



BERNINA 530 | 550 QE



made to create **BERNINA**



Dear Bernina Customer,

Congratulations! You've decided on BERNINA, a reliable choice that will delight you for years to come. For over 100 years, our family has placed the highest value on satisfied customers. For myself, it is a matter of personal pride to offer you Swiss precision at the height of perfection, future-oriented sewing technology, and a comprehensive customer service.

5 Series, BERNINA launches three ultramodern models. Apart from the highest demand on technology, we have also focused on the design; after all we sell our products to creative people like you, who expect a high standard of best quality and appreciate the design vocabulary.

Enjoy the creative sewing with BERNINA and find out about our varied range of accessory. Let yourself be inspired by new sewing projects and visit us at [www.bernina.com](http://www.bernina.com).

And don't forget to make use of service and maintenance offers from our highly trained BERNINA dealers.

I wish you lots of pleasure and many creative hours with your new BERNINA.

H.P. Ueltschi  
Owner  
BERNINA International AG  
CH-8266 Steckborn  
[www.bernina.com](http://www.bernina.com)

# SAFETY INSTRUCTIONS

## IMPORTANT INFORMATION

When using an electrical appliance, basic safety precautions should always be followed, including the following:

Read all instructions before using this sewing computer.

**When the sewing computer is not in use, it should be disconnected from the electricity supply by removing the plug from the outlet.**

### **DANGER!**

To reduce the risk of electrical shock:

1. The sewing computer should never be left unattended when plugged in.
2. Always unplug the sewing computer from the electrical outlet immediately after using and before cleaning.
3. LED Radiation – Do not view directly with optical instruments. Class 1M LED product.

### **WARNING!**

To reduce the risk of burns, fire, electric shock or injury to persons:

1. Use the sewing computer only for purposes as described in this manual. Use only attachments/accessory recommended by the manufacturer.
2. Do not allow the sewing computer to be used as a toy. Close attention is necessary when this sewing computer is used by or near children and infirm persons. This sewing computer is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the sewing computer by a person responsible for their safety. Children must be kept under supervision to ensure that they do not play with the sewing computer.
3. Never operate this sewing computer if:
  - it has a damaged cord or plug,
  - it is not working properly,
  - it has been dropped or damaged,
  - it has fallen into waterTake the sewing computer to the nearest authorized BERNINA dealer for examination or repair.
4. Never operate the sewing computer with any air vents blocked. Keep ventilation openings of the sewing computer free from lint, dust and/or fabric bits.
5. Keep fingers away from all moving parts. Special care is required around the sewing needle.
6. Never drop or insert any objects into any opening on the sewing computer.
7. Do not use the sewing computer outdoors.
8. Do not operate the sewing computer where aerosol products (spray) or oxygen is being administered.
9. Do not pull or push the fabric while stitching. This may deflect the needle, causing it to break.
10. Do not use bent needles.
11. Always use the original BERNINA stitch plate. The wrong stitch plate can cause needle breakage.
12. To disconnect, turn power switch to «0» (off), then remove the plug from the outlet. Do not unplug by pulling the cord, instead grasp the plug to pull it from the outlet.
13. Turn power switch to «0» (off) when making any adjustments in the needle area, such as changing the needle or the presser foot, etc.
14. Always unplug the sewing computer from the electrical outlet when carrying out cleaning or maintenance work or any other user servicing adjustments mentioned in this manual.
15. This sewing computer is provided with double insulation (except USA and Canada). Use only genuine replacement parts. Please note the advice on the servicing of double-insulated products.

## SERVICING DOUBLE-INSULATED PRODUCTS

In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated product nor should a means for grounded be added to the product. Servicing a double-insulated product requires extreme care and knowledge of the system and should only be done by qualified service personnel. Replacement parts for a double-insulated product must be identical to the original parts in the product.

The symbol  may also be marked on the product.

## DISCLAIMER

No liability will be assumed for any possible damage which arises from misuse of this sewing computer.

This sewing computer is intended for household use only.

This sewing computer meets the European Standard 2004/108/EC concerning the electromagnetic tolerance.

## SAVE THESE INSTRUCTIONS!



Please find the latest version of your instruction manual at [www.bernina.com](http://www.bernina.com)

## Environmental Protection



BERNINA is committed to the protection of the environment. We strive to minimize the environmental impact of our products by continuously improving product design and our technology of manufacturing.

When your sewing computer won't be used anymore, dispose this product in an environmentally responsible way according to the national directive. Do not throw away this product with your household waste. In case of doubt, please contact your BERNINA dealer.



If the sewing computer is stored in a cold room, it should be brought to a warm room about one hour before use.



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## 6 Key to Signs



**DANGER!**  
Very important!  
Risk of injury!

**DANGER!**  
Very important!  
Risk of damage!



Tips!

\* **Not** supplied as standard with the BERNINA 530

\*\* **Not** supplied as standard with the BERNINA 550 QE

## Glossary

<b>Balance</b>	Correcting abnormalities in stitch formation due to the fabric
<b>Fabric fold</b>	Folded edge of material
<b>BSR</b>	BERNINA Stitch Regulator. Quilting with consistent stitch length within certain speed
<b>clr</b>	Deleting settings or data
<b>Hook</b>	«Catches» the needle-thread loop, forming the stitch together with the lower thread
<b>LMS</b>	Length Measuring System for buttonhole
<b>Memory</b>	Long Term Memory
<b>Satin stitching</b>	Dense zig-zag
<b>Bartack</b>	Buttonhole-bead cross-connections

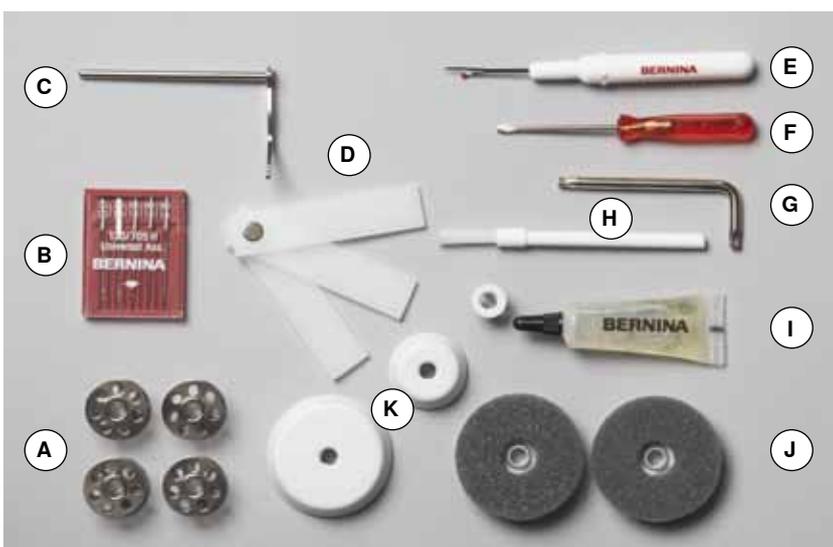
### All rights reserved

For technical and product improvement reasons, the sewing computer's features, parts and accessories are subject to unannounced changes and alterations at any time. The accessories included can differ from country to country.

## Standard Accessory

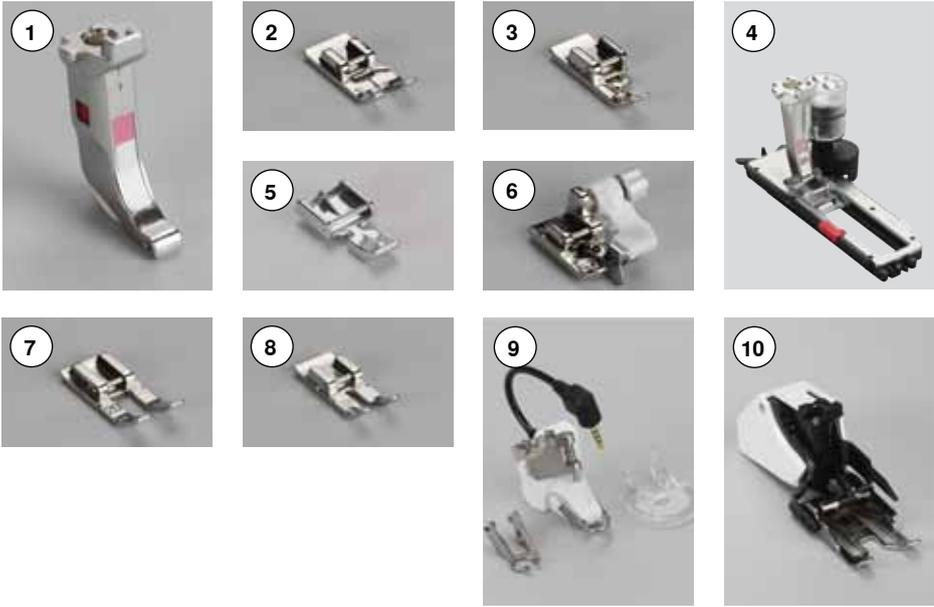


- Carrier bag
- Accessories box
- Foot control
- Power cable
- Slide-on table
- Seam Guide
- Free Hand System (FHS)



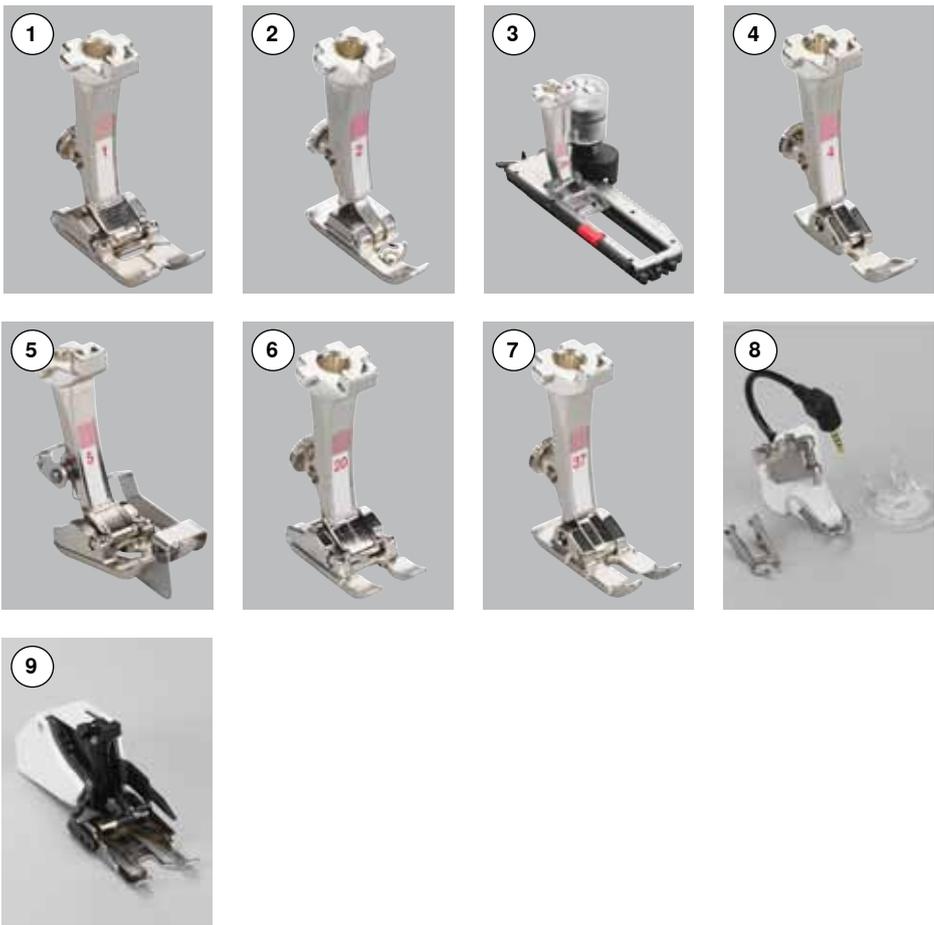
- A** 5 bobbins (one of them in the bobbin case)
- B** Selection of needles
- C** Seam guide, right
- D** Height compensation tool
- E** Seam ripper
- F** Screwdriver, red
- G** Angular Torx wrench
- H** Lint brush
- I** Lubricator
- J** 2 foam pads
- K** 3 spool discs

**Presser foot shank and soles (BERNINA 530/550 QE)**



- 1** Presser foot shank
- 2** No. 1 Reverse pattern sole
- 3** No. 2 Overlock sole \*\*
- 4** No. 3A Automatic buttonhole foot with slide
- 5** No. 4 Zipper sole
- 6** No. 5 Blindstitch sole
- 7** No. 20 Open embroidery sole \*
- 8** No. 37 Patchwork sole \*
- 9** No. 42 BSR foot \*
- 10** No. 50 Walking foot \*

**Presser feet (BERNINA 550 QE)**



- 1** No. 1 Reverse pattern foot
- 2** No. 2 Overlock foot \*\*
- 3** No. 3A Automatic buttonhole foot with slide
- 4** No. 4 Zipper foot
- 5** No. 5 Blindstitch foot
- 6** No. 20 Open embroidery foot
- 7** No. 37 Patchwork foot
- 8** No. 42 BSR foot
- 9** No. 50 Walking foot

Visit [www.bernina.com](http://www.bernina.com) for more accessory information.

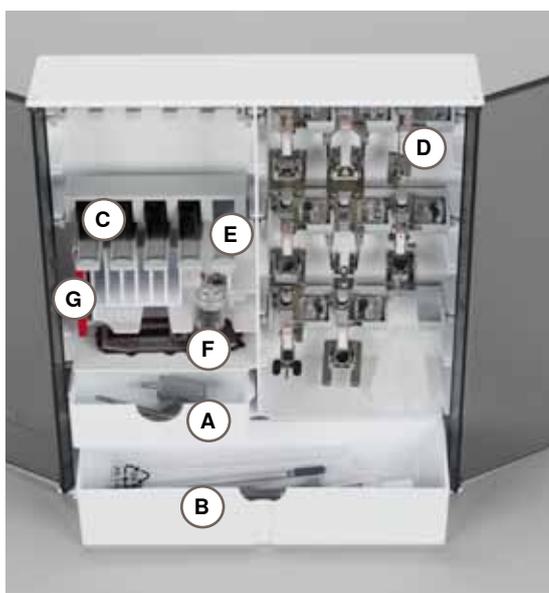
The presser foot system can vary depending on the market (presser feet or pressor foot shank and soles).

