STOLL

The new user interface for CMS machines

EN

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H. STOLL AG & Co. KG, Stollweg 1, D-72760 Reutlingen, Germany

Our products are being developed further continuously. They are therefore subject to technical modifications.

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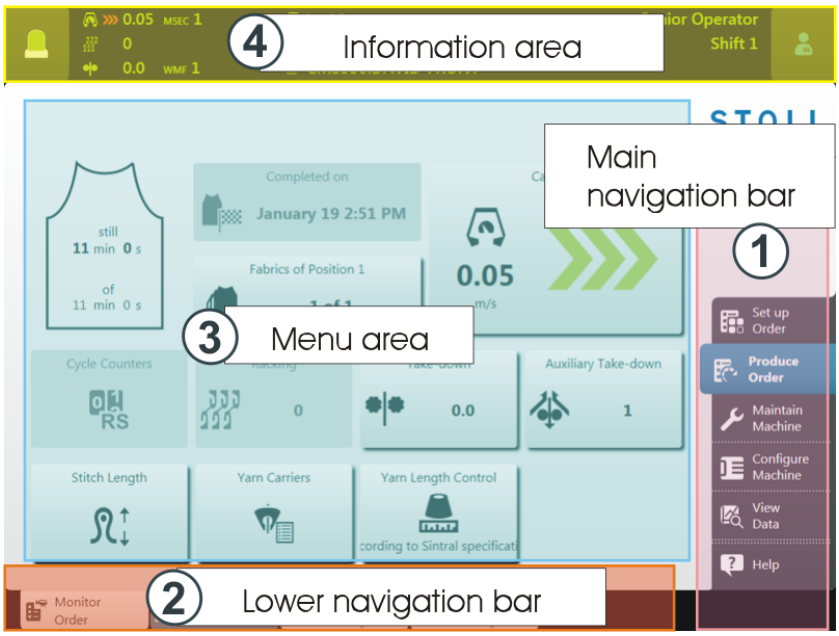
1 Philosophy of the user interface

When developing the user interface, the following points were important to us:

Task oriented structure	The multiple work steps - from setting up the pattern and the production to the network settings - were analyzed and grouped into four main areas: ◆ Set up Order ◆ Produce Order ◆ Maintain Machine ◆ Configure Machine Each area is assigned to a specific user group. Generally, each user group works just in its own area, all the other areas are password protected.
User oriented structure	Each user has specific tasks on the machine. As several users can have the same task, as for example the knitters, these individual users are combined to a user group. There are four user groups: ◆ Operator (knitter) ◆ Maintenance (maintenance personnel) ◆ Senior Operator (technician, foreman) ◆ Stoll Service (Stoll service technician) Each user group has different rights. A senior operator has more permissions at the knitting machine than a operator.
An area that is specifically only for the knitter (operator)	During the development of the new user interface, the main criterion was that the knitter would receive his own area for his activity. For that purpose the "Produce order" was created specifically for the knitter (operator). The training period for this area is short, also for new personnel. All other areas are locked for him, they are protected by a password (default setting). This way the operator cannot perform unintentional changes or error operations in the other areas.
User guidance	If several work steps are necessary for a task the user is guided step-by step through the task. New employees will also be immediately able to perform the work steps correctly.

Guided remedy of a production interruption	The remedy of the most common production interruptions (as for example yarn breakage) is supported by special dialogs to remedy the error as fast as possible.
Intuitive operation	Fast recognition of the function of a button - for this each button has an icon and an explanatory text. You know many of the icons from the previous user interface. Additionally, for most of the buttons there is a bubble help - if you remain a little longer on a button with the touch stylus or with the finger, an additional help text appears, which informs about the function of the button.
Order	An order is created for this production. An order can consist of one or more knitting programs. The previous order menu and sequence menu are no longer required.

2 Design of the user interface



The user interface is grouped into four areas.		
①	Main navigation bar	The main navigation bar can be found at the right screen edge. The tasks at the machine are separated in four main groups: ◆ Set up Order ◆ Produce Order ◆ Maintain Machine ◆ Configure Machine
②	Lower navigation bar	Every main group (1) is separated in several subgroups. You will find the sub areas at the lower screen edge.
③	Menu area	Here you can see the menu for the selected subarea (2).
④	Information area	◆ Messages ◆ Information about the machine, the user group and the order (knitting program) ◆ Change shift, change user group

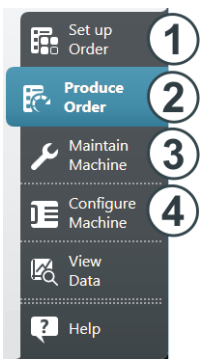
3 Roles and rights

The variety of work steps at the machine are separated in four main areas:

- Set up Order
- Produce Order
- Maintain Machine
- Configure Machine

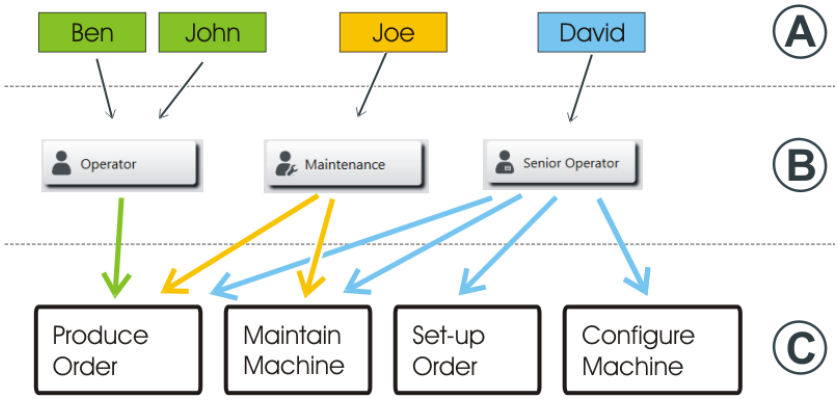
Each area is assigned to a specific user group:

- Operator (knitter)
- Maintenance (Service personal)
- Senior Operator (technician, foreman)

		Main area	User Group		
	1	Set up Order	—	—	Senior Operator
	2	Produce Order	Operator	Maintenance	Senior Operator
	3	Maintain Machine	—	Maintenance	Senior Operator
	4	Configure Machine	—	—	Senior Operator

Generally, each user group works just in its own area, all the other areas are password protected.

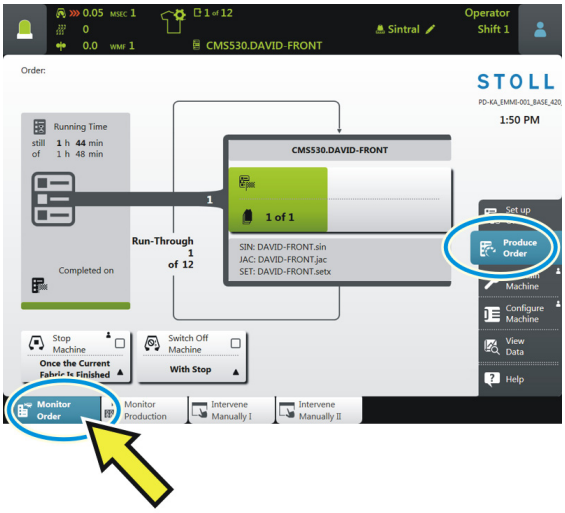
User, User Group and User Profile



User (A)	Each user, who works with the machine, is assigned to a specific user group (B).
User group (B)	Each user group has special permissions, which they need for working at the machine (C). For the work steps, which the user group may not perform, it does not receive any permission. For the work steps at the machine, the maintenance staff needs other permissions than the operator (knitter). The operator, for example, may not change any data or perform specific machine actions. The senior operator defines this in the corresponding user profile (Configure Windows). (Set up machine -> System Settings -> User -> Configure Windows)
User Profile	Working with user profiles simplifies the rights management, as only the rights of the user group are to be adapted in case of a change and not those of every single user.

4 The area for the Knitter - Produce Order

The "Produce Order" menu is intended for the knitter (operator) by default. He can access only this area, alle the other areas of the main navigation are locked for him.

Menu "Produce Order"	
	Submenu "Monitor Production" (default setting)
	If the knitter wants see the work progress of the entire order, he selects the "Monitor Order" submenu.

