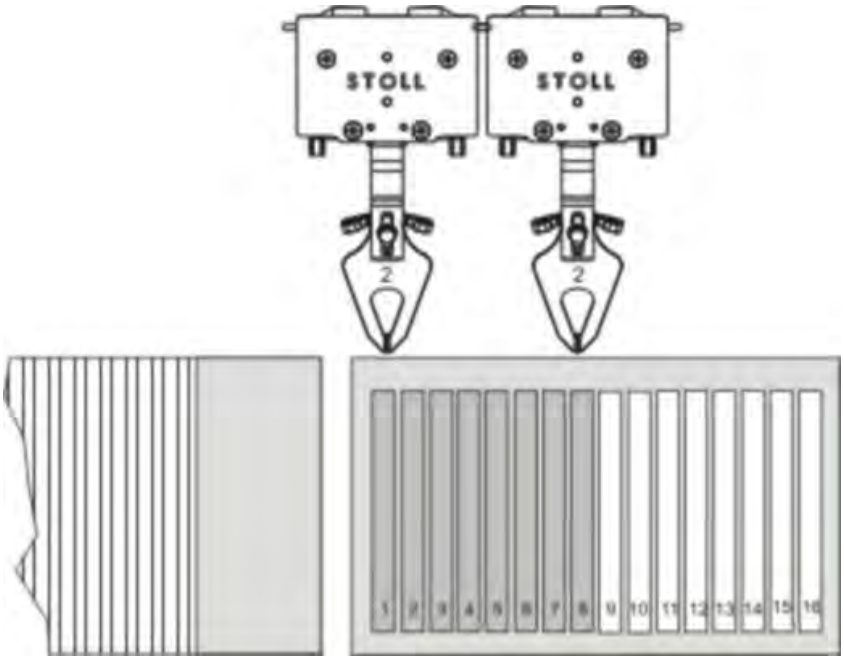
II. Double assignment of yarn carriers on one side of the machine with the clamping and cutting bed deactivated:

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

1. Call up the "Comb, Clamping" tab of the "Configuration" dialog box.
2. Activate the ☑ "Deactivate clamping after knitting-in the yarn carriers".

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

Stopping position with the clamping and cutting bed deactivated

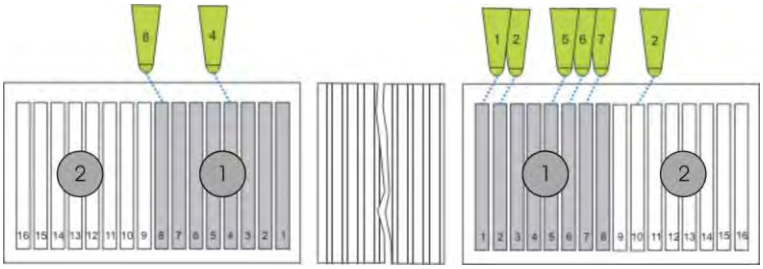


4.9.2 Rules for allocation of the clamping positions

If more than 8 yarn carriers are used on one machine side, crossings of the threads can arise in the area of clamping and cutting bed.

Crossings of the threads will be avoided by grouping into an inner and outer group and by a corresponding allocation.

Grouping of the clamping positions



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

> **i** If you prepare a knitting program manually you have to watch out that no thread crossings occur.

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

> These rules are automatically supported by the M1plus.

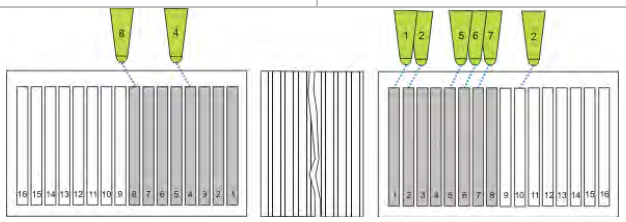
i	Yarn carriers of the inner group that are not used must be thread out if a yarn carrier of the outer group with a lower rail number is being used in the pattern.

4.9.3 Home Positions and Combination Possibilities of the Yarn Carriers

I. Yarn carrier home positions with 2x16 clamping and cutting positions:

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

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

Example of yarn carrier home position			
Left side of the machine / Number of yarn carrier		**Right side of the machine / Number of yarn carrier**	
Outer group	Inner group	Inner group	Outer group
	8, 4	1, 2, 5, 6, 7	2
	 YGC: 4 8 / 1 2 2 5 6 7;		

II. Combination possibilities of the yarn carriers:

Yarn carrier	Clamping/cutting bed 2x8	Clamping/cutting bed 2x16	Clamping/cutting bed 2x16/8
Normal yarn carrier type 1	X	X	X
Normal yarn carrier type 2	X	X	X
Normal yarn carrier type 1 + 2	----	----	----
Intarsia yarn carrier type 1	X	----	X
Intarsia yarn carrier type 2	X	X	X
Intarsia yarn carrier type 1 + 2	----	----	----
Normal yarn carrier type 1 Intarsia yarn carrier type 2	X	X	X
	i: Observe possible combinations of normal and intarsia yarn carriers!		
Normal yarn carrier type 2 Intarsia yarn carrier type 2	X	X	X
	i: Any desired possible combinations!		
Plating yarn carrier	X	----	X

4.9.4 Protection rows

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

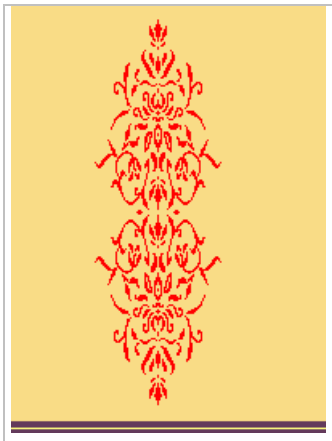
The clamping point of the yarn carrier (protection rows) can be blocked by another yarn carrier. This can lead to an error message (collision) during the technical processing.

Avoid a yarn carrier collision

1. Switch off protection rows in the "Configuration" dialog box / "Knitting Areas" tab / "Special knitting pieces".
   Draw in two stitch rows at the end of the pattern with the color which will be clamped at last.
   - or -

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

5 Stoll-devoré knit® (filigree technique)



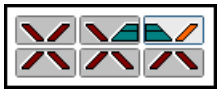
Pattern name	Devoré.mdv	
Pattern size	Width:	200
	Height:	270
Machine type	CMS 530 HP	
Gauge	12	
Setup Type	Setup2	
Start	Tubular	
Basic Pattern:	Front Stitch with Transfer	
Knitting Technique	 Stoll-devoré knit®	
Pattern description	Devoré pattern	

5.1 Stoll-devoré knit® - knitting technique

Devoré-technique:

- Devoré patterns are knitting patterns that have 2 stitch structures (stitch and float) laying above each other in one knitting row.
- The single jersey basic structure (SJ) is formed by a thin, transparent monofilament thread that is called binding thread in the following.
  The motif results by selecting stitches that are formed by thicker yarn. This yarn is called motif yarn.