## Accessory box



### Storing accessory

- on the back of the box, pull both extensions out until they click into place



### Storage example

The box is equipped as standard with one small **A** and one large **B** drawer as well as a compartment for bobbin holders **C** and presser feet **D**.

- to remove a bobbin, press the compartment holder **E** lightly
- buttonhole foot with slide no. 3A can be stored in the left compartment **F**
- store the needle range supplied in the special compartment **G**

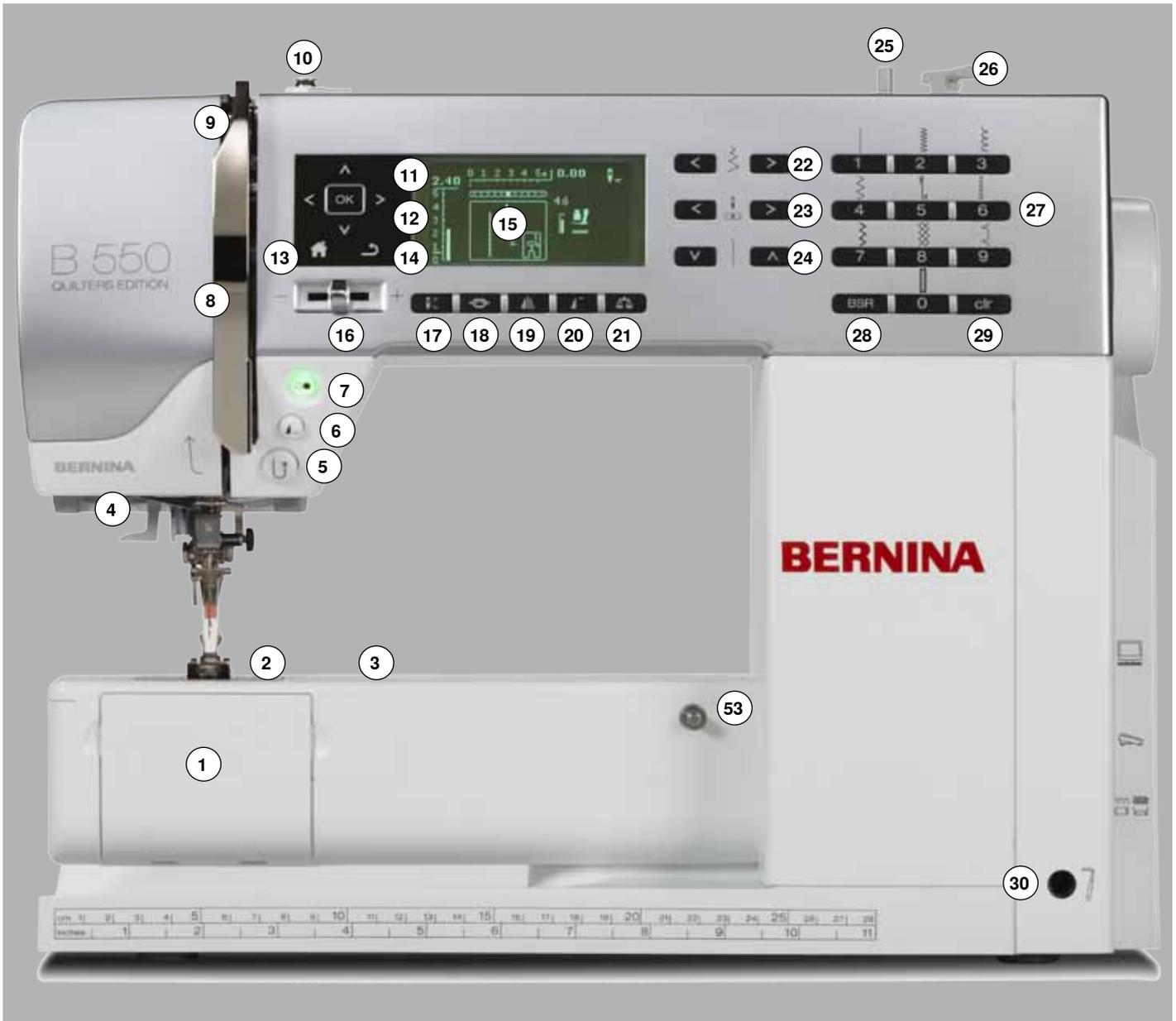


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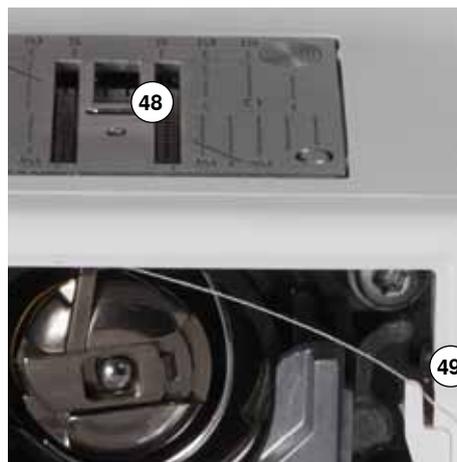
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## 10 Preparation - Overview sewing computer

### Front view



### Detail view



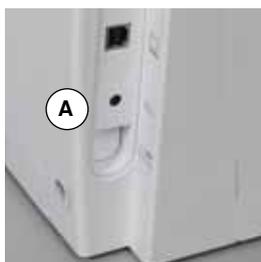


- |  |   |
|--|---|
| 1 Bobbin cover                             | 37 Handwheel                              |
| 2 Stitch plate                             | 38 PC-Connection for software update      |
| 3 Attachment base for special accessories  | 39 Foot control socket                    |
| 4 LED sewing light                         | 40 Feed dog drop                          |
| 5 «Quick reverse»-button                   | 41 Power switch                           |
| 6 «Pattern end/pattern repeat»-button      | On «I»/Off «0»                            |
| 7 «Start/Stop»-button                      | 42 Power plug socket                      |
| 8 Thread take-up cover                     | 43 Air vents                              |
| 9 Thread take-up lever                     | 44 Needle threader                        |
| 10 Bobbin winder pre-tension               | 45 Thread guide                           |
| 11 «Navigation»-buttons left/right/down/up | 46 Needle clamp                           |
| 12 «OK»-button                             | 47 Presser foot                           |
| 13 «Home»-button                           | 48 Feed dog                               |
| 14 «Back»-button                           | 49 Thread cutter in hook opening          |
| 15 Display                                 | 50 Presser foot pressure adjustment wheel |
| 16 Speed control                           | 51 Headframe fixing screw                 |
| 17 «Needle stop»-button down/up            | 52 Thread cutter on the headframe         |
| 18 «Securing»-button                       | 53 Slide-on table socket                  |
| 19 «Mirror image»-button                   | 54 Darning hoop connection                |
| 20 «Pattern begin»-button                  | 55 Presser foot lifter                    |
| 21 «Balance»-button                        | 56 BSR-connection                         |
| 22 «Stitch width»-buttons                  |   |
| 23 «Needle position»-buttons               |   |
| 24 «Stitch length»-buttons                 |   |
| 25 Bobbin winder device                    |   |
| 26 Thread cutter on bobbin winder          |   |
| 27 «Stitch selection»-buttons              |   |
| 28 «BSR»-button                            |   |
| 29 «clr»-button                            |   |
| 30 Free hand system connection             |   |
| 31 Thread tension adjustment wheel         |   |
| 32 Rear thread guide                       |   |
| 33 Carrying handle                         |   |
| 34 Vertical spool pin                      |   |
| 35 Horizontal spool pin                    |   |
| 36 Eyelet thread guide                     |   |



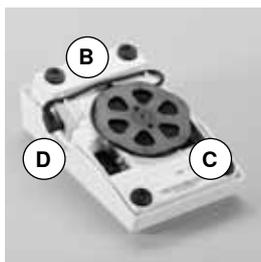
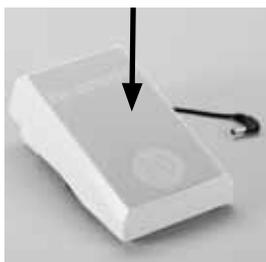
**USA/Canada only:** The sewing computer has a polarized plug (one blade wider than the other). To reduce the risk of electrical shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way!

## Foot control



### Before beginning to sew

- unwind the cable
- plug the cable in the outlet provided **A**
- unwind the cable to the desired length and slip into **B** or **C**



### Sewing speed control

Control the sewing speed by pressing the foot control more or less.

### Adjust needle down or up

- adjust the down/up position of the needle by sinking the heel back on the foot control

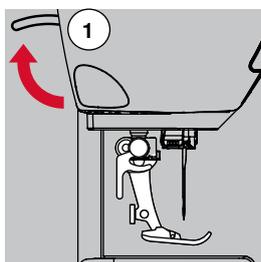
### After sewing

- wind the cable around the spool
- plug cable into **D**



**USA/Canada only: Use only foot controller type LV-1 with sewing computer B 530 and B 550 QE.**

## Slide-on table



- turn the handwheel (see page 11)
- ▶ needle is raised
- raise presser foot lifter **1** up
- ▶ presser foot is lifted



The slide-on table increases sewing surface.

### Attaching the slide-on table

- raise the needle and presser foot
- slide over free-arm to the right until it engages

### Removing the slide-on table

- raise the needle and presser foot
- press button **A** down
- pull slide-on table to the left



### Seam Guide

- press the release button and insert into the groove (underside of table) from left or right
- Can be moved over the entire table length.

## Free Hand System (FHS)



The FHS raises and lowers the presser foot.

### Attaching the lifter

- insert into the opening

### Raising and lowering the presser foot

- with your knee push lever to the right

You should be able to operate the FHS with your knee in your normal sitting position.

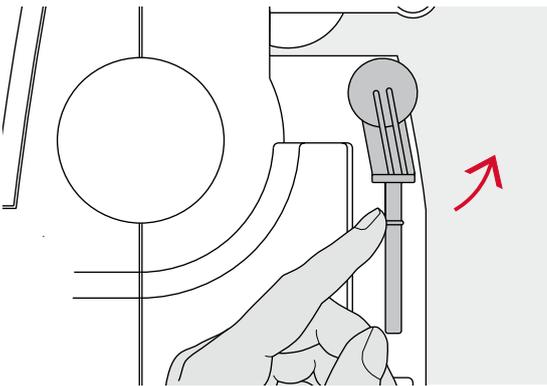
- ▶ the presser foot is raised; the feed dog is lowered simultaneously. The thread tension is released

The feed dog is raised as soon as the first stitch is sewn.



Your dealer can adjust the FHS if necessary.

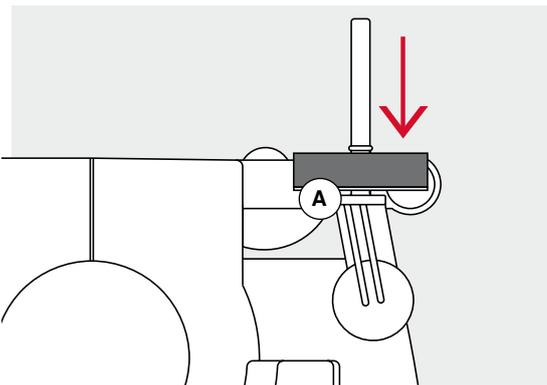
## Vertical spool pin



The vertical spool pin is on the side behind the handwheel.

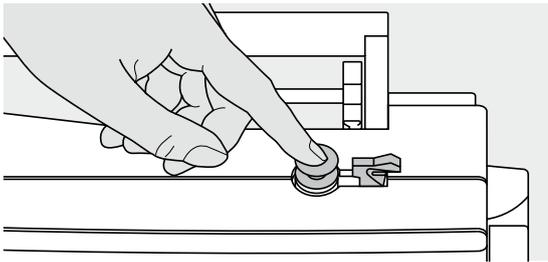
It is an essential aid for sewing with more than one thread, i.e. double needle work and can also be used for winding the bobbin while sewing.

- turn the spool pin as far it will go

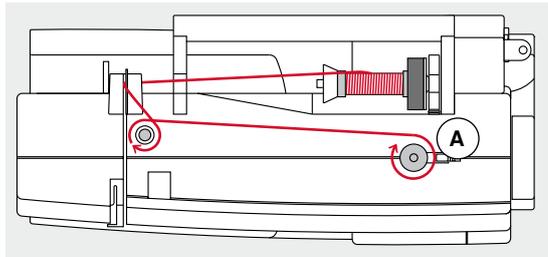


- when using all reels, add the foam pad **A** for stability

## Winding a bobbin



- turn power switch to «I»
- place empty bobbin on spindle

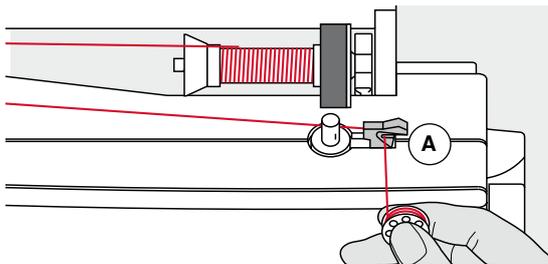


- place foam pad on the spool pin
- place thread on the spool pin
- attach appropriate spool disc
- following the direction of the arrow, take thread through the rear guide and round the pre-tension stud
- wind the thread two to three times around the empty bobbin
- cut off any excess thread on the thread cutter **A**

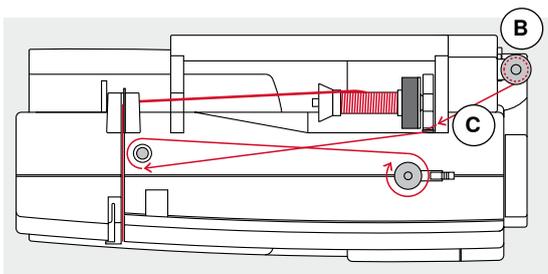


### Appropriate spool disc

Diameter of thread spool determines disc size, there must be no gap between the disc and the spool.