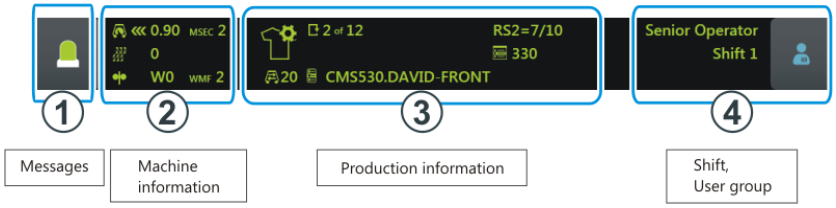
If smaller work steps or interventions are necessary, the knitter changes to the submenu "Intervene Manually I" or "Intervene Manually II".

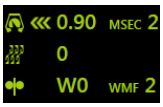
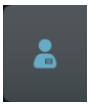
The senior operator can lock or unlock additional menu elements for the knitter, see Select User Profile.

Further information:

- Change Shift [24]
- No Optimal Production [22]

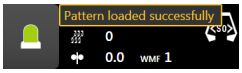
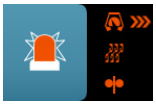
5 Information area



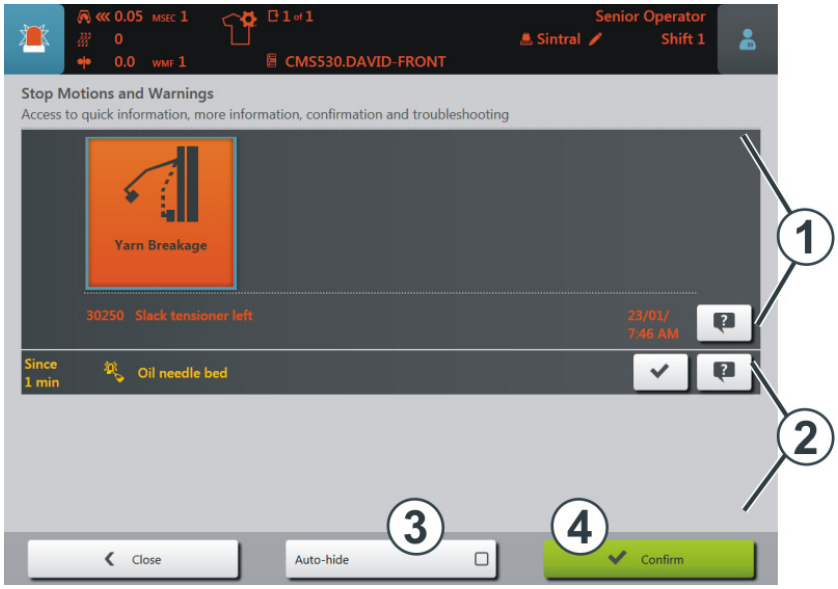
1		Open message window Errors and Messages [14]
2		Machine information Machine information [17]
3		Production information Production information [18]
4		Opening the dialog for: ◆ Change Shift ◆ Change User Group Change Shift [24] Change User Group [25]

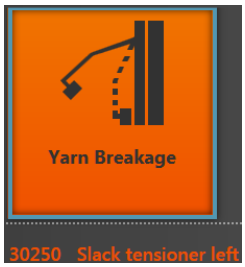
5.1 Errors and Messages

Depending on the machine status, the color of the information area changes.

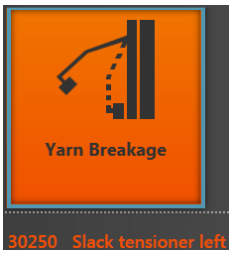
	green: The production is in progress
	If you have carried out an action, an information (note) is displayed.
	yellow: No optimal production The production will not be interrupted. To be able to see the cause, tap on the "Messages" icon. The message window is opened. No Optimal Production [22]
	red: An error occurred The machine stops. The message window is opened automatically.

The message window is divided in two areas:

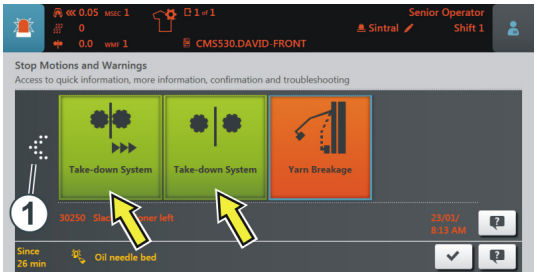


	Area and button	Explanation	
1	Error messages	Structure of the error message: ◆ Icon ◆ Error code ◆ Text of message	
2	Warnings	Structure of the warning: ◆ Time of the warning ◆ Text of the warning	
3	Auto-hide	Function active: The message window remains in the background when a stop motion occurs.	
4	Confirm	Confirm the remedy of the error	

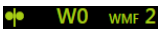
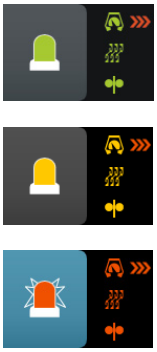
Further information about the error

	Dialog box regarding the error remedy If you tap on the icon, a dialog is displayed, which helps you to rectify the error as fast as possible.
	Brief information about the error If you tap on the icon, a brief information about the error is displayed. In the brief information the possible causes and their remedy are described.

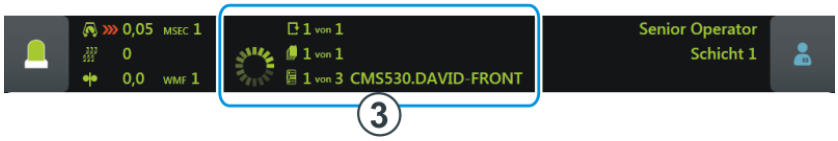
Error history

	If you tap on the arrow (1), the earlier error messages are displayed (color of the icon: green). This way, you can create an overview over the error messages that occurred recently.

5.2 Machine information

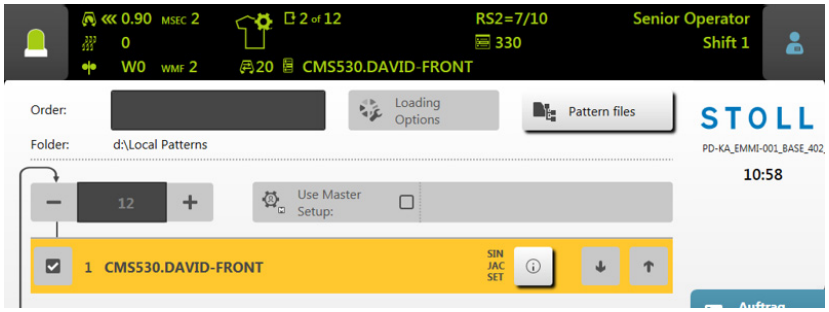
	Carriage direction, speed
	Racking position
	Fabric take-down value
	Machine state Depending on the machine status, the color of the information area changes: ◆ green: The production is in progress ◆ yellow: No optimal production ◆ red: Production interrupted, an error occurred No Optimal Production [🗋22]

5.3 Production information



	This icon shows you that the order consists of one knitting program. Example: 	
	2 of 12	Quantity of run-throughs Example: Run-through 2 of 12 2 = currently the second run-through is being knitted 12= a total of 12 run-throughs are to be knitted
	CMS530.DAVID-FRONT	Name of the knitting program
	20	Course counter (1 course = 2 rows)
	RS2=7/10	Current cycle Example: RS2=7/10 Cycle counter 2 (RS2) is repeated 10 times in total, currently the seventh repetition is in progress.
	330	Current Sintral line
		A change was made (manually or automatically), which has not been yet saved. ⓘ If you want to load a new order, you will be asked, whether the changes are to be saved. ⓘ If you load an older Setup file of the OKC machines, the default values will automatically be entered in the "Ua-b/NCC" tab - therefore, this icon appears.
		The production was interrupted.

The order looks like this, for example:



	This icon shows you that the order consists of several knitting programs. Example: 	
	2 of 12	Quantity of run-throughs Example: Run-through 2 of 12 2 = currently the second run-through is being knitted 12= a total of 12 run-throughs are to be knitted
	1 of 5	Quantity of the fabrics for this position Example: 1 of 5 1 = currently the first piece is being knitted 5 = a total of five fabrics are to be knitted
	2 of 3 CMS530.DAVID-BACK	Name of the current position (knitting program) Example: 2 of 3 2 = currently the second position is being knitted 3 = the order consists of of a total of three positions
	20	Course counter (1 course = 2 rows)
	RS2=7/10	Current cycle Example: RS2=7/10 Cycle counter 2 (RS2) is repeated 10 times in total, currently the seventh repetition is in progress.
	330	Current Sintral line
		A change was made (manually or automatically), which has not been yet saved. If you want to load a new order, you will be asked, whether the changes are to be saved. If you load an older Setup file of the OKC machines, the default values will automatically be entered in the "Ua-b/NCC" tab - therefore, this icon appears.
		The production was interrupted.