- There are two systems necessary for the Stoll-devoré knit®-technique. Therefore a 3 system machine is necessary, in order to carry out all the knitting functions, as the start and the transfer.
- The devoré knit cams are installed in two systems at the rear (center and right side). Herewith the clamping and cutting function is still available for all system at the front.



- All the knitting systems at the front are offering the usual functions.
- At the rear, knitting or tranferring to the rear / front is only possible in one system (left).
- Plush is possible in the trailing system on the opposite to the devoré cams. The combination of plush and devoré is possible as well.

Yarn insertion: Motif thread is trailing and binding thread is leading

Knitting direction shown >>

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®.

5.2 Starts for Stoll-devoré knit®

Comb starts with elastic yarn RS19=2

When using starts with elastic thread, please note that the elastic thread is processed without any specific setting on the rear needle bed.

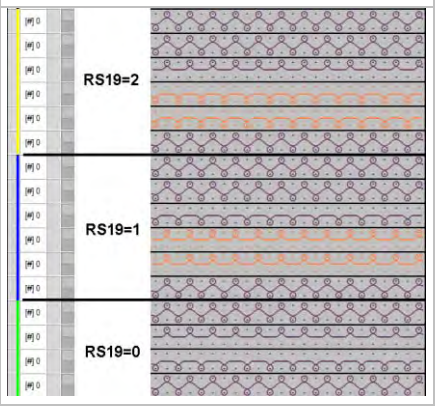
However, as the Stoll-devoré knit® knitting technique is worked on the rear needle bed, the elastic thread lies on the visible front fabric side.

To process the elastic thread on the front needle bed (reverse fabric side), use starts, which have a setting option of the cycle counter 19 with the value 2 (RS19=2). The setting can be made either on the M1plus or on the machine.

> **i** For the following starts the elastic yarn can be changed from the rear to the front.

- **Start with comb with 1 system**
  - Stoll high Performance / Standard / 1 System
  - MG-1x1 Technique / 1 System
  - Stoll Standard / Standard / 1 System

Function of the cycle counter RS19

Cycle Counters RS19	Function	Representation of the module
RS19=2	Elastic yarn is knitting on the front needle bed	
RS19=1	Elastic yarn is knitting on the rear needle bed	
RS19= 0	Elastic yarn is not knitting	

Setting of the cycle counter RS19

1		RS19	Without Elastic Yarn	Rows	0	0
2		RS19	With Elastic Yarn back	Rows	1	1
3		RS19	With Elastic Yarn front	Rows	2	2

- Set RS19=2

> **i** For patterns with Stoll-devoré knit® knitting technique you have to select a 1-system start.

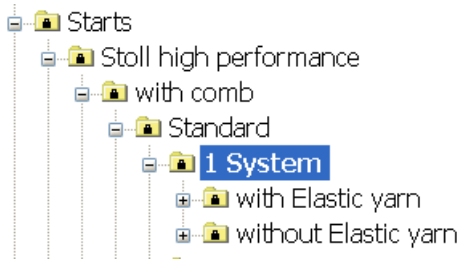
5.3 Use start

Use start for Stoll-devoré knit® knitting technique:

▷ Generate **pattern without shape**

1. Select a start.

For patterns with Stoll-devoré knit® knitting technique you have to select a 1-system start.



5.4 System default and settings for devoré

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

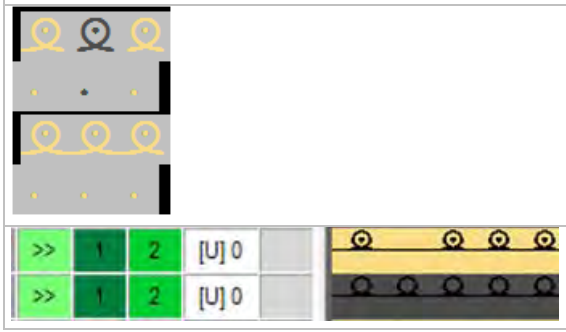
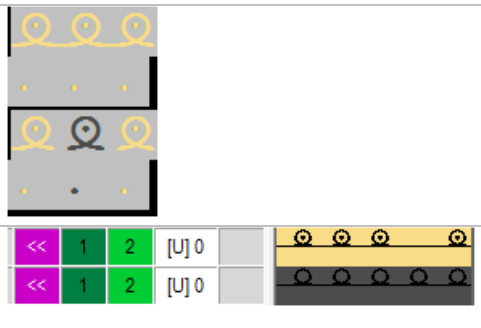
System defaults

▷ 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

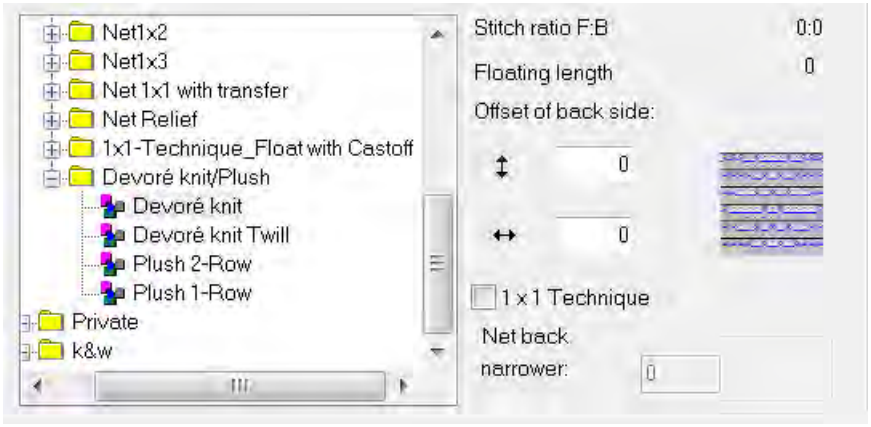
1. It is possible to work "with selvedge correction" if necessary.
2. When applying the selvedge correction, the motif yarn floats over the 2nd needle from outside in the selvedge area, which is 2 needles wide. The float will be carried-out alternately in every 2nd row with the carriage stroke from outside to inside. The binding thread knits on all needles.

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

5.5 Create Pattern

Create the devoré pattern and insert the jacquard:

1. Draw devoré design with two different yarn or yarn carrier colors.
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 "Jacquard " / "Stoll" section and insert with "Apply".



i	The color for the binding thread has to be the leading in the color sequence. Change the color sequence if required.

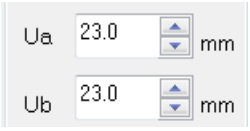
5. Activate the "Stitch length" checkbox. Thereby the stitch length available in the Jacquard module will be applied to the pattern.
6. Close the dialog box with "OK".