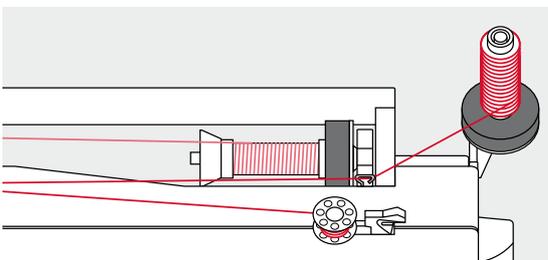


- push engaging lever **A** against bobbin
- ▶ the winder works automatically
- ▶ the motor will stop automatically when the bobbin is full
- remove bobbin and
- pull the thread over thread cutter **A** to cut it



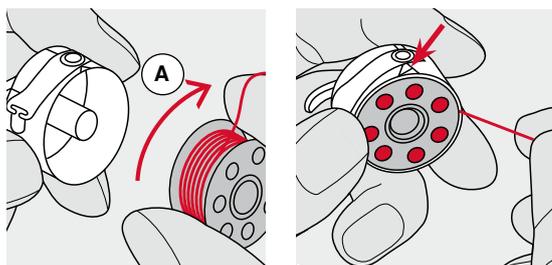
### Bobbin winding while sewing

- attach foam pad on the vertical spool pin **B**
- place thread on the vertical spool pin
- following the direction of the arrow, take thread through the thread guide **C** and
- guide around the pre-tension stud

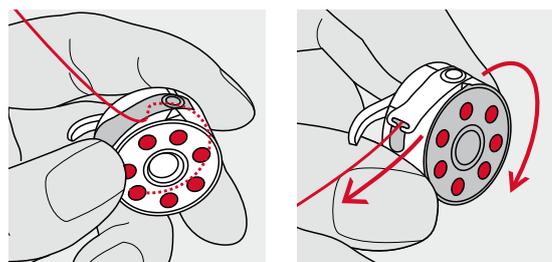


Then proceed as mentioned above.

## Inserting a bobbin/Threading lower thread

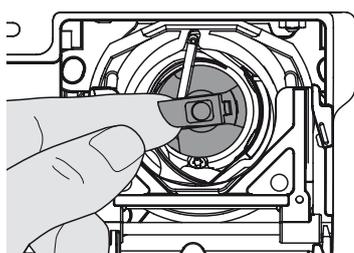


- insert the bobbin so that the thread runs clockwise **A**
- pull the thread from the right into the slot



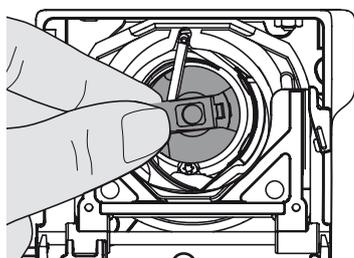
- pull the thread to the left under the spring
- until it lies in the T-shaped slit at the end of the spring
- pull the thread
  - ▶ the bobbin must turn clockwise

## Exchanging bobbin case



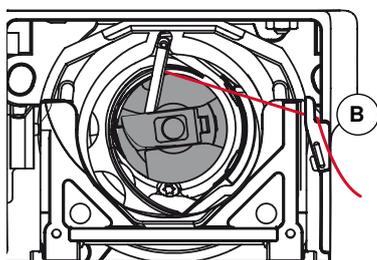
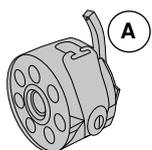
### Remove the bobbin case

- raise needle
- turn power switch to «0» (off)
- open bobbin cover
- grasp the latch of the bobbin case
- remove bobbin case



### Insert the bobbin case

- hold the bobbin case latch
- Finger of the bobbin case **A** points upwards.
- insert the case so that it clicks into place



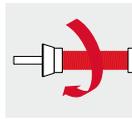
### Bobbin thread cutter

- pull the thread over cutter **B** to cut it
- close the bobbin cover

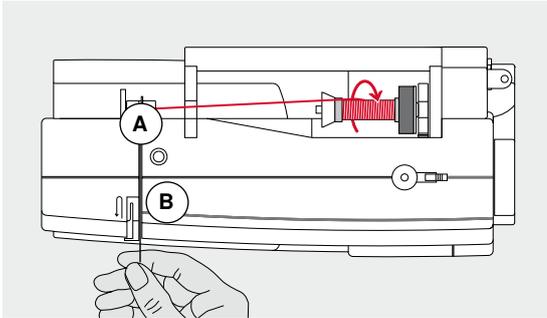


The bobbin thread does not have to be brought up as the loose end is just the right length to start sewing.

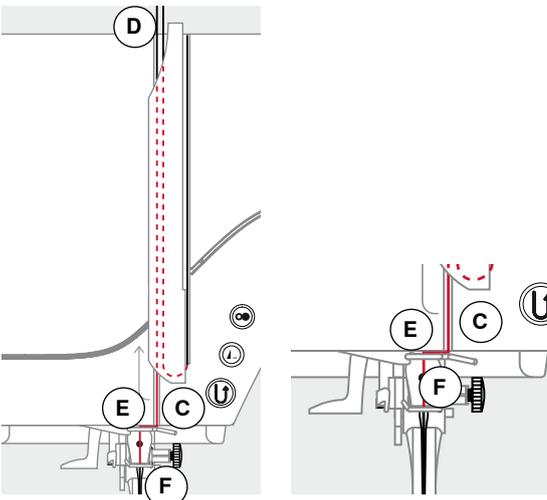
## Threading the upper thread



- raise the needle and presser foot
- turn power switch to «0» (off)
- place foam pad on pin base
- place spool on pin so that the thread unwinds clockwise
- attach appropriate spool disc



- take thread through rear guide **A**
- then into slit of upper thread tension **B**



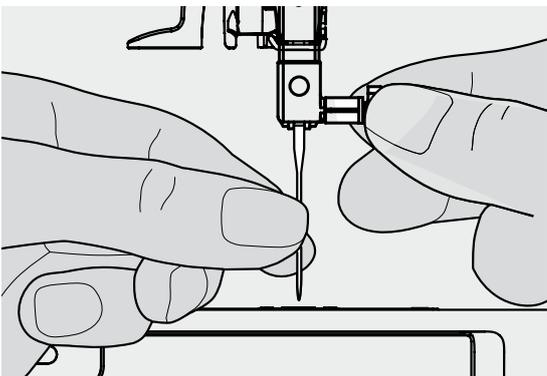
- pull thread down to the right of the take-up cover and around **C**
- take thread up to the left of the cover and around **D**, placing it in the take-up lever
- take thread down and through guides **E** and **F**
- thread the needle (see page 18)



### Appropriate spool disc

Diameter of thread spool determines disc size, there must be no gap between the disc and the spool.

## Changing the needle



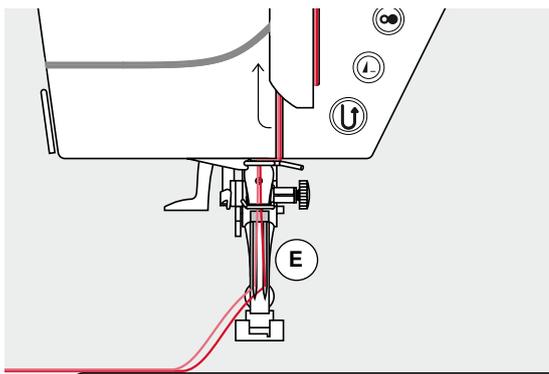
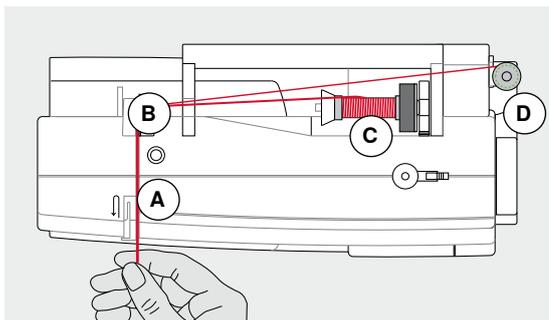
### Removing the needle

- raise needle
- lower or remove presser foot (see page 12)
- turn power switch to «0» (off)
- loosen the needle clamp screw
- pull the needle down to remove

### Inserting the needle

- flat side of needle to the back
- insert the needle as far as it will go
- tighten the needle clamp screw

## Threading the double needle



### Threading the first thread

- turn power switch to «0» (off)
- insert double needle
- raise the needle and presser foot
- place foam pad on pin base
- place thread spool **C** on horizontal spool pin
- attach appropriate spool disc
- take thread through rear guide **B**
- guide the thread to the front in the slit and past the tension disc **A** on the **right** side
- guide the thread to the needle as usual and
- thread the **right** needle manually

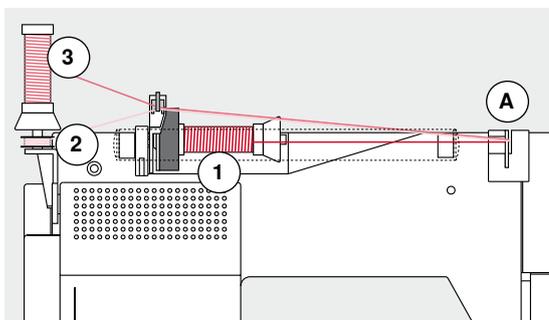
### Threading the second thread

- place foam pad on vertical spool pin
  - place the second thread spool **D** on the vertical spool pin
  - take thread through rear guide **B**
  - guide the thread to the front in the slit and past the tension disc **A** on the **left** side
  - guide the thread to the needle as usual and
  - thread the **left** needle manually
- Threads **E** must not be twisted together.



When using the vertical spool pin, always add a foam pad.

## Threading the triple needle



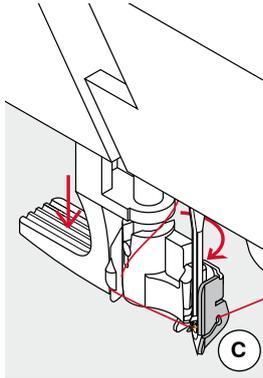
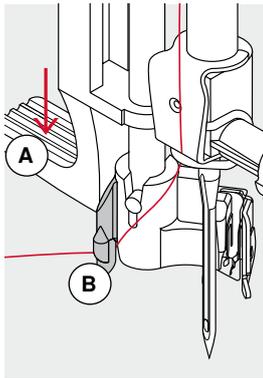
Two thread spools and one full bobbin are needed.

- insert triple needle
- place one thread spool **1** on horizontal spool pin
- place second thread spool **3** and the bobbin **2**, separated by a spool disc, on vertical spool pin (both spools must to turn in the same direction)
- thread as usual and
- guide **two** threads on the **left** side of the tension disc **A** and **one** thread past the **right** side
- guide threads to the needle as usual
- and thread every needle manually



The thread deduction of the superimposed thread spools can be improved by the additional eyelet for metallic and silk threads (optional accessory).

## Thread needle

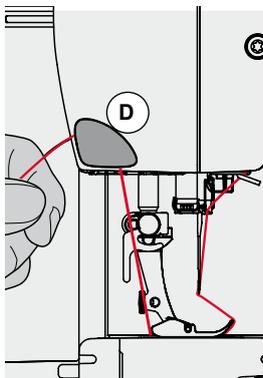
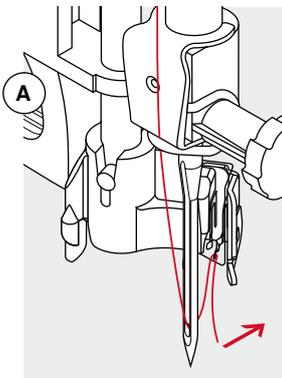


Position the needle upper by pressing the foot control once (1 stitch).

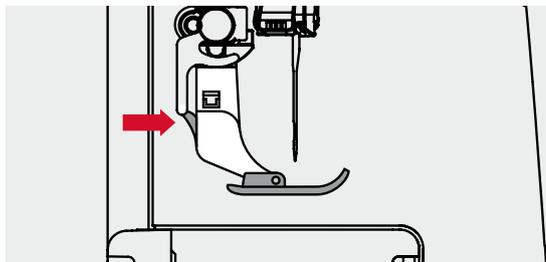
- raise needle
- lower presser foot
- turn power switch to «0» (off)
- hold thread to the left and back
- press lever **A** down and hold it
- guide thread around the hook **B** to the right in front of the needle
- put the thread from the front into the guide **C** until it catches in the wire hook

- release lever **A**
- ▶ needle is threaded
- pull the thread to the back and

- put the thread under the foot and pull it from front to back over the thread cutter on left side of the head frame **D**, cut
- Threads release automatically as soon as the first stitch is sewn.