The order looks like this, for example:

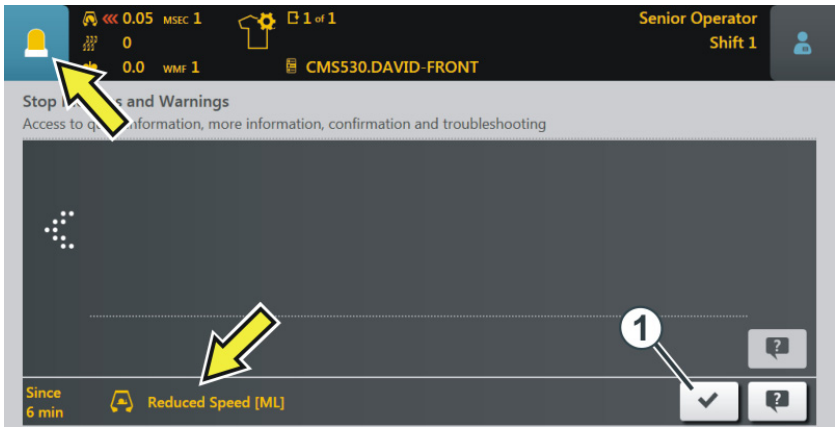
5.3.1 No Optimal Production

If one of the following settings is active, no optimal production is possible:

Reduced Speed
Extended Stroke

So that you can see immediately that no optimal production is possible with this setting, the color of the information area changes from green to yellow.

If you want to know, which setting is causing this, tap on the "Messages" icon. The following window appears:

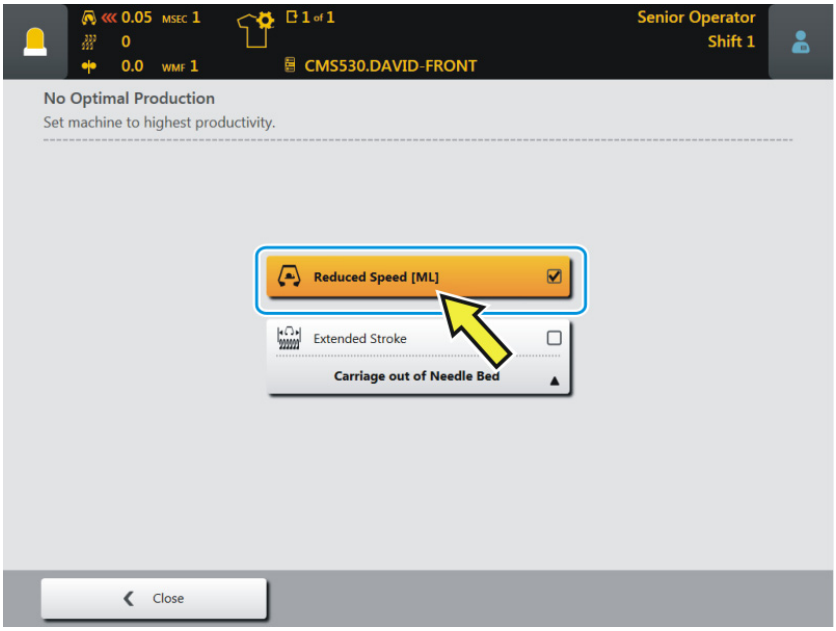


The cause is displayed; in the above mentioned example it is the "Reduced speed".

Eliminate the cause:

1. Tap on the icon (1).
   ▷ The "No optimal production" window is opened.

2. You will see that the "Reduced Speed" setting is activated.

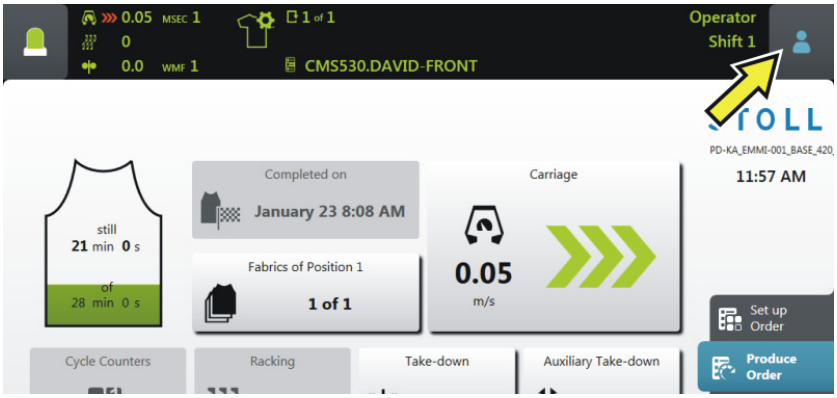


3. For deactivating the setting, tap this button.
4. The reason for the sub-optimal production is deactivated, the color of the information area changes from yellow to green.

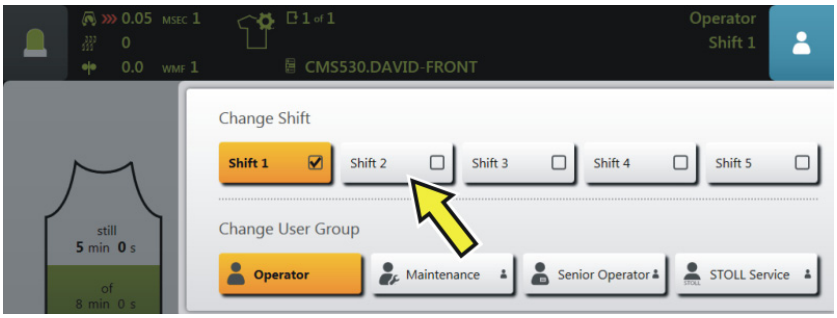
▶ If you want to return to the start menu, tap the "Close" button twice.

5.4 Change Shift

1. Tap on the "Shift, User Group" icon



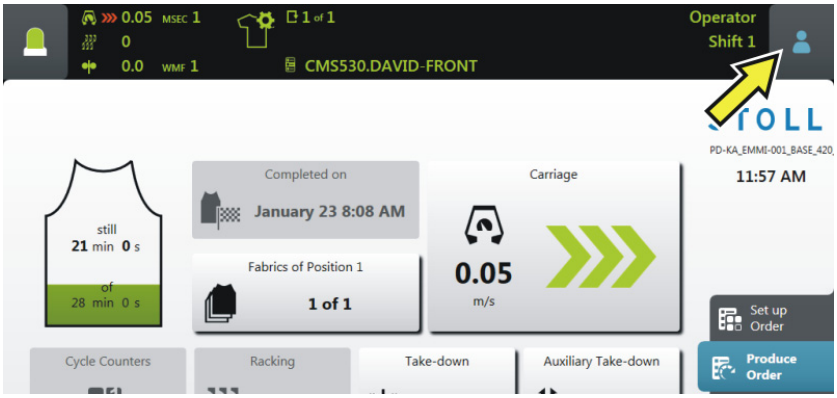
2. The setting window appears. The active shift is highlighted in color.



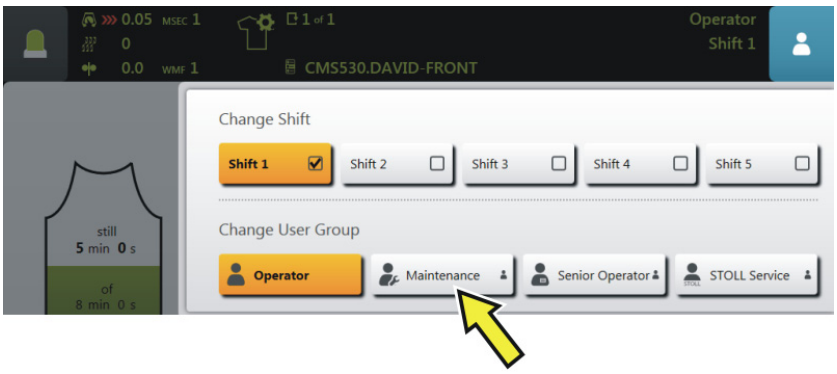
3. Select the desired shift. "Shift 2" is selected in the example.
4. The window is automatically closed.
5. At the user interface, the shift set is displayed.