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.

5.6 Yarn carriers for Stoll-devoré knit®

Yarn carrier carriage with adjustable engaging width:

▷ For the Stoll-devoré knit® knitting technique it is recommended to use a yarn carrier carriage with adjustable engaging width for the motif thread. A steeper yarn instertion is resulting by the larger engaging width. A better knitting result is achieved while working long floats.

1. Adjust for the yarn carrier of the motif thread in the "Yarn Field Allocation" in the column yarn carrier type:
2.  the U+/-.
3. The engaging width Ua - Ub. Set the 

according to the settings in use.

5.7 Complete the Pattern

I. Complete the pattern:

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

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 yarn

3. The control column may include further functions:

Symbol	Function
 "Stitch via split curve"	Use the system function stitch via split curve
 "Undetermined"	No system function.

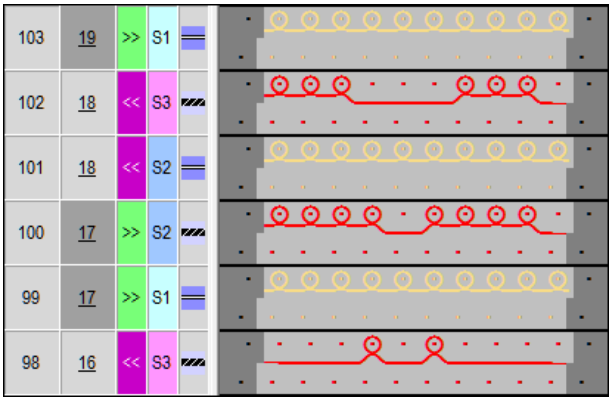
4. Start the technical processing with the  icon.

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

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

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

⇨ The stitch notation for devoré is displayed



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

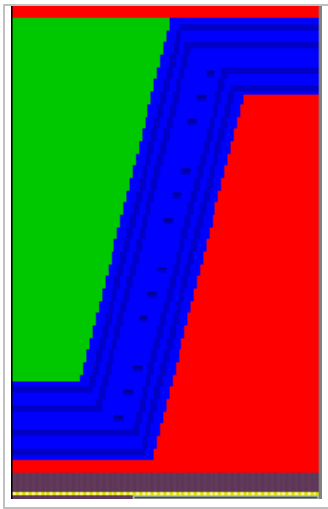
⇨ The following instruction is entered in the "MC Programm".

```
175 << S:<1-><A>$0-Y(6) / <1-><B>0-Y%Z;    Y:=D/=E;  VU  S2 S3
176 >> S:<1-><A>$0-Y(6) / <1-><B>0-Y%Z;    Y:=D/=E;  VU  S1 S2
```

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

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

6 Use of yarn carrier colors with sub-colors



Pattern name	16_NPJ_Intarsia.mdv	
Pattern size	Width:	100
	Height:	152
Machine type	CMS 530	
Gauge	8	
Setup Type	Setup2	
Start	2X1	
Basic pattern:	Front stitch with transfer	
Knitting technique	Intarsia with structure	
Description of pattern	**Different stitch lengths are necessary** ◆ With different yarns ◆ With structure within an intarsia area	

6.1 Create and draw a pattern

I. Generate new pattern:

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

   - or -

➜ Click the  icon.

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 a start.

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

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

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

	The basic pattern is presented in the yarn color (# 31).

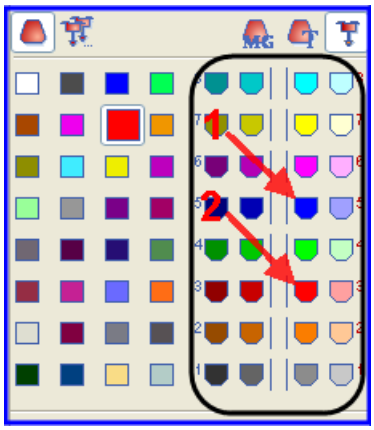
II. Draw intarsia and structure with yarn carrier colors:

	The entire pattern should only be drawn with **yarn carrier colors**. It is **not** recommended to use yarn colors and yarn carrier colors in one pattern.

1. Set the "Yarn or Yarn Carrier Color as Background" in the "Pattern Presentations" toolbar.

⇨ The yarn carrier colors drawn-in are displayed.

2. Select the **yarn carrier color** (2) for the basic pattern in the "Pattern Colors" toolbar.



3. Fill the basic pattern with the selected yarn carrier color with the drawing tool.

⇨ The basic pattern will be knitted with yarn carrier 3 in the right home position.

4. Select the **yarn carrier color** (1) for the intarsia area with structure in the "Pattern Colors" toolbar and draw it in.

⇨ The intarsia with structure will be knitted with yarn carrier 5 in the right home position.

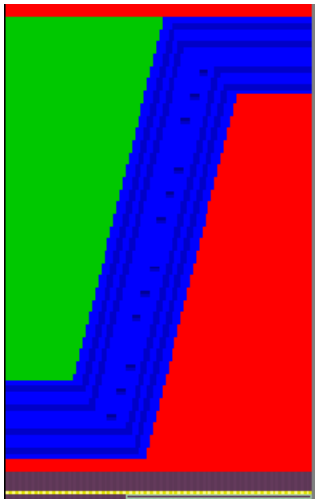
5. Fill the left area of the intarsia area with an additional **yarn carrier color**.

⇨ The left area of the intarsia area is knitted with the left yarn carrier 4 in the example.

i	The **yarn carrier (yarn carrier colors)** in use are positioned on yarn carrier bars.

6. Select structure modules from the "Module" toolbar or the "Module Explorer of Database..." and and draw them in the intarsia area with the yarn carrier color 5.

Result:



i	With the intarsia knitting technique each yarn carrier color drawn-in means the allocation to different knitting systems.

6.2 Need for different stitch lengths within one stitch row

I. Use of different stitch lengths for different yarns:

▷ The basic pattern is loaded.

1. Select the desired intarsia area (=yarn carrier color) with the drawing function.

- or -

➜ Select the yarn carrier color in the table and find the color in the entire pattern using the drawing function in the "Search and Select" tab.

⇨ A selection is displayed.

2. Activate the corresponding symbol for presentation in the "Pattern Presentations" toolbar.

Symbol	Function
	The stitch length only is changed in the rear needle bed.
	The stitch length only is changed in the front needle bed.
+	The stitch length is changed in the rear and in the front needle bed.

3. Open the stitch length table via the "Pattern Parameters" / "Stitch length..." menu.

Used / Favorites | Default | k&w

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

4. Select stitch length values in the table.

- or -

➜ Enter a new entry in the table and fill into selection with .

⇨ The intarsia area can be knitted with another stitch length.

i	Each yarn carrier is knitted in a separate system with the intarsia knitting technique. This means, that a different value of stitch length can be allocated to each system.