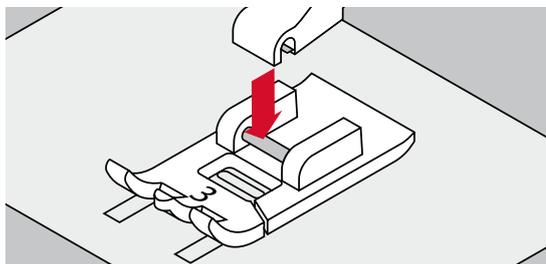


## Changing the presser foot sole



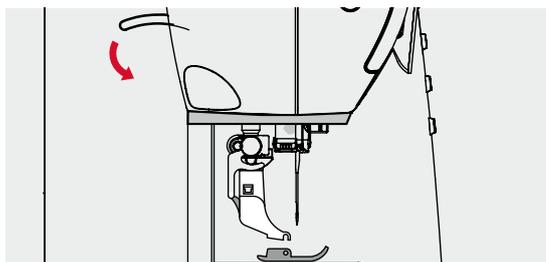
### Remove presser foot sole

- raise the needle and presser foot
- turn power switch to «0» (off)
- press the button on the shaft
- ▶ the sole is released



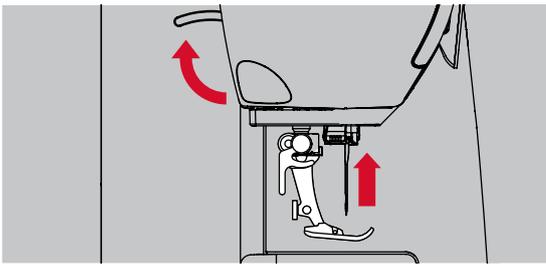
### Attaching the presser foot sole

- place the presser foot sole under the shaft
- the peg sits under the opening of the shaft



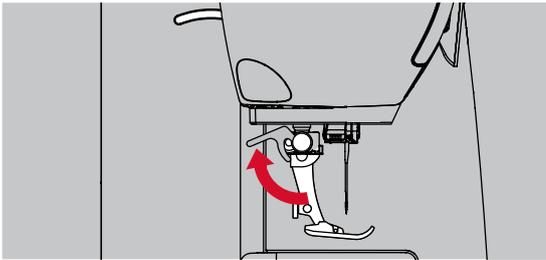
- lower the presser foot lifter
- ▶ the foot sole will click into position

## Changing the presser foot

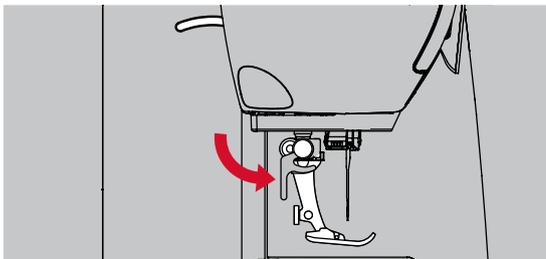


### Remove presser foot

- raise the needle and presser foot
- turn power switch to «0» (off)



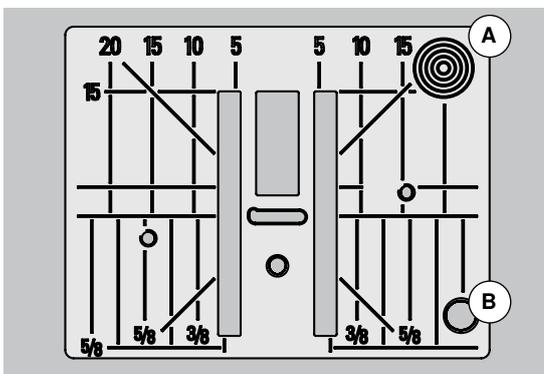
- raise the clamping lever
- remove the presser foot



### Attaching the presser foot

- guide the foot upwards over the cone
- press the clamping lever down

## Stitch plate



### Stitch plate markings

- the stitch plate is marked with vertical, horizontal and diagonal lines in **mm** and **inches**
- the lines help to guide the fabric for sewing seams and precise topstitching, etc.
- the horizontal markings are helpful for sewing corners and buttonholes, etc.
- the diagonal markings are useful for quilting
- needle insertion point is position «0» (center needle position)
- the vertical measurements correspond to the distance between the needle and the line
- the measurements are marked to the right and left, measuring from the center needle position

### Remove the stitch plate

- press «Feed dog»-button (see page 11)
- ▶ the feed dog is lowered
- turn power switch to «0» (off)
- remove presser foot and needle
- press the stitch plate down at the right back corner **A** until it flips up
- remove the stitch plate

### Replace the stitch plate

- place the stitch plate over the opening **B**
- press down until it clicks into place
- press «Feed dog»-button
- ▶ the feed dog is raised as soon as the first stitch is sewn

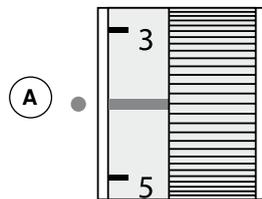
## Thread tension

The upper thread tension is set optimally at the BERNINA factory and the sewing computer has been tested. Metrosene-/Seralon thread size 100/2 (Company Mettler, Switzerland) are used for upper and lower thread.

In case of using other types of sewing or embroidery threads, the optimal tension may vary. Therefore it may be necessary to adjust the tension to suit the fabric and the desired stitch pattern.

For example:

	Tension	Needle
Metallic thread	approx. 3	90
Monofilament thread	approx. 2-4	80



### The basic setting

- is indicated when the red line on the tension adjustment wheel is in line with the marking **A**
- the thread tension needn't be altered when sewing standard fabric
- for special fabric, the tension can be adjusted by turning the tension adjustment wheel to suit the material



### Perfect Stitch Formation

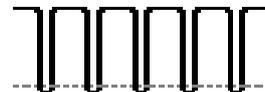
The interlooping of the threads is in the material.



### Upper thread tension too tight

The lower thread is pulled more up, i.e. to the right side of the material.

- to reduce the upper thread tension = turn tension adjustment wheel to 3-1

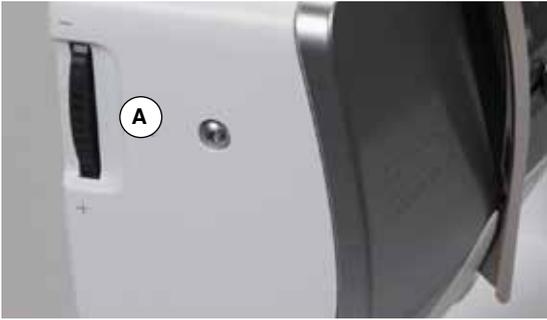


### Upper thread tension too loose

The upper thread is pulled more down, i.e. to the wrong side of the material.

- to increase the upper thread tension = turn tension adjustment wheel to 5-10

## Adjusting presser foot pressure

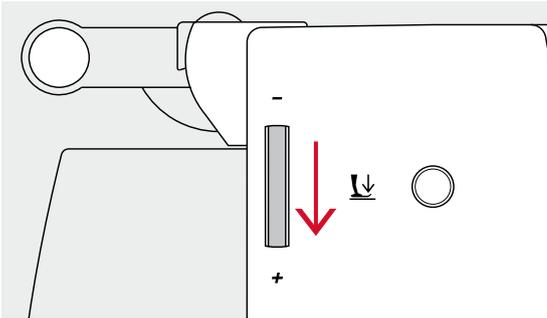


The presser foot pressure is adjusted by the presser foot pressure adjustment wheel **A** on the left side of the headframe.

### Presser foot pressure

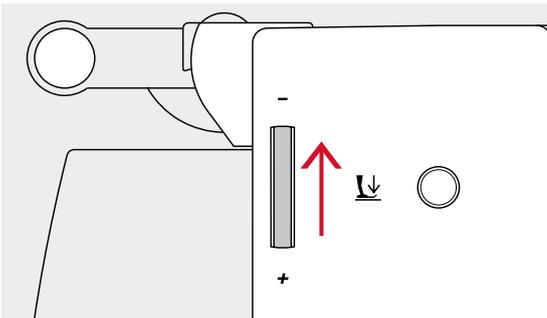
Basic setting = 46

- ▶ the basic setting is always visible
- for basic fabric



### Increase presser foot pressure

- for sturdy material e.g. denim
- improves the fabric feed

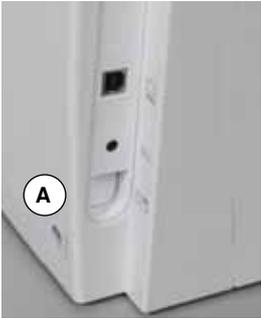


### Loosen presser foot pressure

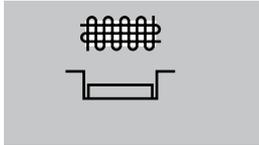
- for jersey fabrics and loose knits
- to prevent fabric from stretching
- adjust pressure so that the fabric still feeds correctly

## Feed dog

### Feed dog lowered/ready to sew



«Feed dog»-button **A** flush with housing.  
▶ feed dog is ready to sew



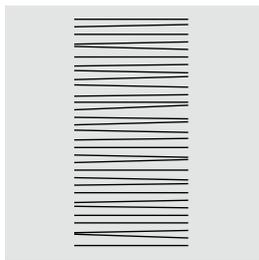
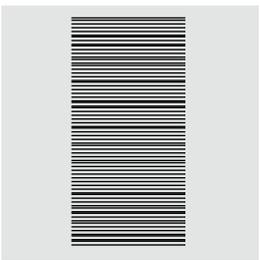
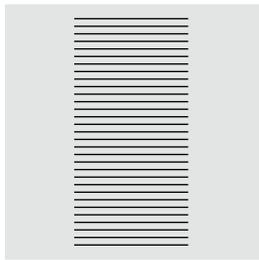
«Feed dog»-button **A** pressed.  
▶ feed dog is lowered  
For free-motion sewing (darning, embroidery, quilting, etc.).

### Feed dog and fabric feed

With each stitch the feed dog moves forward by one step. The length of this step is determined by the stitch length selected.

With an extremely short stitch length, the steps are also very short. The fabric moves away from the foot quite slowly, even at full sewing speed. e.g. button-holes, satin stitch and decorative stitches are all sewn with a very short stitch length.

Let the fabric feed evenly.



### **ATTENTION!**

**Pulling, pushing or holding back the fabric can result in damages of the needle and stitch plate.**

Pulling, pushing or holding back the fabric will result in uneven stitches.

## Important facts about thread and needle

### Thread

The thread is chosen according to use. For a perfect sewing result, thread and fabric quality play an important role. It is recommended to use quality brands.

#### Cotton thread

- cotton thread has the advantage of being a natural fiber and therefore is especially suitable for sewing cotton fabrics
- if cotton thread is mercerized, it has a slight sheen that is not lost with washing

#### Polyester thread

- polyester thread has a high tensile strength and is particularly colorfast
- polyester thread is more flexible and is recommended where a strong and elastic seam is required

#### Rayon threads

- rayon threads are made of natural fibers and have a brilliant sheen
- rayon threads are suitable for decorative stitches and achieve a more beautiful effect

### Needle, thread and material

#### **ATTENTION!**

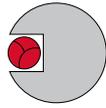
**Check the needle condition.**

**As a guideline: Replace the needle before starting a new sewing project. A defective needle does not only damage the sewing project but also the sewing computer.**

Care must be taken when choosing needle and thread.

The correct needle size depends on the selected thread and fabric. The fabric weight and type determine the thread weight, needle size and point form.

**Needles, threads**



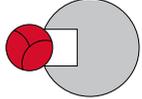
**Correct needle/thread combination**

When sewing, the thread should travel smoothly down the long groove on the front of the needle.



**Too thin thread or too thick needle**

The thread has too much clearance in the long groove. Skipped stitches and damage to the thread can occur.



**Too thick thread or too fine needle**

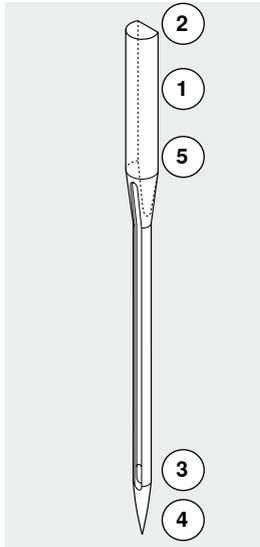
The thread rubs on the edges of the long groove and can get jammed. This can cause thread breakage.



**Guidelines**

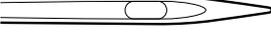
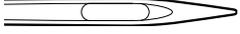
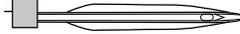
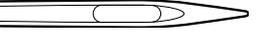
Material and thread	Needle size
Light materials: Fine thread (darning thread, embroidery thread)	70-75
Medium materials: Sewing thread	80-90
Heavy materials: Sewing thread (quilting thread, topstitching)	100, 110, 120

**130/705 H-S/70**



- 1 **130** Shank length
- 2 **705** Flat shank
- 3 **H** Needle scarf
- 4 **S** Needle point (here e.g. medium ball point)
- 5 **70** Needle size (shank diameter)

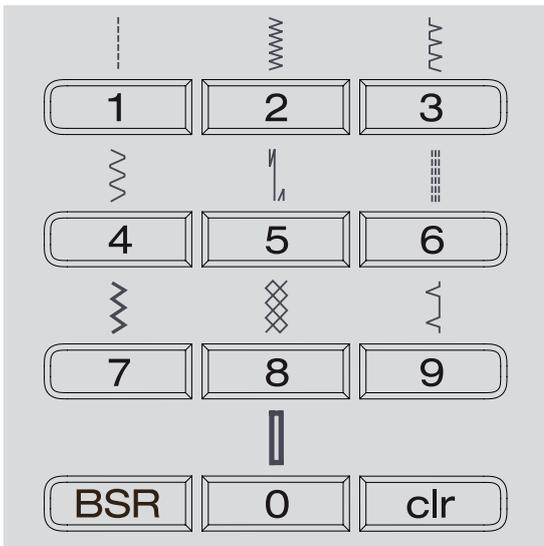
## Overview needles

<p><b>Universal</b> 130/705 H/60-100</p>  <p>Normal point, slightly rounded</p> <p>For nearly all natural and synthetic fabrics (woven and knitted)</p>	<p><b>Metafil</b> 130/705 H-MET/75-80 or H-SUK/90-100</p>  <p>Large eye</p> <p>Sewing with metallic threads</p>
<p><b>Jersey/Stretch</b> 130/705 H-S, H-SES, H-SUK/70-90</p>  <p>Ball point</p> <p>Jersey, knit and stretch material</p>	<p><b>Cordonnet (Topstitching)</b> 130/705 H-N/80-100</p>  <p>Small ball point, long eye</p> <p>Topstitching with thick thread</p>
<p><b>Leather</b> 130/705 H-LL, H-LR/90-100</p>  <p>With cutting point</p> <p>All types of leather, synthetic leather, plastic, sheeting</p>	<p><b>Wing needle (hemstitch needle)</b> 130/705 HO/100-120</p>  <p>Wide needle (wing)</p> <p>Hemstitching</p>
<p><b>Jeans</b> 130/705 H-J/80-110</p>  <p>Very fine sharp point</p> <p>Heavy weight fabrics such as jeans, canvas, overalls</p>	<p><b>Double wing needle</b> 130/705 H-ZWI-HO/100</p>  <p>Special effects with hemstitch embroidery</p>
<p><b>Microtex</b> 130/705 H-M/60-90</p>  <p>Especially fine sharp point</p> <p>Micro fiber fabrics and silk</p>	<p><b>Double needle</b> 130/705 H-ZWI/70-100</p>  <p>Needle distance: 1.0/1.6/2.0/2.5/3.0/4.0</p> <p>Visible hems in stretch fabrics, pintucks, decorative sewing</p>
<p><b>Quilting</b> 130/705 H-Q/75-90</p>  <p>Fine sharp point</p> <p>Straight and topstitching</p>	<p><b>Triple needle</b> 130/705 H-DRI/80</p>  <p>Needle distance: 3.0</p> <p>Visible hems in stretch fabrics, pintucks, decorative sewing</p>
<p><b>Embroidery</b> H-SUK/70-90</p>  <p>Large eye, slight ball point</p> <p>Embroidery on all natural and synthetic fabrics</p>	

## Overview «Function»-buttons sewing computer



### Stitch selection



#### «Direct-selection»-buttons

- select the desired stitch pattern via the «Direct-selection»-buttons
  - ▶ stitch pattern, stitch number, stitch length and width are all visible on the display
- The «Direct selection»-button 0 selects stitch number 51 (standard buttonhole).