5.5 Change User Group

1. Tap on the "Shift, User Group" icon.

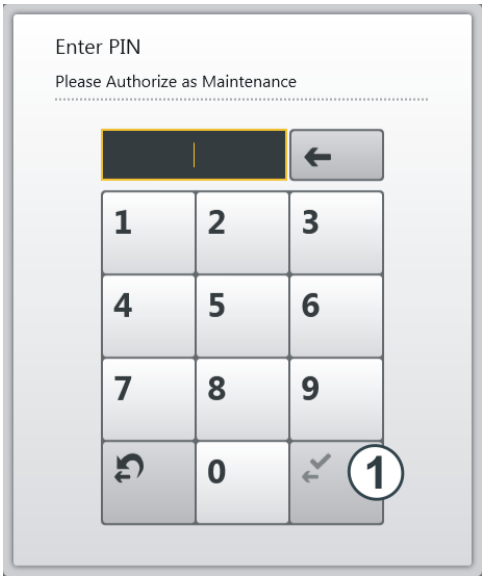


2. The setting window appears. The active user group is highlighted in color.



3. Select the desired user group. "Maintenance" is selected in the example.

4. If you select a higher user group, a prompt appears asking for the PIN.
   If you select a lower user group, the window is automatically closed. The steps 4 to 6 are not necessary.



5. Enter the PIN, and confirm the entry. For this, tap the button (1).
   You may log in also with an even higher user group, i.e. "Senior Operator".

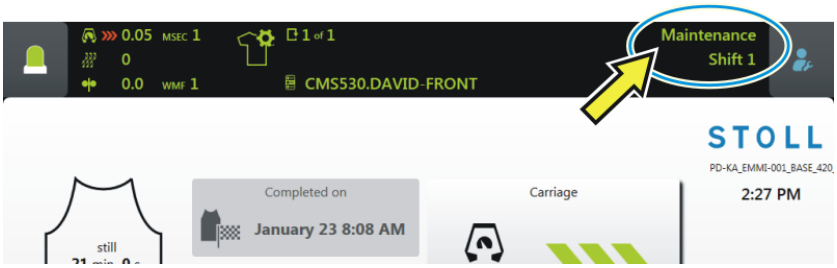
User group	PIN required	PIN (default)
Operator	—	—
Maintenance	X	1111
Senior Operator	X	2222
STOLL Service	X	3333

6. If you have entered the PIN correctly, the window is automatically closed.

   - or -

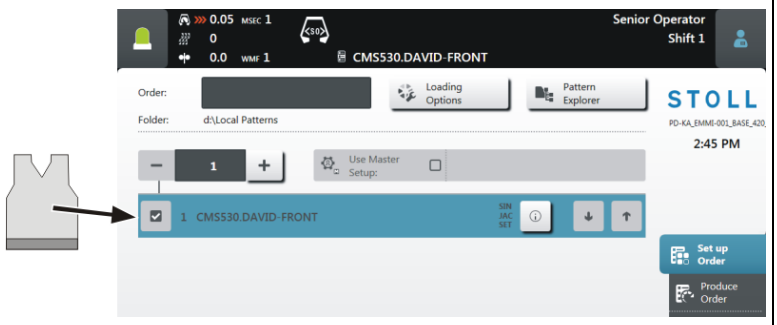
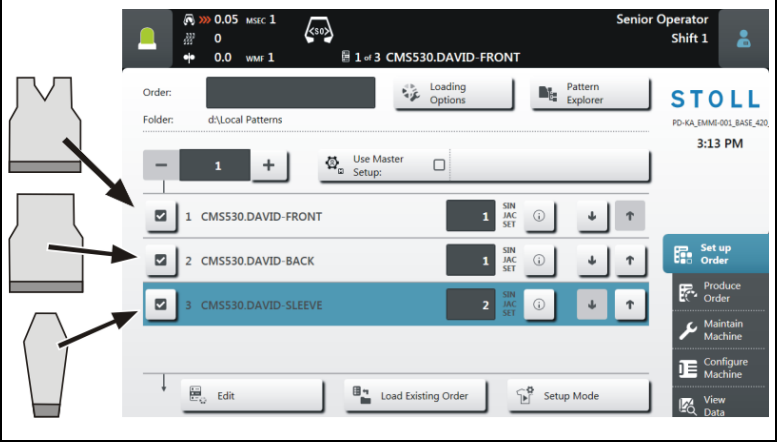
➜ If you have entered the PIN incorrectly, the window is not closed. Repeat the steps 3 to 5.

▶ In the information area, the set user group is displayed.



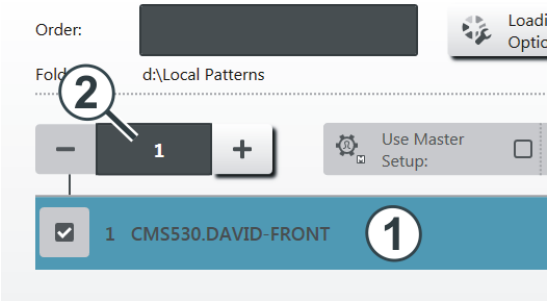
6 What is an Order?

An order consists of one or more knitting programs that are knitted once or more times.

Example	
Order with one knitting program	
Order with three knitting programs	

Create order - with one knitting program

At the user interface it looks like this:

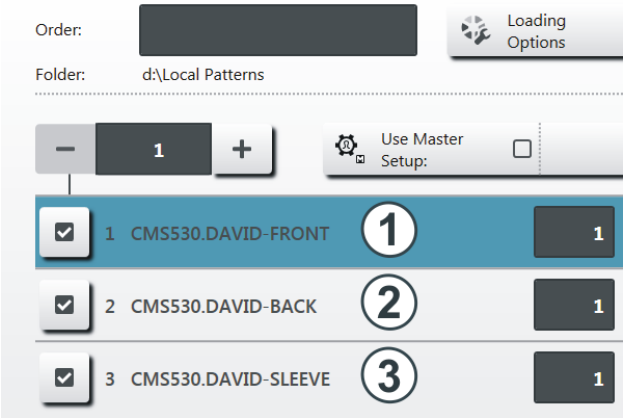


1 Knitting Program

2 Quantity of run-throughs (quantity of fabrics).

Create order - with several knitting programs

If the order consists of several knitting programs it looks like this:



1 Knitting program 1 (position 1)

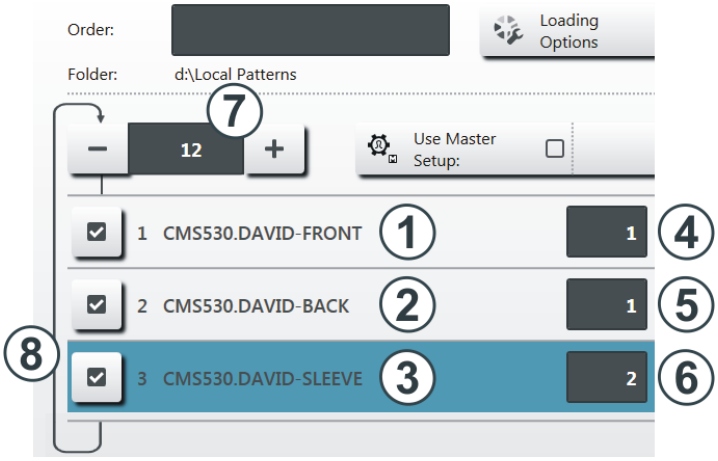
2 Knitting program 2 (position 2)

3 Knitting program 3 (position 3)

➜ Several knitting programs (positions) are grouped to an order in a list.

➜ The sequence of positions is also the order when knitting.

The positions (knitting programs) are completed with the piece quantities.



4 Piece quantity for knitting program 1

5 Piece quantity for knitting program 2

6 Piece quantity for knitting program 3

7 Quantity of run-throughs

Number of times that the list of positions (knitting programs) is repeated.

8 If the quantity of run-throughs is greater than "1", this will be represented graphically with a loop (8).

The order consists of three positions (knitting programs) which should be knitted in the following order:

1. DAVID-FRONT (front) 1 piece
2. DAVID-BACK (back) 1 piece
3. DAVID-SLEEVE (sleeve) 2 piece

This sequence will be repeated 12 times (7).

i	Perhaps, you already know this example from earlier, it was designated as a sequence.

7 Create Order

7.1 Create New Order

The creation of an order is structured in several steps:

- Step 1 must be carried out to create an order.
- The steps 2, 3 and 4 are optional to create an order.
- With the arrow keys you proceed to the next step or you return.