5. Define the corresponding specifications for the inserted stitch length in the table.
6. Close the stitch length table with .
7. Delete the selection with .

II. Use different stitch lengths within an intarsia-color field:

Use of yarn carrier sub-colors

i	A total of 50 sub-colors is available in the **yarn carrier colors** palette.

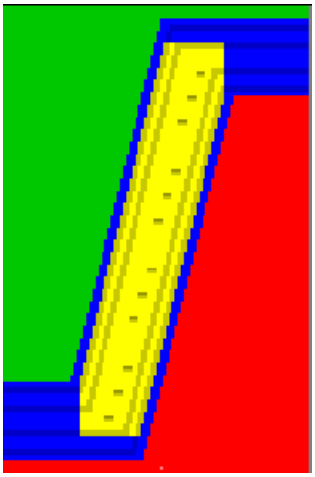
▷ The basic pattern is loaded.

1. Select the "yarn carrier color" **5 at the right** (#97 = main color of the intarsia area) in the "Pattern Colors" toolbar.
2. Open the context menu with "RMB".
3. Select the "Add and Select a Sub-Color" menu.

⇨ A sub-color is automatically added to the selected yarn carrier color and is selected for drawing.

i	The color for automatically generated sub-colors can be changed.

4. Draw the sub-color into the intarsia area, (**yarn carrier color 5**) in the area of the structure.



⇨ The area with the **sub-color** is knitted with the same yarn carrier as the area with the related **main color**.

i	With the help of the sub-color you can allocate other stitch length values to this area.

5. Select the drawn-in sub-color with the drawing function 

- or -

➜ Select the sub-color in the table and find the color in the entire pattern using the drawing function  in the "Search and Select" tab.

⇨ A selection is displayed.

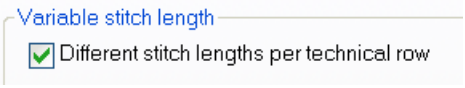
6. Select the desired stitch length presentation  and / or  in the "Pattern Presentations" toolbar.
7. Open the stitch length table via the "Pattern Parameters" / "Stitch length..." menu.
8. Select stitch length values in the table.

- or -

➜ Add a new entry in the table and fill into selection with  .

⇨ Another stitch length can be entered in the front and / or in the back of the area of the sub-color.

9. Define the corresponding specifications for the inserted stitch length (NPJ) in the table.
10. Close the stitch length table with  .
11. Delete the selection with  .
12. Activate the "Different stitch lengths per technical row" checkbox within "Configuration" in the "Additional settings" tab in the "Variable stitch length" section.



i	Observe the motif distances and the idle periods so that the machine can process the change of the stitch length.

6.3 Complete the Pattern

Complete the pattern:

1. Expand the pattern with  of the "Steps of Processing" toolbar.
2. Start the technical processing with  .
   ⇨ The query "Generate MC Program" appears.
3. Confirm the query with "OK".
4. Call up the "Sintral Check" by  .

7 Change the knitting sequence with a technical pattern

This description applies to technical patterns only.

I. Change knitting sequence:

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

   in the "Pattern Presentations" toolbar.

   - or -

➜ "View" / "Open Yarn Field View..." menu.

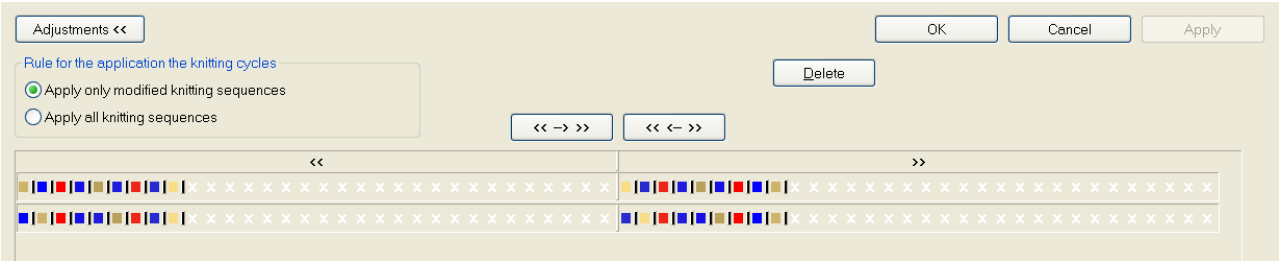
2. Select the rows in which the knitting sequence is to be changed in the row list of the "Yarn field view".
3. Open the "Technical Row Data" dialog box via "Pattern Parameters" / "Technical Row Data" / "Yarn Carrier...".

   - or -

➜ Call up the context menu "Display / edit knitting sequence" in the row list of the "Yarn Field View".

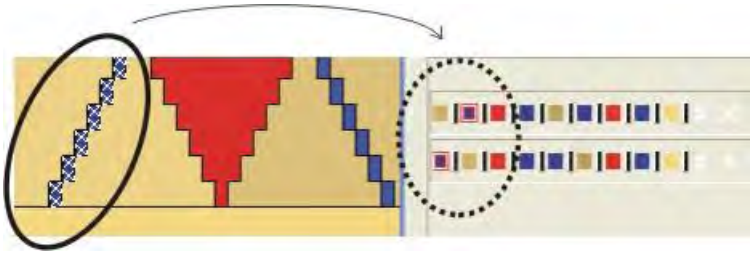
⇨ The existing knitting sequences for both stroke directions is displayed in "Technical rows data" dialog box. The working systems and the yarn carriers are presented by the colors of the yarn fields and the system separations.

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

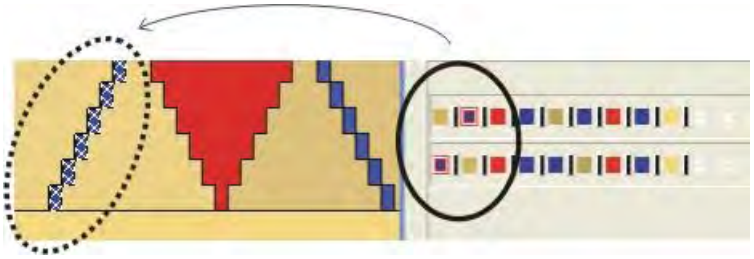


Elements	Meaning
<< <– >>	The knitting sequence defined for the the **>>** stroke will be applied to the **<<** stroke (as a copy).
<< –> >>	The knitting sequence defined for the **<<** stroke will be applied to the **>>** stroke (as a copy).
"Apply"	Enter the defined knitting sequence in the Technical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