## Stitch categories

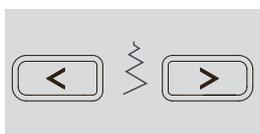


- press «Home»-button



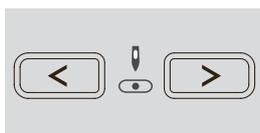
- choose the desired stitch category in the main menu via the «Navigation»-buttons (see page 29)
- confirm by pressing the «OK»-button

## Adjusting individually



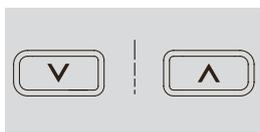
### Altering stitch width

- press the left button
- ▶ narrows the stitch width
- press the right button
- ▶ widens the stitch width
- keep button pressed
- ▶ quick alteration



### Altering needle position

- press the left button
- ▶ needle moves to the left
- press the right button
- ▶ needle moves to the right
- keep button pressed
- ▶ quick alteration



### Altering stitch length

- press the left button
- ▶ shortens the stitch length
- press the right button
- ▶ elongates the stitch length
- keep button pressed
- ▶ quick alteration

## «Function»-buttons sewing computer



### Overview «Function»-buttons



#### «Quick reverse»-button

##### temporary:

- press the button
- the sewing computer sews stitch pattern in reverse until button is released

##### Application:

- programs buttonhole length
- programs darning length
- for switching when in the straight stitch securing program no. 5
- manual securing (seam begin and end)
- used for securing in quilters securing program no. 1324

##### continuous reverse:

- press the button at hold until you hear a beep and
  - ▶ the symbol appears on the display
  - ▶ the sewing computer sews the chosen stitch in reverse
- finish reverse sewing: press button at hold until you hear a beep
  - ▶ the symbol disappears from display



#### «Pattern end/pattern repeat»-button

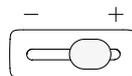
- press button while sewing
  - ▶ the sewing computer stops at the end of the active single pattern or the active pattern in a pattern combination (in Memory)
- press the button 1-9x before sewing
  - ▶ the pattern end symbol appears on the display along with the set number of repeats selected

A single pattern or a pattern combination sews out the number of repeats set.



#### «Start/Stop»-button

- starts and stops the sewing computer when operating it **with** and **without** foot control
- starts and stops the BSR-Function if the BSR foot is attached and activated



#### Slide speed control

- with the slide of the Slide Speed Control the sewing speed can be regulated infinitely variable
- while winding the bobbin thread, the speed of the bobbin winder can be regulated if the sewing computer is in an idle state



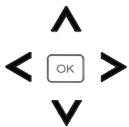
#### «Home»-button

- press the button
- ▶ opens the Main Display



#### «Back»-button

- goes one step back
- Exception:
- decorative stitches
  - alphabets



**«Navigation»-buttons left/right/down/up**

Chooses in the different menus.

- keep button pressed = scrolls through the menu
- scroll through the stitch patterns by pressing buttons left/right/down/up



**«OK»-button**

Confirm selection.



**«Needle stop»-button**

Basic setting is needle stop up (arrow points up).

- press the button
  - ▶ lowers or raises the needle
- keep the button pressed:
  - ▶ lowers the needle
  - ▶ the arrow on the display points down
  - ▶ the sewing computer stops with the needle down
- keep the button pressed again:
  - ▶ raises the needle
  - ▶ the arrow on the display points up
  - ▶ the sewing computer stops with the needle up



**«Securing function»-button (3 securing stitches)**

- press the button before sewing
  - ▶ single stitches or a stitch combination are secured at the beginning
- press button while sewing a single stitch
  - ▶ the single stitch is secured at the end
  - ▶ the sewing computer stops
- press button while sewing a stitch combination
  - ▶ the stitch combination is secured at the end
  - ▶ the sewing computer stops



**Needle stop position up and «Quick Reverse»-button**

If the «Quick Reverse»-button is pressed while sewing or after stopping (e.g. zig-zag) with programmed needle stop up, the sewing computer sews one stitch forward before it switches to sewing in reverse.



**Needle stop position down and «Quick Reverse»-button**

If the «Quick Reverse»-button is pressed after stopping (e.g. zig-zag) with programmed needle stop down, the sewing computer switches to sewing in reverse immediately.



**«Mirror image»-button (left/right)**

- press the button
- ▶ the active stitch is sewn mirrored



**«Pattern begin»-button**

- press the button
- ▶ the active stitch pattern or program is set to pattern begin



**«Balance»-button**

Balances forward and reverse stitches.



**«BSR»-button**

By pressing the button the BSR mode 1 or 2 is activate when the BSR foot is attached.



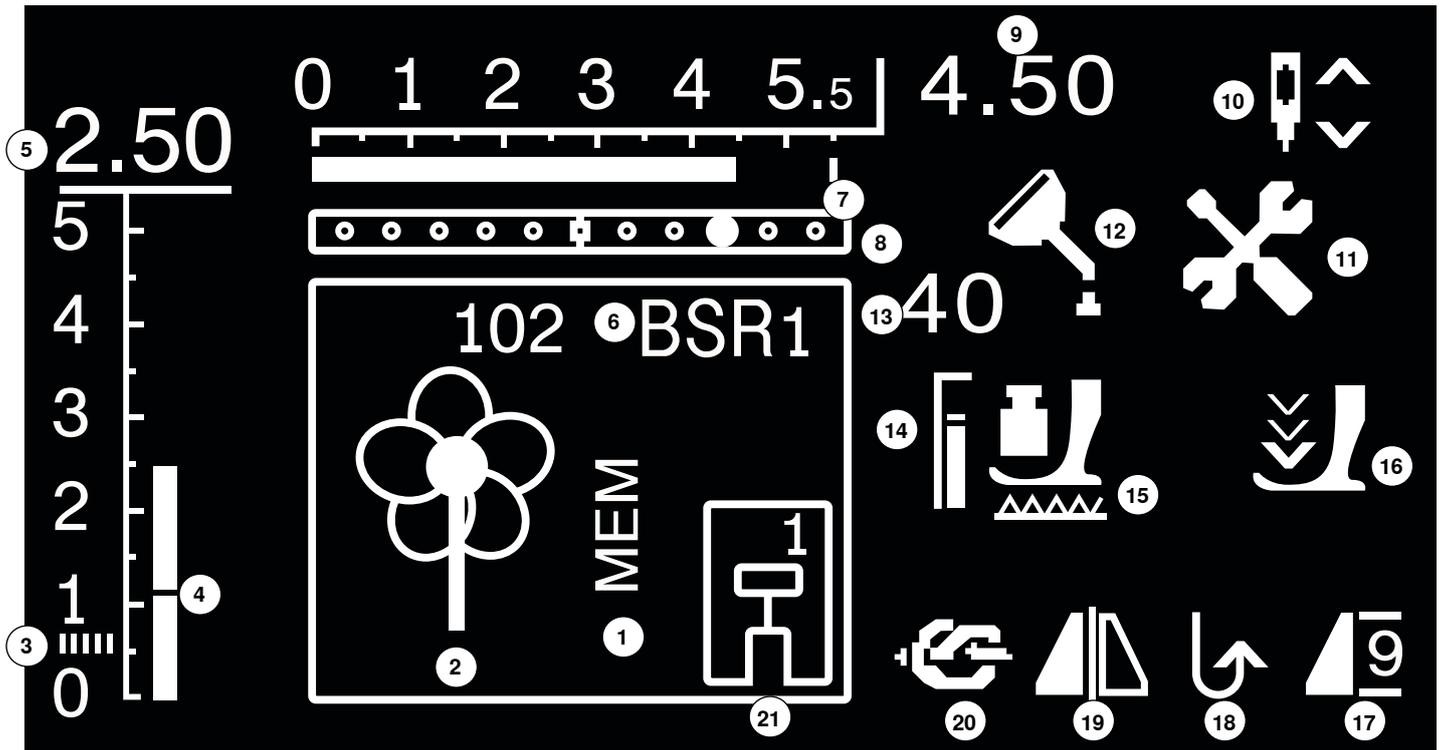
**«clr»-button**

- press the button short
  - ▶ the temporary sewing settings of the active stitch pattern are reset to basic setting
  - ▶ other selected functions are cleared
- keep the button pressed until you hear a beep
  - ▶ the saved sewing settings of the active stitch pattern are reset to basic setting
  - ▶ other selected functions are cleared

Exception:

- needle stop up/down

## Overview Display

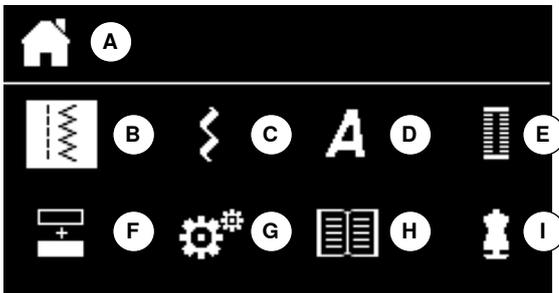


- 1 «MEM»-Display for saved single stitches
- 2 Single stitches: graphical and numerical
- 3 Satin stitch: dense, short zig-zag stitch
- 4 Stitch length: Basic setting
- 5 Stitch length: actual value
- 6 BSR: indicates BSR mode 1 or 2
- 7 Stitch width: Basic setting
- 8 Needle position: 11 possibilities
- 9 Stitch width: actual value
- 10 Needle stop up/down: stops up as standard/in BSR mode 1 down, in BSR-Modus 2 up
- 11 Service icon: visible if the sewing computer needs to be taken to a BERNINA dealer for servicing
- 12 Cleaning icon: visible if the sewing computer needs cleaning or lubrication
- 13 Presser foot pressure: indicates the presser foot pressure while adjusting
- 14 Presser foot pressure: basic setting
- 15 Feed dog icon: indicates whether the feed dog is lowered or raised
- 16 Arrow and presser foot icon: appears if the presser foot is lifted and the sewing computer is started
- 17 Pattern begin/end/repetition
- 18 Continuous reverse sewing
- 19 Mirror: left/right
- 20 Securing function
- 21 Presser foot indicator: shows recommended presser foot for the selected stitch pattern

## Main menu



- press «Home»-button



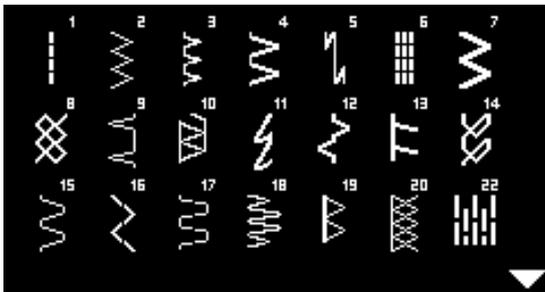
- A Selected menu is displayed
- B Practical stitches
- C Decorative stitches
- D Alphabets
- E Buttonholes
- F Combi mode
- G Setup Program
- H Tutorial
- I Creative consultant

- select the desired menu via the «Navigation»-buttons
- press «OK»-button to confirm

## Submenu e.g. practical stitches



- press «Home»-button



- select practical stitches via «Navigation»-buttons
- press «OK»-button to confirm
- select the desired stitch pattern via the «Navigation»-buttons
- press «OK»-button to confirm

## System settings

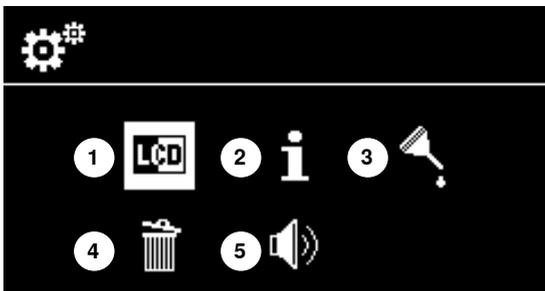
### Setup Program



- press «Home»-button



- select «Setup Program»-icon via «Navigation»-buttons
- press «OK»-button to confirm



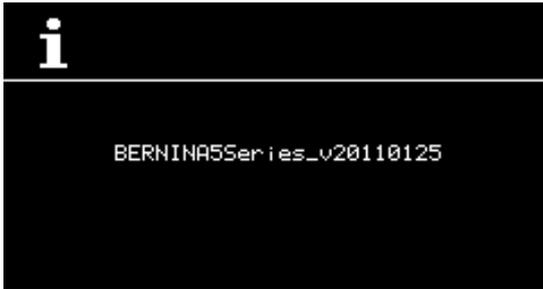
#### Overview «Setup»-Display

- 1 Display settings
- 2 Information
- 3 Lubricate sewing computer
- 4 Basic Setting
- 5 Beeper for BSR



#### Brightness and contrast

- select the desired icon via the «Navigation»-buttons down/up
- press «OK»-button
- alter the brightness or the contrast via the «Navigation»-buttons left/right



### Software version

The current software version of the sewing computer is visible.