- Each step is performed in a separate window.

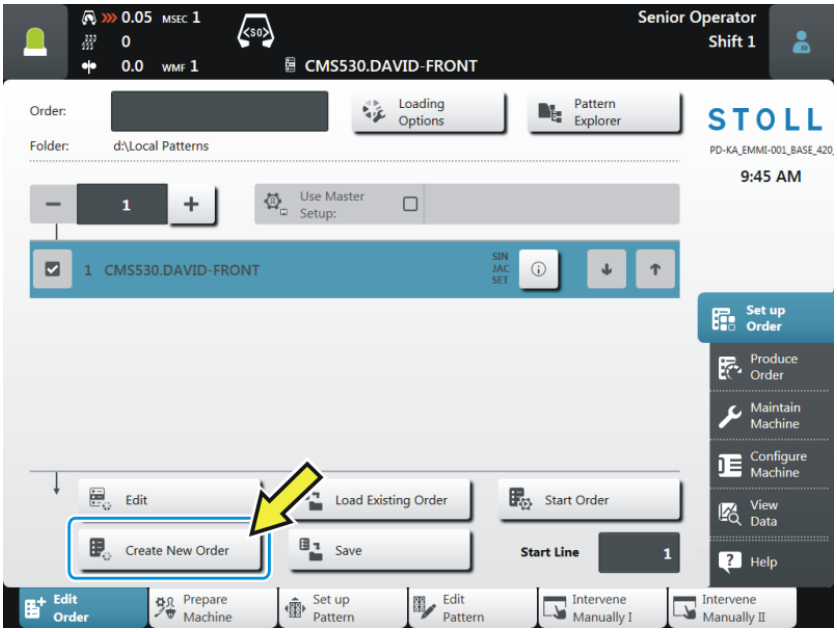
Step 1	Select knitting programs	Select one or more knitting programs, which are to be produced. Select knitting programs [🗋34]
Step 2	Set Loading Options	Determine what should occur with the previous data when loading a new order or a new knitting program Set Loading Options [🗋37]
Step 3	Select library	Select a library that is to be loaded additionally to the knitting programs. It can be the automatic functions of the AUTO-SINTRAL Stoll program or a private Autosintral file.
Step 4	Select Master Setup	ⓘ This function is only active, if two or more positions (knitting programs) are selected for the order. Select a Master Setup file that is used for all the knitting programs of this order. Select Master Setup [🗋39]

7.1.1 Select knitting programs

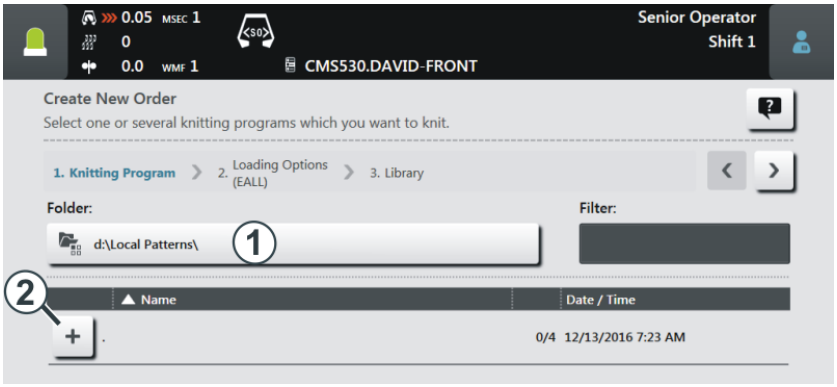
✓ You are signed in as senior operator.

✓ The "Set up Order" -> "Edit Order" window is selected.

1. In the "Edit Order" window tap the "Create New Order" button.



2. The "Create New Order" window appears.

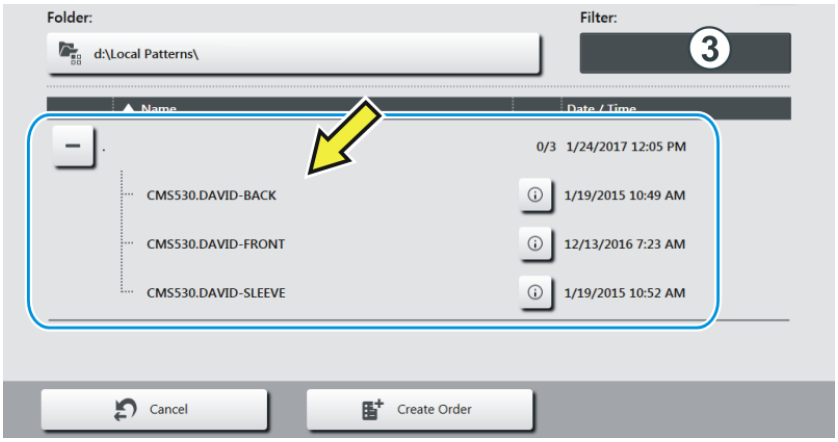


3. Select the path (storage location) of the desired knitting program.
For this, tap the button (1).

ⓘ For example, open the main directory "Local Patterns". This folder is located on the knitting machine in the local drive "D".
It is also called root directory. It is identified with the • sign.

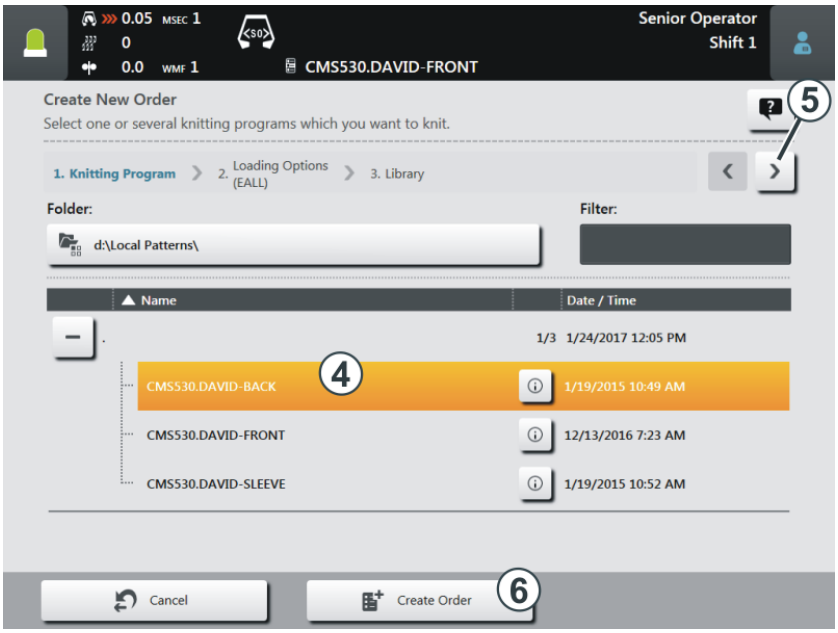
+ . or − .

4. If the folder is closed, tap on the plus sign (2).
5. The folder is opened and you can see the knitting programs contained in it.



If there are many knitting programs in the selected folder you can use the filter function to find the knitting program quickly.
For this, tap on the field (3).

6. Select the desired knitting program.
Tap on the knitting program (4) for this. It is highlighted in color.



If you want to undo the selection, simply tap again on the knitting program. The knitting program is no longer highlighted.

7. If the order must consist of several knitting programs, select further knitting programs. They are highlighted in color.

▶ The first part of the task is done: You have selected the desired knitting program.

It continues with the section "Set Loading Options" [□37]. Tap the (5) key for this.

If you don't need any Master Setup you can finish here and generate the creation of the order.

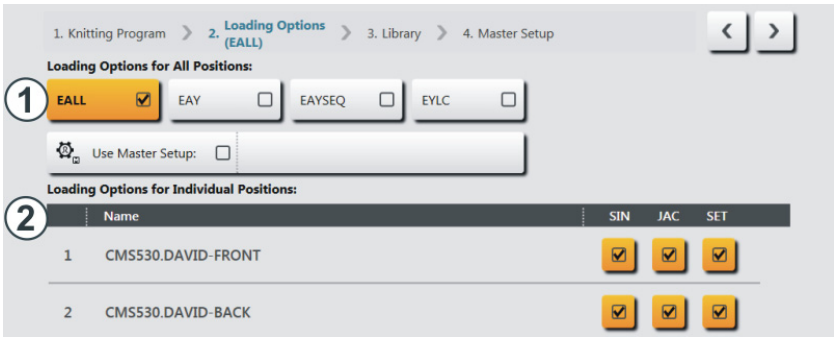
➜ Tap the (6) button for this.