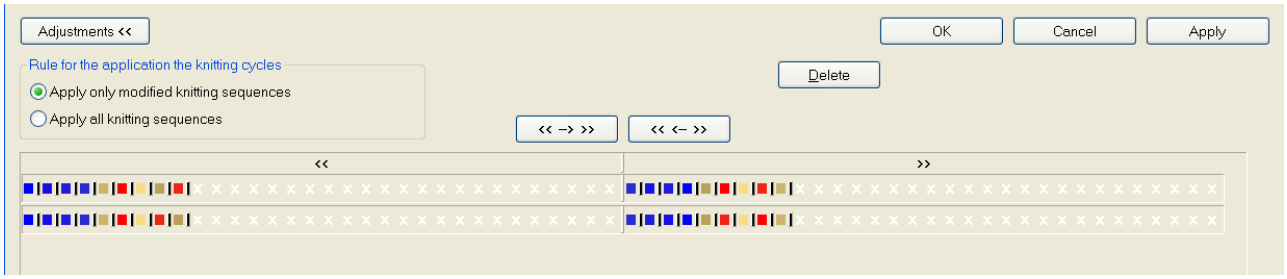
4. Select a yarn field to emphasize it in the views.
   - The corresponding color box of the knitting sequence will be emphasized by a red border in the "Technical Row Data" dialog box.



   - Double click a yarn color of the knitting sequence in the "Technical row data" to select the corresponding yarn field in the "Yarn field view".

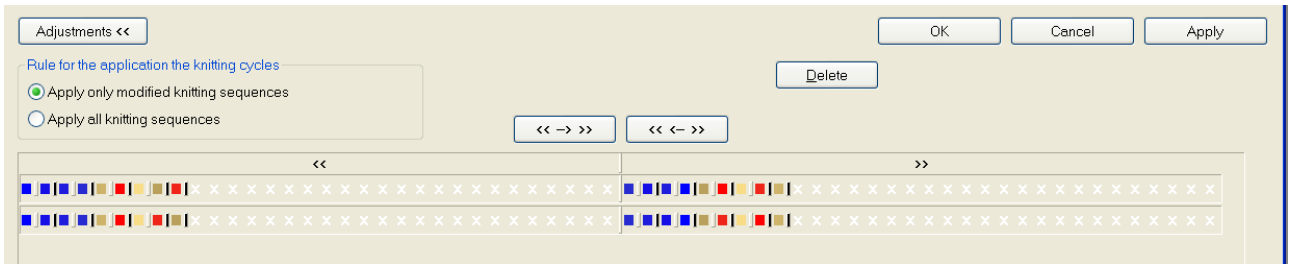


5. Modify the knitting sequence:
   - Re-position the color fields with Drag & Drop.

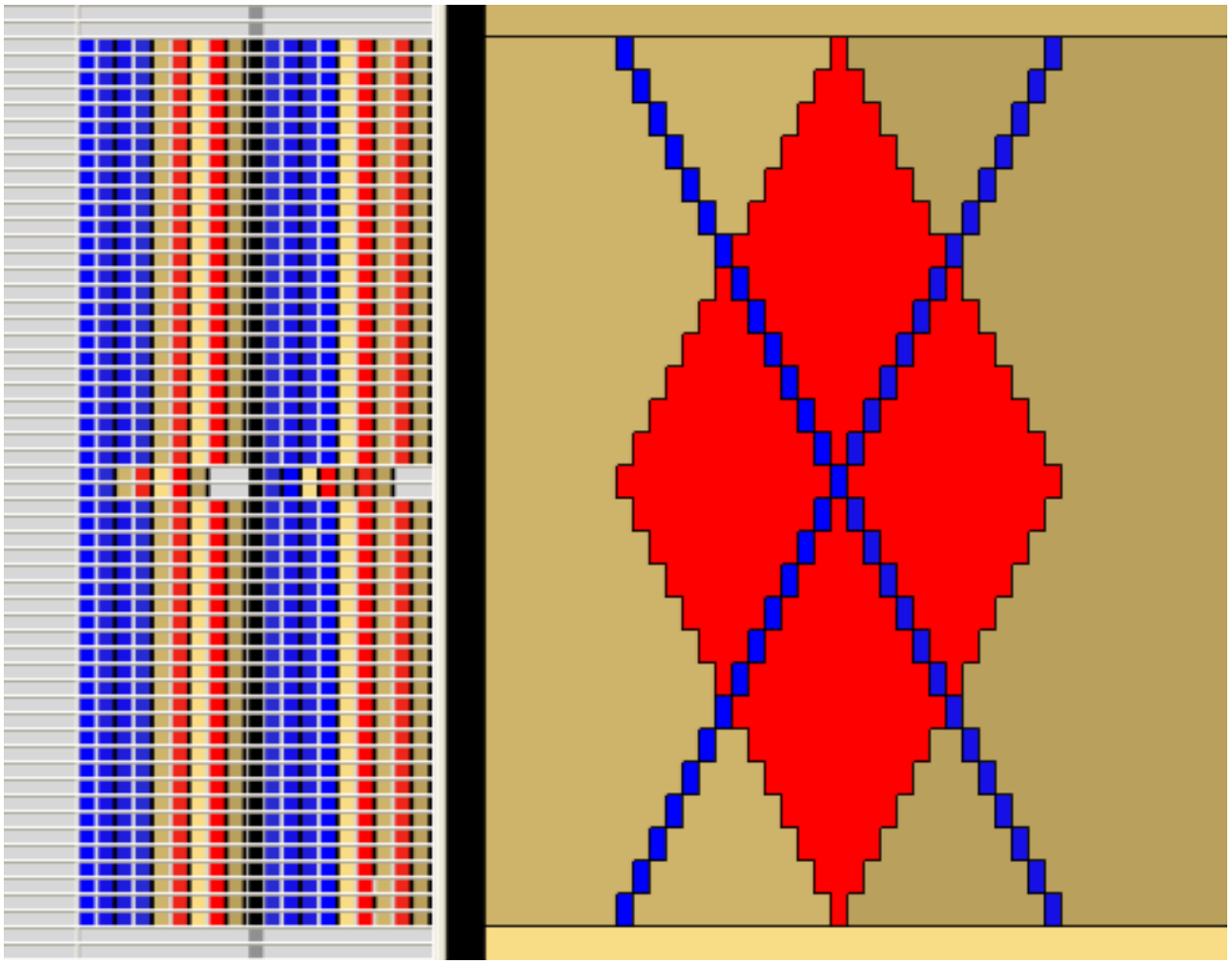


6. Group the yarn fields clicking the system separations.

▷ Without a system separation (black switch), two or more colors will be knitted in the same system, if it is possible with regard to the technique.



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



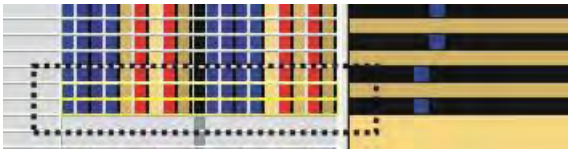
8. Close the "Yarn Field Allocation" dialog box.