### Lubricating the sewing computer

- ▶ the icon is displayed when the sewing computer has reached 360,000 stitches
- select the «?»-icon via the «Navigation»-buttons
- press «OK»-button
- ▶ an animation shows the lubrication process
- after lubricating select the «Lubrication»-icon via the «Navigation»-buttons
- press «OK»-button
- the counter under the «Lubrication»-icon is reset to 0



### Basic Setting

- press «OK»-button
- ▶ all the sewing settings are reset to the basic settings



### Beeper for BSR

- select left icon
- press «OK»-button to confirm
- ▶ Beeper is activated
- select right icon
- press «OK»-button to confirm
- ▶ Beeper is off

## Tutorial



- press «Home»-button
- select the «Tutorial»-icon via the «Navigation»-buttons



- 1 Lubricating sewing computer
- press «OK»-button to confirm



An animation shows how the sewing computer has to be cleaned and lubricated.

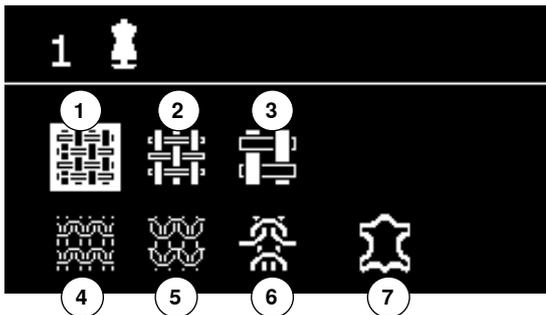
- press the «Back»-button twice
- ▶ the main display appears

## Creative consultant

The creative consultant provides information and help with various sewing techniques. After selecting the fabric and the desired sewing technique suggestions for stitch pattern, presser foot, presser foot pressure and thread tension are displayed.



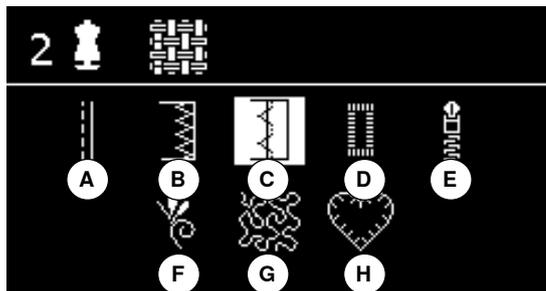
- press «Home»-button
- select «Creative consultant» via the «Navigation»-buttons
- press «OK»-button to confirm
  
- select type of fabric via the «Navigation»-buttons
- press «OK»-button to confirm



### Types of fabric

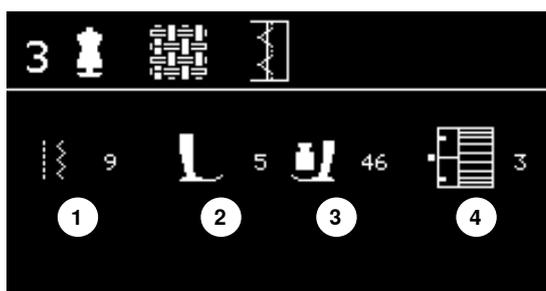
- 1 Light weight woven fabrics
- 2 Medium weight woven fabrics
- 3 Heavy weight woven fabrics
- 4 Light weight knit
- 5 Medium weight knit
- 6 Heavy weight knit
- 7 Leather/Vinyl

- select a sewing technique via the «Navigation»-buttons
- press «OK»-button to confirm
- ▶ recommendations are displayed



### Sewing techniques

- A Seam
- B Overcasting
- C Blind hem
- D Buttonhole
- E Zippers
- F Decorative stitching
- G Free motion stitching
- H Appliqué



### Recommendations

- 1 Number of stitch pattern
- 2 Presser foot
- 3 Presser foot pressure
- 4 Thread tension

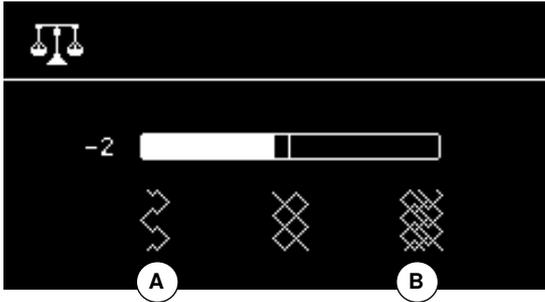
## Balance

### Practical-/decorative stitches

The sewing computer is tested and optimally set before it leaves the BERNINA factory. Different fabrics, threads and stabilizers can affect programmed stitches so that they are not sewn out properly. These effects can be corrected with the electronic Balance so that the stitch formation can be adjusted where necessary to suit the material.



- press «Balance»-button



### Correcting practical-/decorative stitches

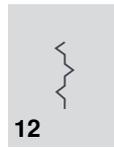
- press left «Navigation»-button
  - ▶ the stitch pattern is stretched **A** (max. 20 steps)
- press right «Navigation»-button
  - ▶ the stitch pattern is compressed **B** (max. 20 steps)
- press «Balance»- or «Back»-button
  - ▶ balance display is closed
  - ▶ alterations are saved
- press the «clr»-button
  - ▶ resets the balance to basic setting

## Overview Practical stitches



### Straight stitch

For non-elastic fabric; all straight stitch work, such as seams, topstitching, sewing zippers



### Gathering stitch

Most types of fabric. Gathering with shirring elastic. Butted seams = butting two pressed edges and sewing together, decorative stitches



### Zig-zag

Zig-zag work such as overcasting edges, attaching elastic and lace



### Stretch-Overlock

Medium weight knits, toweling and firm wovens. Overlock seams, flat joining seams



### Vari-overlock

For fine jerseys, stretch overlock seams, hems and stretch seams



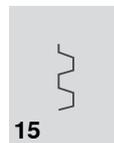
### Jersey stitch

For jersey materials; visible seams in lingerie, sweaters, mending jersey



### Running stitch

Most types of fabric. Mending, patching, reinforcing seams, etc.



### Universal stitch

Firm fabrics such as felt and leather. Flat joining seams, visible seams, attaching elastic, decorative seams



### Securing program

For all materials, secures the beginning and end of seams by straight stitching



### Sewn out zig-zag

Edge finishing and reinforcing, attaching elastic, decorative seam



### Triple Straight Stitch

For durable seams in firm materials; visible hems and seams



### Lycra stitch

All two-way stretch fabrics, flat joining seams and hems, reinforced seaming on underwear



### Triple zig-zag

For durable seams in firm materials; visible hems and seams



### Stretch stitch

All stretch fabrics; open seam in sportswear



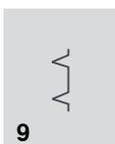
### Honeycomb stitch

For all types of jersey and smooth materials; visible seams in lingerie, clothing, linen, mending etc.



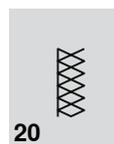
### Reinforced Overlock

For medium-weight knitware and toweling; overlock seam, flat joining seam



### Blind stitch

For most types of material. Blind hems; shell edging effect on soft jerseys and fine material; decorative seams



### Knit Overlock

For knit material, hand- and machine made items, overlock seam = sewing and finishing in one step



### Double Overlock

All types of knit; Overlock = sew and neaten in one operation



### Simple darning program

Automatic darning of fine to medium weight materials



### Super stretch

All stretch fabrics; open seam in clothing



### Basting stitch

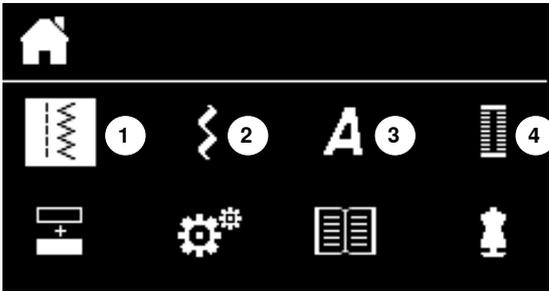
For basting seams, hems, quilts, etc.

## Stitch pattern selection



### Via menu selection

- press «Home»-button



- select the desired main category 1-4 via the «Navigation»-buttons
- 1 Practical stitches
- 2 Decorative stitches
- 3 Alphabets
- 4 Buttonholes

- press «OK»-button to confirm

▶ the available stitch patterns are displayed

All of the other stitch patterns can be selected by scrolling via the «Navigation»-buttons.

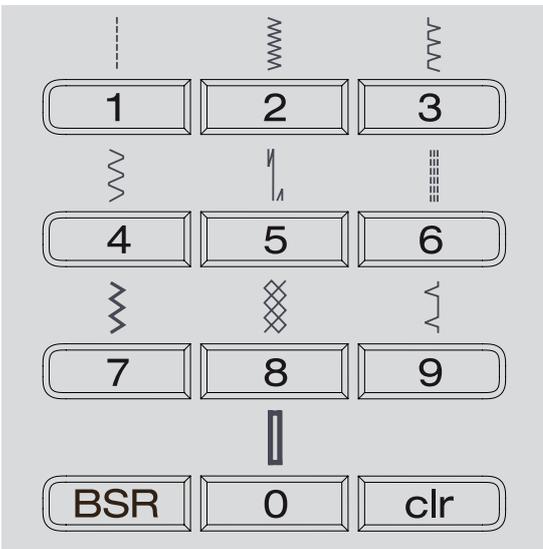
- select desired stitch number via «Navigation»-buttons
- press «OK»-button to confirm

### By stitch number

- select the desired stitch number via the «Direct selection»-buttons

▶ stitch number and basic setting of stitch width and stitch length appear on the display

The «Direct selection»-button 0 selects stitch number 51 (standard buttonhole).



## Temporary altered stitch memory

### Customizing stitch pattern individually

According to material and purpose a stitch pattern can be altered individually. The alterations described here are applicable for all practical and many decorative stitches.

Any stitch length or width alterations will be saved automatically.

### For example:

- sew an altered stitch, e.g. zig-zag
- select and sew another stitch, e.g. straight stitch
- return to zig-zag, your alterations are still active

### Return to basic settings

Individual stitch patterns can be reverted to basic settings manually.

- press «clr»-button or
- switch off the sewing computer
- ▶ any alterations of all stitches are deleted

### Application:

- for all stitch patterns
- especially useful for alternate applications



The temporary altered stitch memory is unlimited. It can hold alterations to any number of stitches (stitch length, stitch width, needle position, mirror images and balance).

## The temporary altered stitch memory fix

The factory basic stitch settings may be altered and saved, even after the sewing computer is turned off. The original settings are always visible.

### Altering the basic settings

- select stitch pattern e.g. zig-zag
- alter stitch width and stitch length
- press «OK»-button
- ▶ the alterations are saved

### Deleting alterations

- keep the «clr»-button pressed or
- press «Home»-button
- select «Setup Program»-icon via the «Navigation»-buttons
- press «OK»-button to confirm
- select «Delete»-icon via the «Navigation»-buttons
- press «OK»-button to confirm
- «Basic Setting»-icon is selected
- press «OK»-button to confirm
- ▶ the altered stitch pattern are in basic setting

## Examples of application

### Straight stitch



Reverse pattern foot/sole No. 1

#### Straight stitch No. 1

After turning on the sewing computer the straight stitch will appear.

#### Application

Suitable for all fabrics.



#### Adjust the stitch length to suit the fabric

For example, use a longer stitch length (approx. 3-4mm) with denim, a shorter length with fine fabric (approx. 2-2.5mm).

#### Adjust the stitch length to suit the thread

For example, use a longer stitch length thread when using cordonnet thread for topstitching (approx. 3-5mm).

#### Activate needle stop down

Prevents the fabric from shifting when you adjust or pivot the sewing project.

### Triple straight stitch



Reverse pattern foot/sole No. 1

#### Triple straight stitch No. 6

#### Open seam

Durable seam for firm or dense materials such as denim and corduroy.



#### For firm or densely woven materials

A Jeans needle and Jeans foot No. 8 will help when sewing denim or canvas.

#### Decorative topstitching

Lengthen stitch and use the triple straight stitch for decorative topstitching.

## Triple zig-zag



**Reverse pattern foot/sole No. 1**

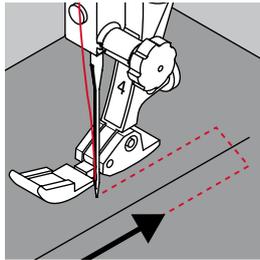
**Triple zig-zag No. 7**

In firm materials, particularly for denim, deckchair covers, awnings.



Seams on often washed items. Finish raw edges first. Use Jeans needle for very firm materials.