▶ The order is created. The "Edit Order" window is re-opened automatically.

If necessary, you can also perform the program steps "Master Setup" und "Loading Options" in the "Edit Order" window.

7.1.2 Set Loading Options

Here you determine what is to be done with the previous data:



1	**Loading Options for All Positions:**	
	Delete all data of the previous order. Here you determine what is to be done with the data of the previous order.	
	EALL	Delete all data of the previous order.
	EAY	Delete the yarn carrier positions of the previous pattern.
	EAYSEQ	Delete yarn carrier home position after each position of the order (knitting program). This function is only active, if two or more positions (knitting programs) are selected for the order.
	EYLC	If a YLC device is used for the yarn length control. Delete YLC correction values of the previous order ("workings in mm" mode).

1	**Loading Options for All Positions:**	
	Use Master Setup	Select whether a "Master Setup" should be used. This function is only active, if two or more positions (knitting programs) are selected for the order.
		The button is divided into two areas:
		A: Select the path (storage location) of the desired Master Setup. Tap the (A) button for this.
		B: Activate or deactivate Use Master Setup. Activate: For this tap on the button (B). It is highlighted in color.

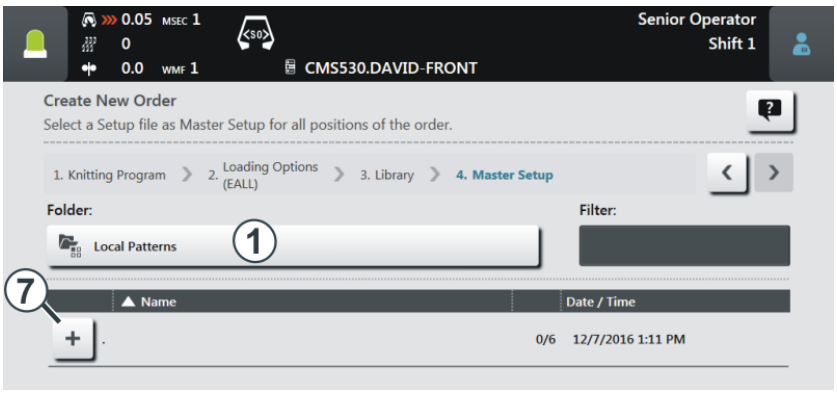
2	**Loading Options for Individual Positions**	
	For each position (knitting program), here you see which program sections are contained in it: ◆ Sintral program (*.sin) ◆ Jacquard program (*.jac) ◆ Setup file (*.setx) You can individually switch on or off these program sections.	
	☑	The program section (.sin, .jac, .setx) is switched on (active), i.e. it is used for the production (default setting).
	☐	The program section (.sin, .jac, .setx) is switched off (inactive), i.e. it is not used for the production.
		If you use a "Master Setup", it is marked in the "SET" column with this sign.

7.1.3 Select Master Setup

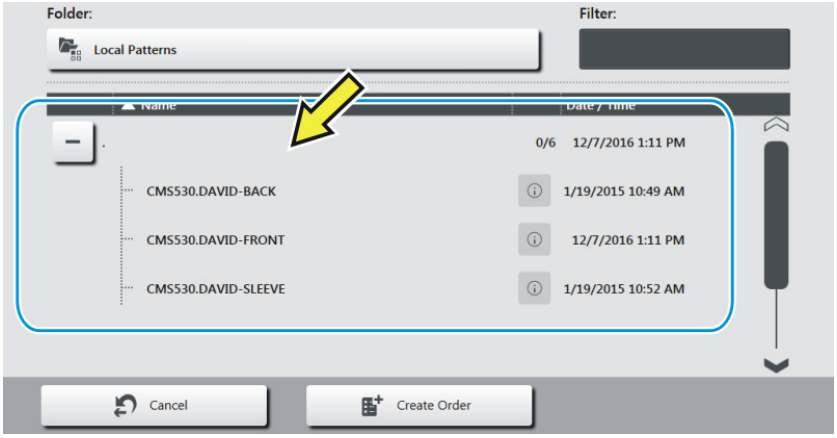
This function is only active, if two or more positions (knitting programs) are selected for the order.

"Master Setup" is the designation for the Setup file that is used for all the knitting programs of this order.

1. By default, the same folder where the knitting program was selected is displayed.
   If the Setup file is located somewhere else you can select the corresponding path with the button (1).

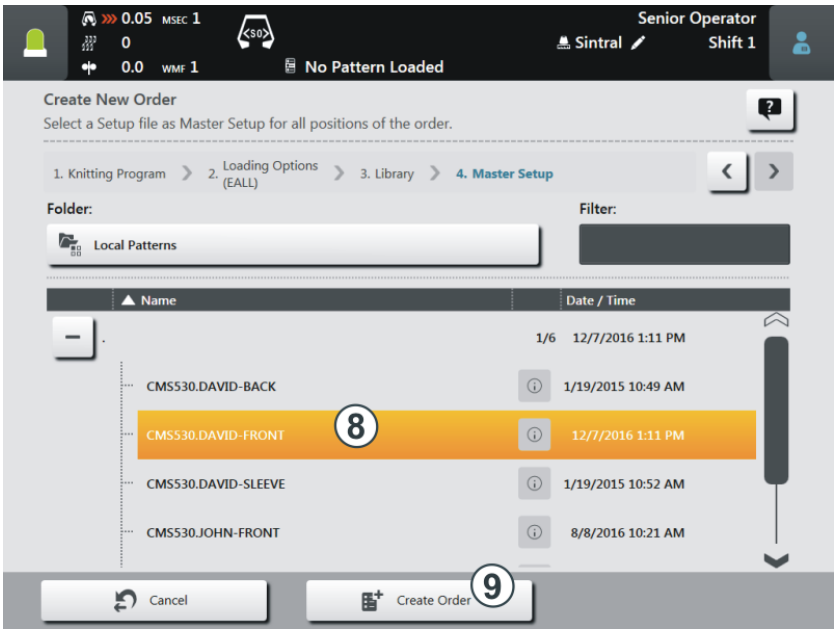


2. Open the desired folder, for example, the main directory "Local Patterns".
3. If the folder is closed, tap on the plus sign (7).
4. The folder is opened and you can see the Setup files contained in it.
   In the example there are three setup files.



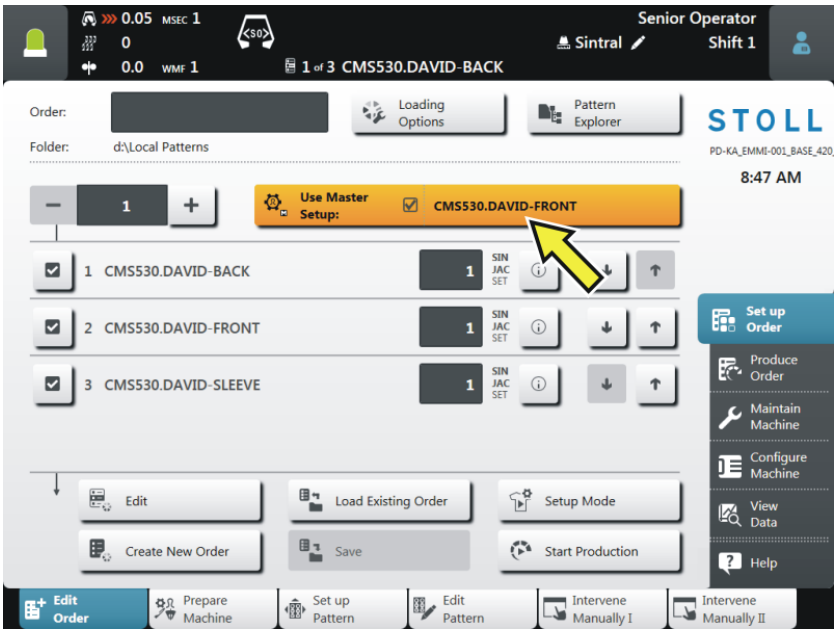
5. Select the desired Setup file.
   Tap on the desired Setup file (8) for this.

   ▷ It is highlighted in color.



6. The last part of the task is done: You have selected the desired Master Setup.
7. Have the order generated.
   For this, tap the button (9).

▶ The order is created. The "Edit Order" window is re-opened automatically.
You see the order and the corresponding Master Setup.