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

II. Copy knitting sequences:

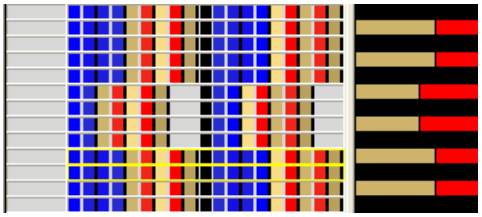
1. Switch the "Yarn field view" to the technical row presentation with  .
2. Select the knitting sequence in the yarn field view and copy it with "Ctrl+C".

▷ The selected knitting sequence will be framed in yellow.



3. Insert the knitting sequence present at the cursor into the desired rows of the row bar.

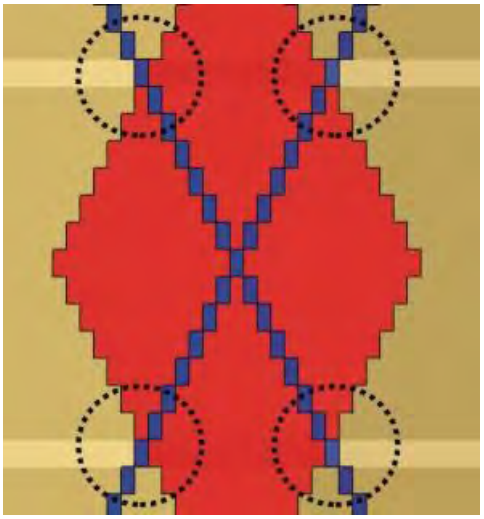
- Copied yarn colors **not** present in the target knitting sequence will be ignored.
- Yarn colors of the target knitting sequence which are **not** present in the copied knitting sequence will be added at the end of the knitting sequence.



III. Increasing the running stability of the pattern:

Several yarn carriers are on a narrow, unfavorable position at some places of a motif and make the yarn insertion difficult.

1. Create a separate yarn field for each of the enter or exit points of the diagonals.



2. Deactivate the swiveling of the yarn carriers for these yarn fields.

⇨ The yarn carriers will be shifted.

8 Width Regulation with Size Correction Switch and negative Values

i	**The pattern is drawn with the maximum width.** Use of negative values with #70/ #74 necessary.

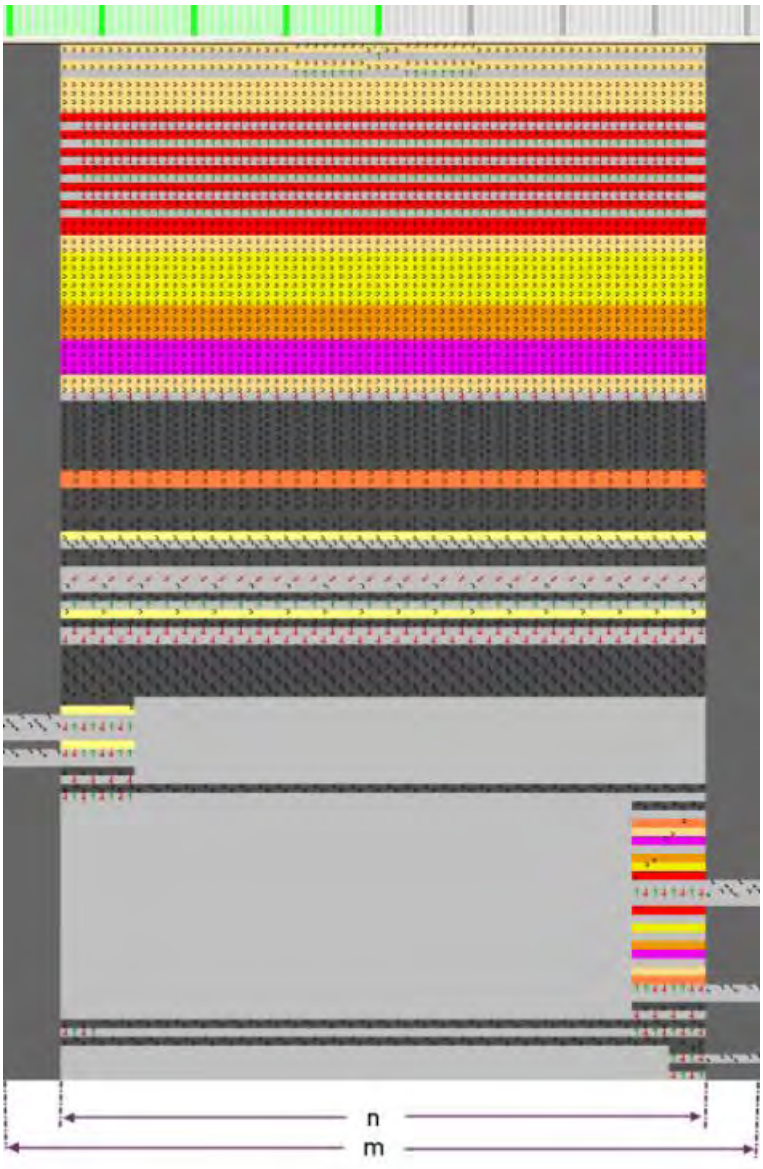
- Fully Fashion pattern only 

  Even patterns without narrowings and widenings must be generated in the fully fashion mode.

  PF0 and FF transitions will otherwise not be written to Sintral.
- Using the size correction switch you can start with the largest knitting width.

  By changing the counter with negative values you switch to the next smaller knitting width.
- A center part is defined.

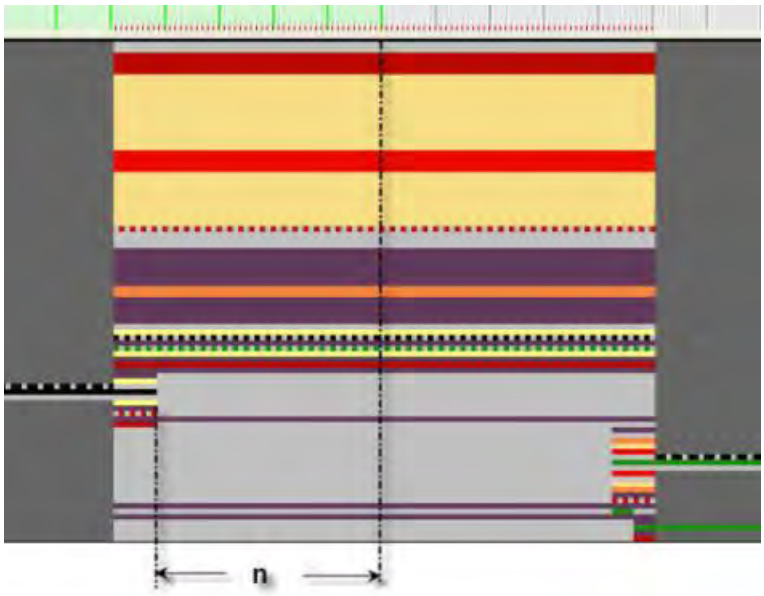
- The maximum knitting width may not be larger than the needle bed width (m) minus 6 needles at the left and at the right (n)