## Zipper



### Zipper foot/sole No. 4

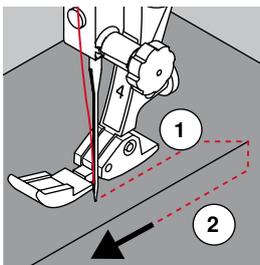
### Straight stitch No. 1

#### Preparation

- close seam to the zipper beginning
- sew the securing stitches
- baste seam closed and clean
- finish the seam allowance
- iron the seam
- open the zipper
- baste the zipper
- baste or pin zipper in place so that fabric folded edges meet over the center of the zipper

#### Sewing in the zipper

- open zipper a little
- move needle position to the right
- start sewing from top left
- position the foot so the needle stitches along the edge of the zipper coils
- stop in front of the pull (needle position down)
- raise the presser foot
- close the zipper again
- lower presser foot
- continue to sew, stop in front of the base of the zipper, needle position down
- raise presser foot
- turn the sewing project
- lower presser foot
- sew across the seam, stop with needle position down
- raise presser foot
- turn sewing project again
- lower presser foot
- sew the second side from bottom to top



#### Variation: Sew both sides of zipper from bottom to top

Suitable for all fabrics with nap or grain (e.g. velvet).

- prepare zipper as described above
- start sewing in the seam of the zipper end and sew first side from bottom to top
- sew diagonal along the edge of the zipper coils
- first side **1** sew from bottom to top
- move needle position to the left
- second side **2** sew in the same way from bottom to top



#### Sew around the zipper pull

- sew up to about 5 cm away from the zipper pull
- stop with the needle down, raise the presser foot, open the zipper, lower the presser foot, finish sewing (use Free Hand System)

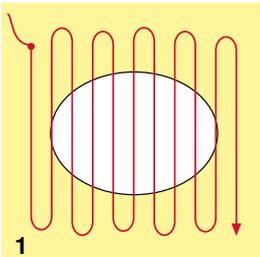
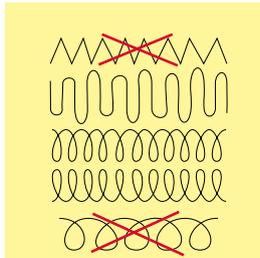
#### Seam begin

- hold thread firmly when starting to sew = pull fabric slightly to the back (fewer stitches) or
- sew about 1-2 cm reverse first, and continue to sew as usual

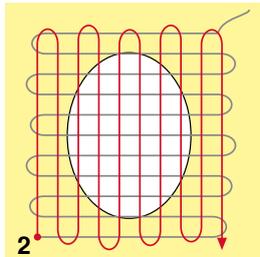
#### Zipper or fabric is thick or densely woven

For even stitch formation use a 90-100 needle.

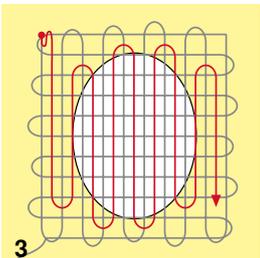
## Manual darning



1



2



3

**Darning foot No. 9 <sup>\*/\*\*</sup>**

**Straight stitch No. 1**

**Holes or worn areas**

«Replacing» threads along the lengthside and crosswise in every material.

**Preparation**

- lower the feed dog
- attach slide-on table
- hoop the sewing project plus stabilizer into the darning hoop (optional accessory)
- ▶ the darning area stays evenly taut and cannot be distorted

**Sewing**

- work from the left to the right, guide the fabric evenly without using pressure
- move in curves when changing direction on top and on bottom. Avoid points as this can cause holes and thread breakage
- work in different length so the thread is better spread over the fabric

**1 Sew the first rows to cover the hole**

- first rows just beyond the worn area and not too close together
- work the rows in irregular lengths
- turn fabric by a quarter turn -90°

**2 Sew over the first rows**

- first rows not too close
- turn fabric by half turn -180°

**3 Finish darning the hole**

- sew another loose row



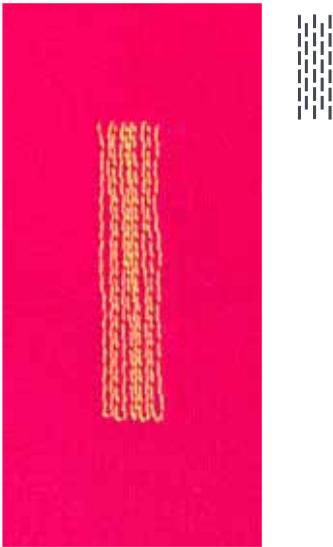
**Poor stitch formation**

- if the thread is lying on top, slow down the fabric movement
- if there are knots on the wrong side of the fabric, move the fabric more quickly

**Thread breaks**

Guide the fabric with a more consistent speed.

## Automatic darning



**Reverse pattern foot/sole No. 1**  
**Automatic Buttonhole foot with slide No. 3A**

### Darning program No. 22

#### Quick darning of holes or worn areas

Replaces threads along the lengthwise grain in all materials.

#### Preparation

- hoop light-weight materials in the darning hoop (optional accessory)
- ▶ the darning area stays evenly taut and cannot be distorted

#### Darning with reverse pattern foot/sole No. 1

- insert the needle in the top left of the worn area
- sew first row
- stop sewing computer
- press «Quick reverse»-button
- ▶ the length is programmed
- finish sewing the darning program
- ▶ the sewing computer stops automatically
- press the «clr»-button
- ▶ the program is cleared

#### Darning with the automatic buttonhole foot with slide No. 3A

- for darning worn and damaged areas
- Darning length max. 3cm
- same procedure as with foot No. 1



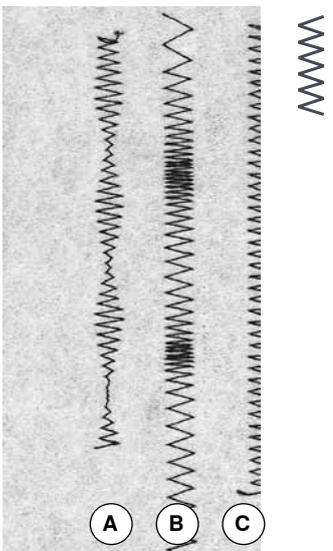
#### Reinforcement

Use fine material or (adhesive) interlining as a backing.

#### Darning area becomes distorted

Correct with the Balance function (see Balance-Function page 36).

## Zig-zag



- A** Zig-zag with altered stitch width
- B** Zig-zag with altered stitch length
- C** Finishing edges with zig-zag

**Reverse pattern foot/sole No. 1**

### Zig-zag No. 2

- for all fabrics
- for finishing raw edges
- elastic seams
- decorate sewing

#### Finishing edges

- guide edge of fabric into the center of the presser foot
- do not select too wide a stitch
- do not select too long a stitch
- needle goes into fabric on one side and over the edge into the air on the other side
- the edge of the fabric should lie flat and not roll
- use a fine darning thread for lightweight fabric

#### Satin stitch

- dense, short zig-zag (stitch length 0.5-0.7mm)
- use satin stitch for appliqué, embroidery, etc.

## Double overlock



Reverse pattern foot/sole No. 1

Double overlock No. 10

### Closed seam

Double overlock seam in loose knits and cross seams in knits and jerseys.



#### Knits and jersey

- use a new Jersey needle to prevent damaging the loops
- if necessary loosen presser foot pressure

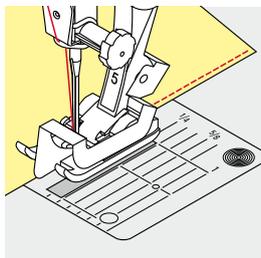
#### Sewing stretch materials

If necessary use a stretch needle (130/705 H-S).

## Top stitching edges

**Blindstitch foot/sole No. 5**  
**Reverse pattern foot/sole No. 1**  
**Edge stitch foot No. 10** \*\*/\*

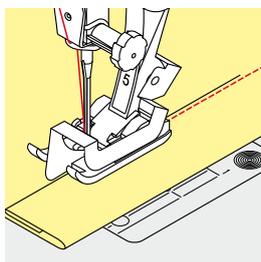
### Straight stitch No. 1



#### Narrow edgestitching

##### Outer edges

- place edge of fold left against the guide on the blindstitch foot/sole
- select needle position at the desired distance left from the folded edge



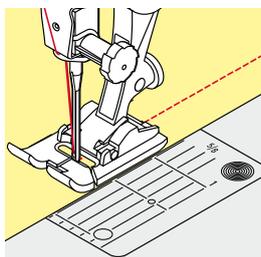
##### Hem edges

- place edge of fold (inside upper edge of hem) right against the guide on the Blindstitch foot/sole
- select needle position to the right to sew along the upper edge



**Blindstitch foot/sole No. 5**  
 Needle position left or far right.

**Reverse pattern foot/sole No. 1 and Edge stitch foot No. 10**  
**(optimal accessory)**  
 Any needle position possible.



#### Wide edgestitching

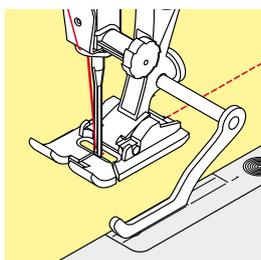
##### Material guidance

Presser foot as guide:

- guide the folded edge along the edge of the presser foot

##### Stitch plate as guide:

- guide the folded edge along the marks on the stitch plate (1 to 2.5cm)



##### Seam guide as guide:

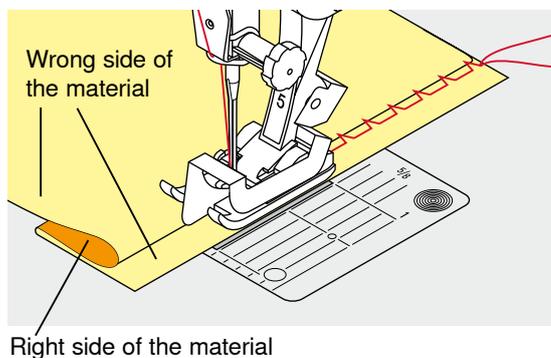
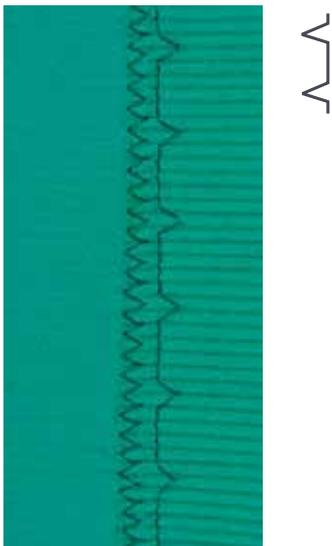
- loosen the screw on the back of the presser foot
- insert the seam guide into the hole of the presser foot
- adjust the wide as desired
- tighten the screw
- guide the folded edge along the seam guide

##### Presser foot shaft/sole

- insert the seam guide into the hole of the presser foot shank
- adjust wide as desired
- guide the folded edge along the seam guide

To sew parallel wide lines, guide the seam guide along a previously sewn line of stitches.

## Blind hem



### Blindstitch foot/sole No. 5

### Blindstitch No. 9

For invisible hems in medium to heavy cotton, wool and blended materials.

#### Preparation

- finish raw edges
- fold and baste or pin the hem

- fold the fabric back over the right side of the fabric to expose the finished lower edge
- place under presser foot and
- move the folded edge against the metal guide on the presser foot

#### Sewing

- the metal guide on the sole of the blindstitch sole can be adjusted sideways by turning the screw on the right
- the needle should just pierce the edge of the fold (as when hand blind-stitching)
- after sewing about 10cm, check both sides of fabric and adjust width again if necessary



#### Fine stitch width adjustment

Guide the folded edge evenly along the metal guide on the foot = even depth.  
Guide the raw edge along the guide on the foot to keep the stitch depth even.

## Hem visible



### Reverse pattern foot/sole No. 1

### Jersey stitch No. 14

For visible, elastic hems in jersey, cotton, synthetic and mixed fibers.

#### Preparation

- iron the hem, baste if necessary
- reduce the presser foot pressure if necessary

#### Sewing

- sew the hem at preferred depth on the right side
- trim excess fabric from the wrong side

## Securing program



**Reverse pattern foot/sole No. 1**

### Securing program No. 5

- for all fabrics
- secures beginning and end of seam

### Sewing long seams with straight stitch

Even securing by defined stitch count.

#### Sew begin

- press the foot control
- ▶ the sewing computer secures automatically when beginning to sew (5 stitches forward, 5 stitches reverse)
- sew seam with straight stitches in desired length



#### Ending the seam

- press «Quick reverse»-button
- ▶ the sewing computer secures seam automatically (5 stitches reverse, 5 stitches forward)
- ▶ the sewing computer stops automatically at the end of the securing program

## Basting stitch



**Darning foot No. 9 \*/\*\***

### Basting stitch No. 30

- for work which requires a very long stitch
- bastes seams, hems, quilts etc.
- temporary joining
- easy to remove

#### Preparation

- lower the feed dog
- pin work at a right angle to basting direction
- ▶ to prevent the layers from slipping

#### Basting

- place fabric under the presser foot
- hold the threads while sewing the first stitch
- pull work from behind to the required length of the stitch
- sew one stitch
- repeat the procedure



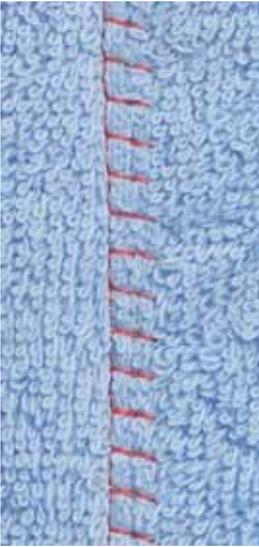
#### Securing/fixing the thread

Lower feed dog, sew at the beginning and at the end 3-4 basting stitches in the same place.

#### Thread

Use a fine darning thread for basting as it is easier to remove.

## Flat joining seam



TTTTT

**Reverse pattern foot/sole No. 1**

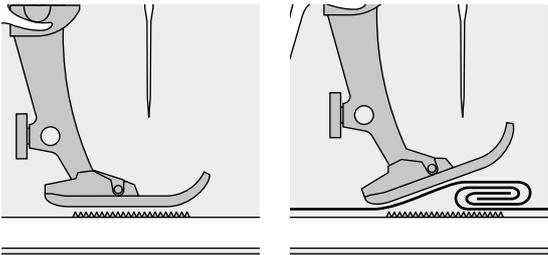
**Stretch-overlock No. 13**

Ideal for fluffy or thick materials such as terry cloth, felt and leather etc.