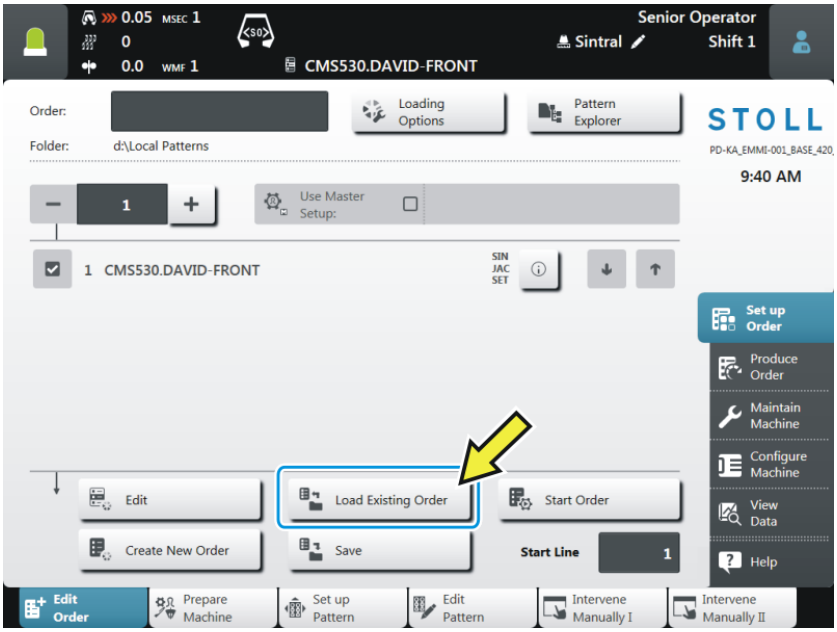


7.2 Load Existing Order

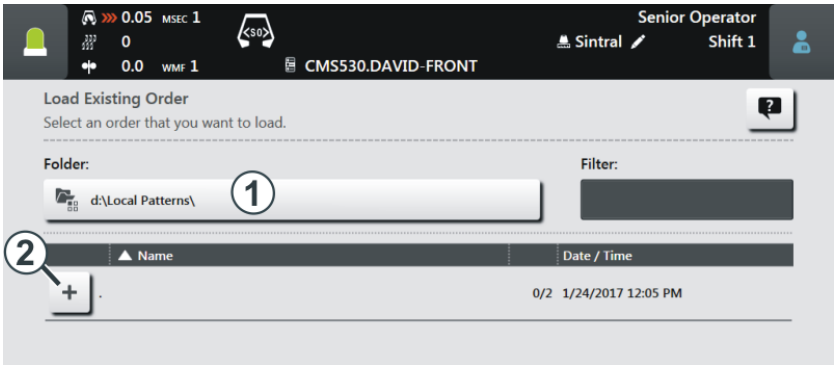
✓ You are signed in as senior operator.

✓ The "Set up Order" -> "Edit Order" window is selected.

1. In the "Edit Order" window tap the "Load Existing Order" button.



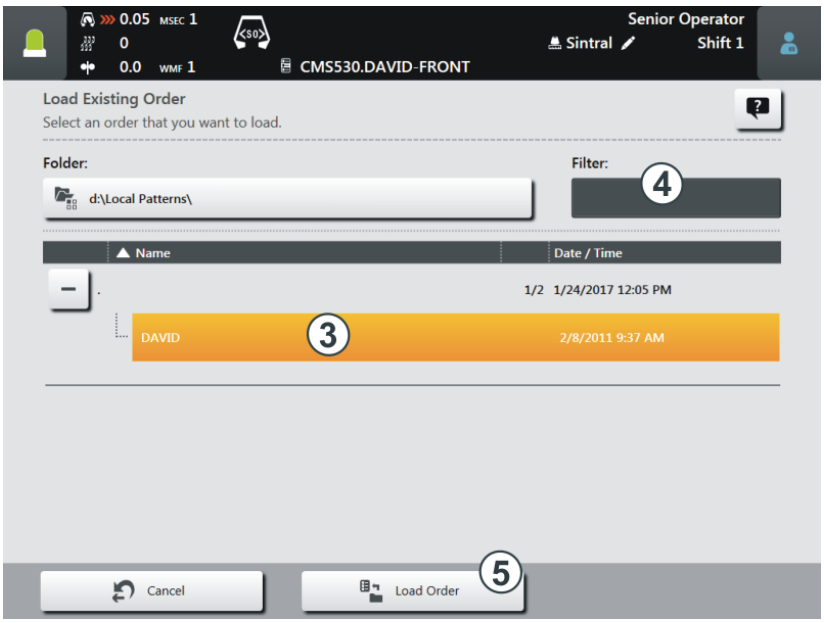
2. The "Load Existing Order" window appears.



3. Select the path (storage location).
For this, tap the button (1).

4. If the folder is closed, tap on the plus sign (2).

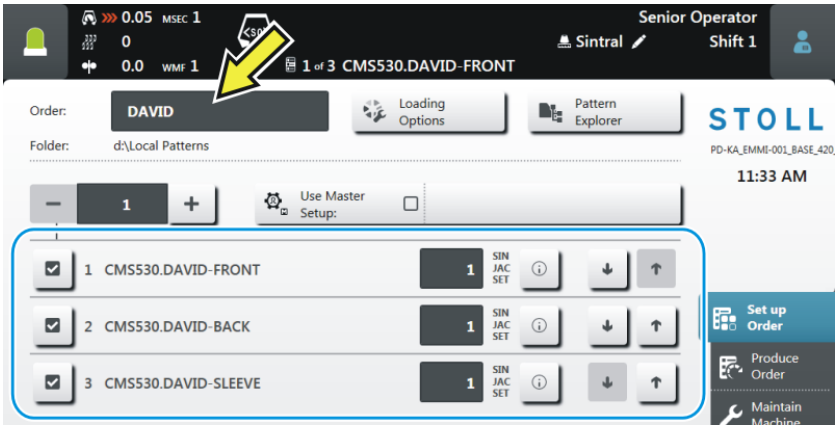
   ▷ The folder is opened and you can see the orders contained in it.



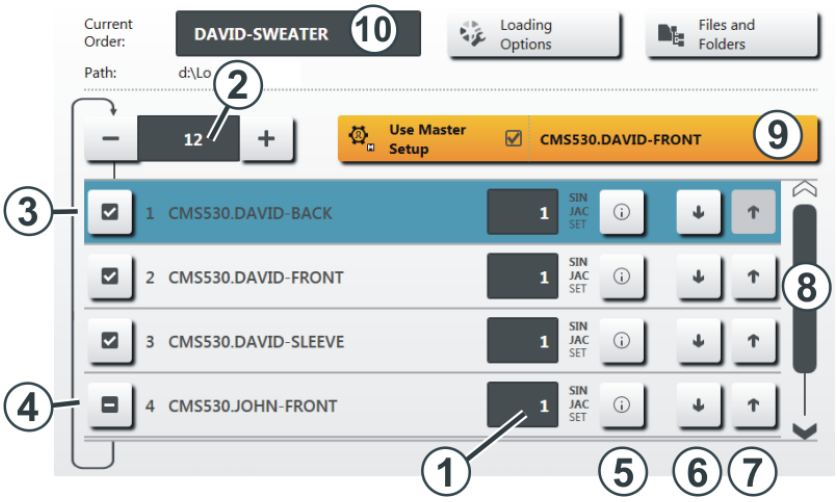
   ⓘ If there are many orders in the selected folder you can use the filter function to find the order quickly.
   For this, tap on the field (4).

5. Select the desired order.
   Tap on the desired order (3) for this. It is highlighted in color.
   ⓘ If you want to withdraw the selection, simply tap again on the order. The order is no longer highlighted.

▶ Finally tap the button (5). The order is loaded.
The "Edit Order" window is re-opened automatically.
You see the loaded order.