- Start with Knitting-in Float and Lock [8 – 8]

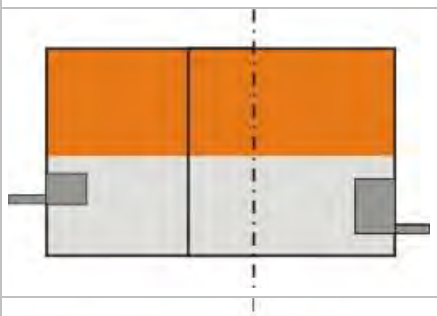
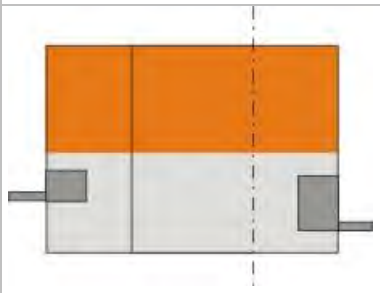
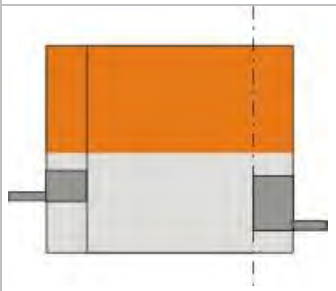
  The minimum knitting width may not be smaller than the width (n)/2 so that the yarn

fixing (X) when knitting-in will not be overlapped when moving the two pattern halves.



- With negative values the two pattern halves will be positioned overlapping.

  Recommendation: Maximum overlap up to the yarn fixing (X).

Size correction switch	Change of the fabric width
No negative change	
Negative change	
Further negative change	
Maximum negative change	

- Width of the yarn fixing with different clamping and cutting

Marking	Function Clamping and cutting	Module width
6	Knitting-in	6 stitches
X	8 - 8	8 stitches
	16 - 16	MC - gauge-dependent

9 Technical Row Data

You can make pattern related settings in the "Technical Row Data" dialog box.

Tab	Setting	Specifications	Function
Yarn carrier (Yarn carrier specifications have to exist) **After expanding the pattern**	Stopping position / correction	HL HR	Stopping position of the yarn carrier at the left Stopping position of the yarn carrier at the right
		Correction	left / right
	Action/path	Action	Activating the yarn carrier actions
		Lay-in	Lay-in the thread in the knitting area
		Swivel	Swivel the intarsia yarn carrier
		Clamping and cutting	Clamp yarns Clamp yarns with x rows delay
		Open clamp	Open clamp Delay clamp opening after x rows
		Path	Change of the yarn carrier stroke (PAI)
		Border Position	The yarn carrier will be positioned outside the SEN area or the specified position.
	Add	Spacer	**Use when creating modules** Yarn carrier properties will be allocated to a placeholder, which will be transferred to the used yarn carrier when processing the pattern.
Racking			Display of the racking
Print	Print	Instruction	Entry of a Print command PRINT/……/
		Language	The selected language should correspond to the installed language of the M1plus. No entry of the instruction (Print) with different settings!
	Command	Sintral command	Insert Sintral commands in the Sintral program ◆ Before system ◆ Before stroke ◆ After stroke ◆ You can combine a Sintral command with a Print command.
Knitting sequence (with Technical pattern only)	Rules for applying the knitting sequences	Apply only modified knitting sequences	Only the changed knitting sequences will be transferred into the control columns. The technical processing edits the information.
		Apply all knitting sequences	All knitting sequences will be transferred into the column selection. The technical processing edits the information.
Function Calls	Function	Addl. commands	Calling up a Sintral function
		Function	Name of function
		Repetitions	Number of repetitions for the function
		Before stroke	Run the Sintral function before the carriage stroke
		After stroke	Run the Sintral function after the carriage stroke

I. Make or change settings:

1. Open the existing pattern and save it with a new name via the "File" / "Save as…" menu.

   - or -

➜ Generate a new pattern.

2. Expand the pattern with  icon of the "Steps of Processing" toolbar.
3. Open via the menu "Pattern parameter" / "Technical row data" the desired selecting list.
4. Open the window with the "Setting >>" button.
5. Make settings.
6. Apply the settings with "Apply".

   - or -

➜ Apply the settings with "OK" and close the dialog box.

II. 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 the "MC Program / Conduct Sintral Check..." menu.

10 Online connection to the machine

- for transfer of pattern data (*sin, *jac, *set /*setx).
- for transmission of machine data.

i	A network has to be set up for an online connection. You can get the networking manual from the Stoll Helpline.

I. Transfer pattern data to the machine:

1. Stop carriage at the left reversal point.
2. Call-up the "Tools" / "Machine Explorer" menu.
3. Select a machine from the tab "Stoll machines".
4. Call-up "Load data in machine…" in the context menu.
5. In the dialog "Load Data in Machine: xxx" carry out the required settings.
6. Set the path of the file to be transfered with "Search".
7. Start the transmission to the machine with "Start".

II. Save pattern data from the machine:

1. Call-up the "Tools" / "Machine Explorer" menu.
2. Select a machine.
3. Call-up "Save data from machine…" in the context menu.
4. In the dialog "Save data from machine: xxx" select the file to save.
5. Change pattern name possibly.
6. Set the path of the file to be saved with "Search".
7. Start backup with "Start".

III. Incorporate a machine into the network:

1. Call-up the "Tools" / "Machine Explorer" menu.
2. Add a machine in the "M1plus machine explorer" under **My machines**.
3. Select a machine.
4. Run the "Properties" function in the context menu.

▷ The dialog "xxx properties" for the selected machine will be opened.

5. Select tab "Online Parameter".
6. Select  "Ethernet" in the "Type of connection" section.
7. Check and correct the IP address of the machine.
8. Confirm input with "OK".

⇨ The dialog box is closed.

IV. KnitLAN directory:

1. Activate the  "Online (Selan)" checkbox when installing the M1plus software.

⇨ The KnitLAN directory will be generated under D:\ Stoll\ Knitlan.

i	The directory is needed to establish the online connection in case of OKC machines.

11 Data conversion and data exchange

Data needs to be converted in order to transfer them via network from **SIRIX to M1plus** or **M1plus to SIRIX**. The conversion generates formats, which can be read from M1plus or SIRIX.

i	The conversion is always carried out on the SIRIX.