7.3 Changing an order



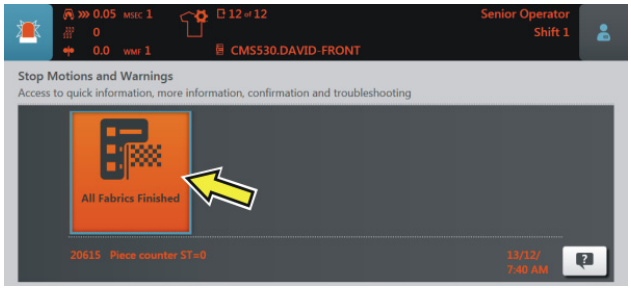
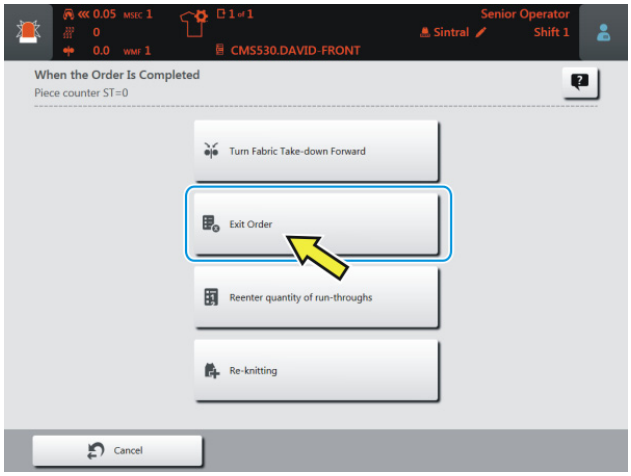
1		Enter the piece quantity for this position (knitting program). Tap on this field and enter the piece quantity in the "Quantity of Fabrics" dialog.
2		Enter the quantity of the run-throughs for the entire order. + Increase quantity − Reduce quantity
3	☑	The position (knitting program) is switched on (active), i.e. it is used for the production (default setting).
4	▬	The position (knitting program) is switched off (inactive), i.e. it is not used for the production. Tap on this field, the icon changes from active ☑ to inactive ▬.
5	ⓘ	Opens the pattern preview for this position. ◆ Sintral program ◆ Jacquard program ◆ Preview graphic of the M1plus ◆ Setup Data (list)
6	↓	Change the order - Shift the position downwards.
7	↑	Change the order - Shift the position upwards.

8		Scroll bar It is possible to scroll down/up with the scroll bar. ⓘ If the order consists of more than four positions (knitting programs) a scroll bar appears automatically.
9		Activate or deactivate Master Setup.
10		Enter order name

7.4 Exit Order

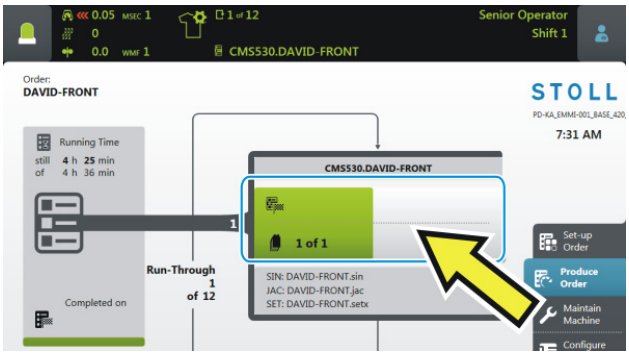
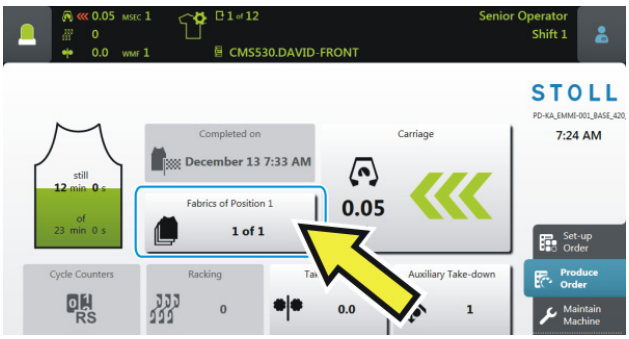
Before creating a new order you must exit the previous order.

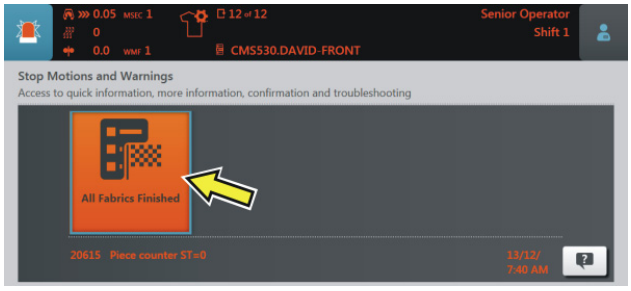
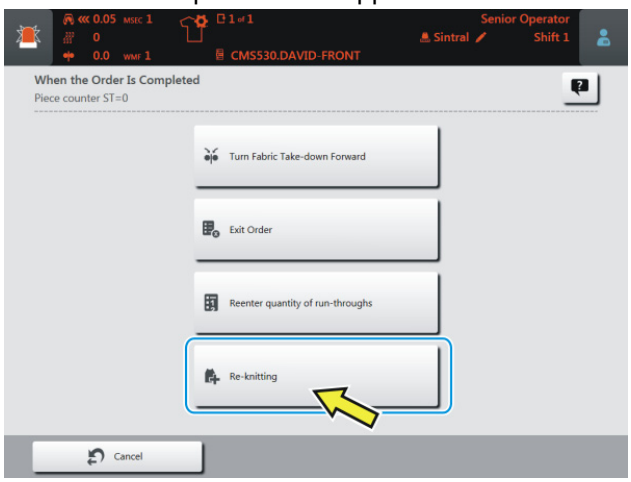
You have three possibilities to exit the order:

After production The machine has stopped as the piece counter is on zero (ST=0)	1	1. The message box opens as all fabric pieces were produced.  2. Tap on the icon "All Fabrics Finished". The "Order complete" menu appears.  3. Depending on whether the order consists of one or more knitting programs, tap the button "Exit order" or "Exit production".
During production	2	Depending on whether the order consists of one or more knitting programs, tap the button "Exit order" or "Exit production". (Set up Order -> Edit Order).
	3	In the "Intervene Manually" window tap the "Cancel Production" button.

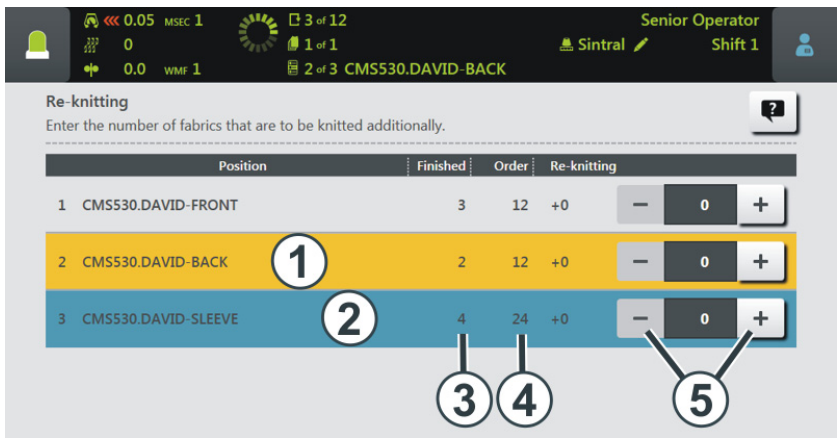
8 Re-knitting of fabrics

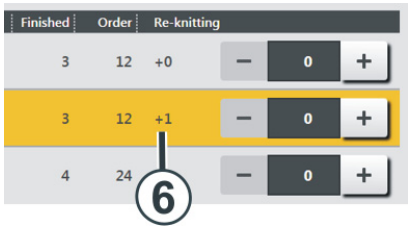
You have three possibilities to call up the "Re-knitting" window:

During production	1	In the "Monitor order" window tap the button (arrow) (Produce Order -> Monitor Order). 
	2	In the "Monitor Production" window tap the button (arrow). (Produce Order -> Monitor Order). 

After production The machine has stopped as the piece counter is on zero (ST=0)	3	1. The message box opens as all fabric pieces were produced.  2. Tap on the icon "All Fabrics Finished". The "Order complete" menu appears.  3. Tap the "Re-knitting" button.

The "Re-knitting" window is opened.



1	The currently knitting position (knitting program) is shown in yellow.
2	If you want to select another position, tap the desired position.
3	Quantity of the completed fabrics for this position

4	Total piece quantity for this position
5	Input, how many fabrics need to be re-knitted.
	◆ When the currently knitting fabric is completed, the fabric to be re-knitted is produced immediately. ⓘ If fabrics need to be re-knitted for several positions, first of all the fabrics for all the positions are re-knitted. Then the production is continued.
	◆ When displaying the quantity you will see that there are pieces being re-knitted. Example, when a piece is re-knitted (+1): ⓘ This display is only active as long as all the pieces are re-knitted.
6	Once a fabric was re-knitted, the number in the column (6) is increased.