The programs needed for the conversion are:

- "SIRIX_to_M1"
- "M1_to_SIRIX"

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

Data to convert:

- Sintral
- Jacquard
- Setup
- Sintral Check data:
  - Compressed
  - Uncompressed
- Sequence file
- Sequence file list
- Picture file:
- Text file:
- Machine data

I. Data conversion SIRIX to M1plus.

i	The Sintral Check has to be carried out and the check data have to be saved on the SIRIX.

1. Place the pattern folder with the Sintral Check data on the program **SIRIX to M1**.

⇨ Generate a folder with the same name and the ending .M1.

i	The : character within names of SIRIX files or SIRIX folders is not allowed under Windows. It will be replaced automatically by = when converting the data. The : characters is present in the designation of the machine type CMS330:6.

Use of the imported data on M1plus:

File	Ending	Extension SIRIX	Use in the M1plus
Sintral	.sin		◆ Archiving ◆ Online transfer to the machine ◆ Transfer to KMC and floppy disk ◆ Changes in Sintral editor
Jacquard	.jac		
Sintral Check data	.check		◆ Generate pattern element / pattern element
Compressed Sintral Check data	.check.z	.check.gz	
Setup	.set		◆ Archiving ◆ Online transfer to the machine ◆ Transfer to KMC and floppy disk ◆ Changes with the Setup program ◆ Apply the data to the pattern
Sequence	.seq	.seq	◆ Archiving ◆ Online transfer to the machine ◆ Transfer to KMC and floppy disk ◆ Changes using Text editor

II. Data conversion from M1plus to SIRIX.

i	The data has to be extracted from the M1plus pattern file (*mdv) before the conversion.

Extract data on the M1plus:

1. Open the "Extract jac/sin/set files…" dialog box via the "MC Program" / "Extract MC Program…" menu.
2. Select the target directory.
3. Confirm entries with "OK".

⇨ The dialog box is closed.

i	If the filename contains illegal characters a message is displayed and the name is adjusted automatically.

4. Save the extracted files Sintral, Jacquard und Setup on floppy disk

- or -

➜ place in a folder shared by the SIRIX for transfer.

Create a new folder with the same name of the files (*sin,*jac,*set) and place in this folder.
Benefit: All files in this folder are converted on the SIRIX in one step.

Carry out the data conversion on SIRIX:

▷ The files on the M1plus are to be extracted from the .mdv file.

1. Drop the files Sintral, Jacquard and Setup individually onto the "SIRIX_to_M1" program of SIRIX and convert them.

⇨ A folder with the ending .# will be created for the first converted file.

2. Convert the next file

⇨ A message is displayed: "A pattern folder with this name is existing already. Overwrite?"

3. Selecting "YES", the converted file will be placed in the existing folder.

- or -

➜ Selecting "No", the conversion is not carried out.

Use of the imported data on SIRIX:

File	Ending	Use in the SIRIX
Sintral	.sin	◆ Archiving ◆ Online transfer to the machine ◆ Transfer to KMC and floppy disk ◆ Changes with the Sintral editor
Jacquard	.jac	◆ Archiving ◆ Online transfer to the machine ◆ Transfer to KMC and floppy disk ◆ Editing in the Jacquard program
Setup	.set	◆ Archiving ◆ Online transfer to the machine ◆ Transfer to KMC and floppy disk ◆ Changes with the Setup program
Sequence	.seq	◆ Archiving ◆ Online transfer to the machine ◆ Transfer to KMC and floppy disk ◆ Changes with the Text editor

i	The pattern can be edited further on the SIRIX.

III. Import Sintral Check data from SIRIX to M1plus:

You have to convert the Sintral Check Data generated on the SIRIX by the "SIRIX_to_M1" program in order to transfer them. By this a format readable by the M1plus is generated.

Importing the data from SIRIX to M1plus:

- Networking SIRIX and M1plus by the means of Samba software
- Transferring from SIRIX to M1plus by floppy disk or Knit-Memory Card

1. You have to save the data on a drive of the M1plus in order to import them.
2. You have to extract the compressed Sintral Check data (.check.gz).
3. Call up the "Import Sintral Check" dialog box via the "File" / "Import" / "Sintral Check as Pattern…" menu.
4. Select a machine.
5. Make "Import settings".

Setting		Function
Take cycles into account	☑	Cycles and their repetitions of the SIRIX program will be transferred into the cycle table of the M1. The repetitions will not be displayed in the technical view.
	☐	Cycles of the SIRIX program will not be transferred into the cycle table of the M1, but will be displayed with the corresponding repetitions in the technical view.
Optimize pattern width	☑	Empty columns to the left and right of the fabric selvedge will be deleted.
Remove overrun path / edge floats	☑	The overrun path of the yarn carriers will be displayed.
	☐	The overrun path of the yarn carriers will not be displayed.
Group pattern rows after Jacquard 1	☑	One Jacquard row corresponds to one pattern row. (SIRIX Jacquard #1) Jacquard rows will be grouped to one pattern row.
	☐	Each knitting row results in a separate own pattern row. Transfer rows will always be grouped with the knitting row below them independent of the setting.
Pattern start with undefined racking	☑	Undefined racking will be inserted in the first knitting row by the V? symbol. The racking position will be kept until a needle bed will get empty by transferring or casting off.
Import before Technical Processing	☑	The Sintral Check data will be read in. You can start the technical processing again.
Generate shape from shape counter #L...#R	☑	The shape counters will be used to generate a shape.

6. Select the desired file.
7. Start the import with the "Import" button.

⇨ The data are imported and displayed in the **Technical View**.

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

8. Add the desired presentation via the "View" / "Open New Fabric View" or "Open New Symbol View".

i	The yarn type specification in the Sintral check file is ignored. Each yarn carrier will be displayed by its own yarn color. If you want to generate the Sintral from the pattern, always carry out **Technical Processing** beforehand in order to complete the yarn carrier movements.

12 Import setup data

Setup data can be imported in M1plus:

- From another M1 or M1plus pattern.
- From the machine.
- From the Sirix.

The setup data can contain:

- Stitch length (NP)
  - NP1..50
  - NP51..100
- Fabric take-down (WMF)
- Yarn carrier correction (KI / K<I>)
- Carriage Speed (MSEC)
- Yarn carrier distance (YD)
- Engaging value (Ua-b) (with OKC machines only)

Import Setup data into the M1plus:

1. Call up the "Import Setup" via the "MC Program" / "Setup File..." menu Call up dialog box "Import Setup".
2. Select a Setup file (*set).
3. Confirm with "Import".

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

Behavior during import of setup data:

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

13 Stoll Customer Support

In the header of each page of the Online Help of the M1plus you can find "http://support.stoll.com ..." .
This calls up the "Stoll Customer Support".
In addition to FAQs, tips and tricks, you will also find download options for software and documentation here.
For "Stoll Customer Support", the **Customer** and **PIN Number** must be entered.