### **Sewing**

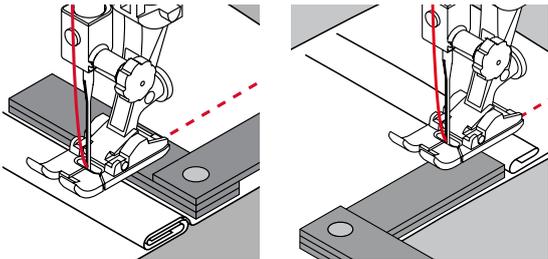
- overlap fabric edges
- sew stretch overlock along the fabric edge
- the stitch should sew over the edge of the top layer on the right side
- ▶ very flat durable seam

### Height compensation of uneven layers



The feed dog works accurately when the foot is level.

If the foot is at an angle, e.g. when sewing over thick to thin or vice-versa, the feed dog cannot grip and feed the fabric. The fabric might jam.



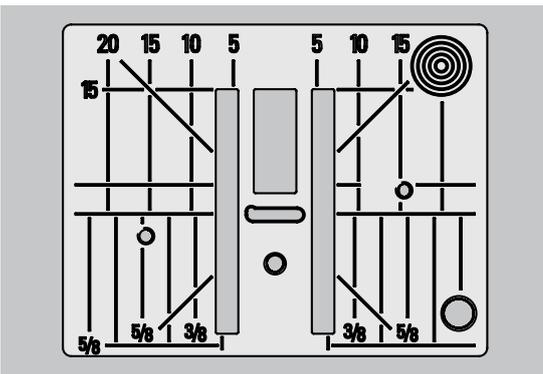
To solve this problem, place one, two or three compensating plates as required behind the needle under the presser foot to level it.

To correct the height in front of the foot, place one or more plates under the foot close to the needle. Sew until the foot is level again and remove the plates.

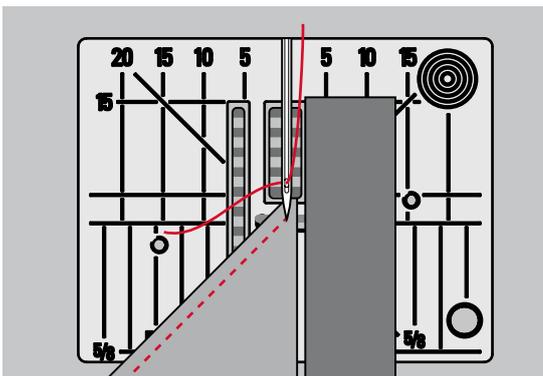


Needle stop down.

### Sewing corners



Due to the width of the stitch plate hole the outer feed dog rows are relatively far apart.



When sewing corners only a small section of the fabric is actually on the feed dog. Therefore it cannot grip the fabric well.

Place one or more plates of the height compensation tool parallel to the presser foot close to the edge of the fabric.

► the fabric is fed evenly



Needle stop down.

## Overview Buttonhole

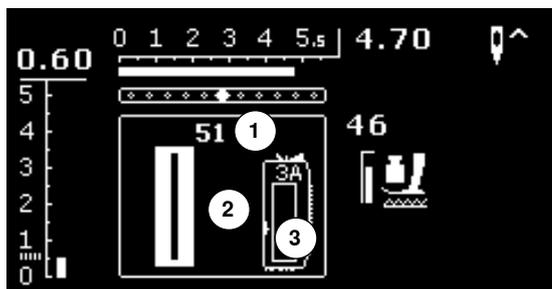
 <b>51</b>	<p><b>Standard buttonhole</b> For light to mediumweight fabrics; blouses, shirts, trousers, bedlinens, etc.</p>	 <b>59</b>	<p><b>Straight-stitch buttonhole</b> Program for staystitching buttonholes, for pocket openings, reinforcing buttonholes; especially for buttonholes in leather and imitation leather</p>
 <b>52</b>	<p><b>Narrow buttonhole</b> For light- to medium weight fabrics; blouses, dresses, children's and baby clothes, crafts</p>	 <b>60</b>	<p><b>Button sew-on program</b> For buttons with 2 and 4 holes</p>
 <b>53</b>	<p><b>Stretch buttonhole</b> All stretch fabrics made from cotton, wool, silk and synthetic fibers</p>	 <b>61</b>	<p><b>Eyelet with small zig-zag *</b> Openings for cords and narrow ribbons, decorative work</p>
 <b>54</b>	<p><b>Round buttonhole</b> For medium- to heavy weight materials: dresses, jackets, coats, rainwear</p>	 <b>62</b>	<p><b>Straight-stitch eyelet</b> Openings for cords and narrow ribbons, decorative work</p>
 <b>56</b>	<p><b>Keyhole buttonhole</b> For heavy weight, non-stretch materials: jackets, coats, leisure wear</p>	 <b>63</b>	<p><b>Heirloom buttonhole</b> For light- to medium weight woven fabrics: blouses, dresses, leisure wear, bed linen</p>

## Buttonhole - important information

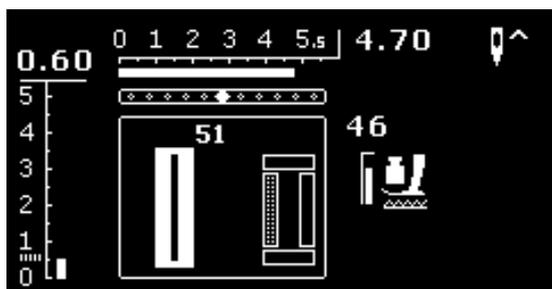
Buttonholes are not only practical closures, they can also be used to decorative effect.



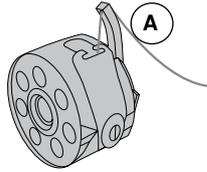
- press «Home»-button
- select «Buttonhole» via the «Navigation»-buttons
- press «OK»-button to confirm or
- select the desired buttonhole with the «Direct selection»-buttons



- Display shows:
- 1 Buttonhole number
  - 2 Buttonhole icon
  - 3 Presser foot indicator



When beginning to sew the actual sequence of the buttonhole is displayed instead of the presser foot indicator.

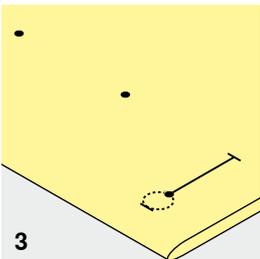
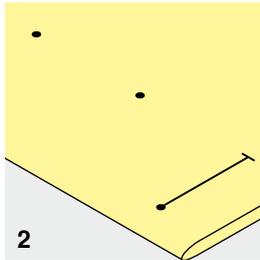
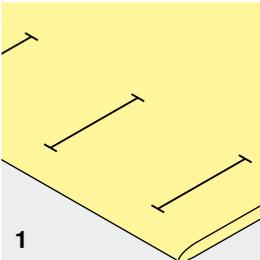


**Thread tension for sewing buttonholes**

- thread the bobbin thread through the finger **A** of the bobbin case
- ▶ the bobbin thread tension is a little tighter
- ▶ this gives the beads on the right side of the fabric a slightly rounded appearance



An additional cord reinforces buttonholes and enhances their appearance (see page 54).



**1 Marking the length of manual buttonholes**

- mark the buttonhole length in the desired position
- use buttonhole foot/sole No. 3 \*\*/\*\*

**2 Marking the length of automatic buttonholes**

- mark the length of just one buttonhole
- ▶ after sewing the first buttonhole, the length for all subsequent buttonholes is automatically programmed
- mark only the beginning of all subsequent buttonholes
- use automatic buttonhole foot with slide No. 3A

**3 Marking the length of keyhole buttonholes**

- mark the bead length only
- ▶ the correct length eye will be added when the buttonhole is sewn
- ▶ after sewing the first buttonhole, the length for all subsequent buttonholes is automatically programmed
- mark only the beginning of all subsequent buttonholes
- use automatic buttonhole foot with slide No. 3A

**Test-sewing**

- always sew a test sample on the original fabric and with stabilizer you intend to use
- select the buttonhole type you intend to use
- sew the buttonhole in the same direction on the fabric (horizontal or vertical, with or against the grain)
- cut the buttonhole open
- push the button through
- adjust the buttonhole length if necessary

**To adjust the bead width**

- alter the stitch width

**Altering stitch length**

Stitch length adjustments affect both buttonhole beads.

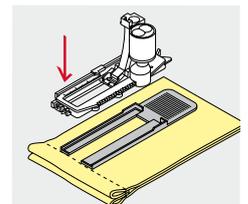
- ▶ spacing between the stitches

After stitch length alteration.

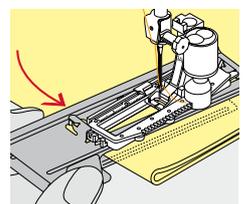
- re-program the buttonhole



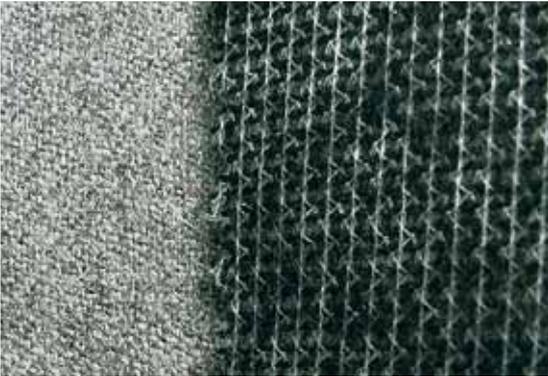
If a buttonhole is to be sewn at right angles to the seam, we recommend the use of the height compensation plates (optional accessory). Place the plates from the back between fabric and bottom of slide foot up to the thick part of the fabric and push to front.



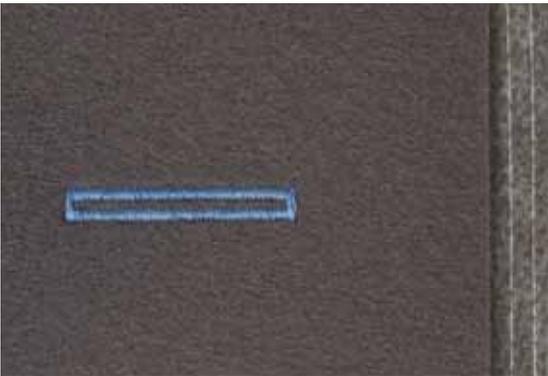
When sewing a buttonhole in difficult materials, we recommend to use the Compensation plate for buttonholes (optional accessory). It can be used along with buttonhole foot with slide No. 3A.



## Stabilizer and interfacing

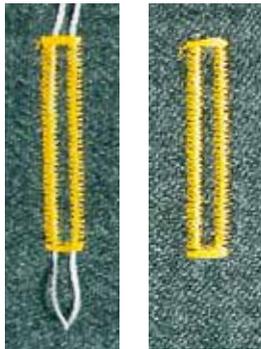


- interfacing provides durability and stability to the buttonhole
- choose the interfacing according to the material being used



- when using thick or fluffy materials an embroidery stabilizer can be used
- ▶ therefore the fabric feeds better

## Cording

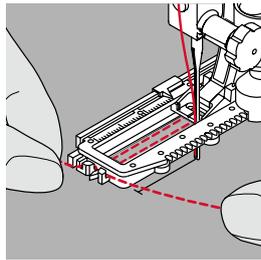
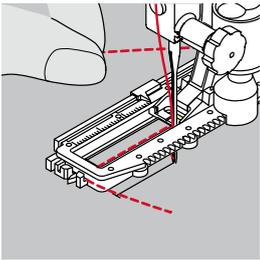


### General facts

- use cording to reinforce buttonholes and enhance their appearance
- the loop of the cord should be at the end of the buttonhole that is most subject to wear = where button is sewn on
- position the work accordingly

### Ideal cords

- Perle cotton No. 8
- strong hand-sewing thread
- fine crochet yarn

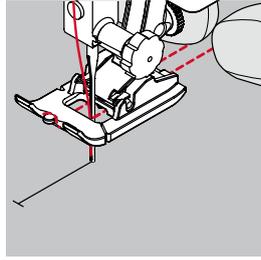
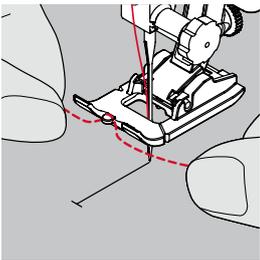


### Cord with the automatic buttonhole foot with slide No. 3A

- raise the buttonhole foot No. 3A
- insert the needle at the beginning of the buttonhole
- guide the cord on the right side under the buttonhole foot No. 3A
- hook the cord over the pin at the back of the buttonhole foot No. 3A
- pull the cord on the left side under the buttonhole foot No. 3A to the front
- pull the cord ends into the slits
- lower buttonhole foot No. 3A

### Sewing

- sew the buttonhole in the usual manner
- do **not** hold the cord
- ▶ the buttonhole will sew over the cord, covering it

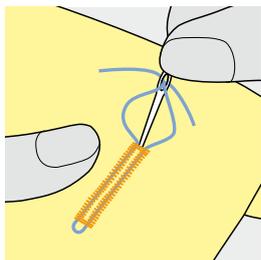


### Cord with buttonhole foot/sole No. 3 \*\*/

- raise buttonhole foot
- insert the needle at the beginning of the buttonhole
- hook cord over the pin in the middle of the buttonhole foot (at the front)
- pull both cord ends under the buttonhole foot sole to the back and
- place both ends of the cord in the grooves on the sole
- lower the buttonhole foot

### Sewing

- sew the buttonhole in the usual manner
- do **not** hold the cord
- ▶ the buttonhole will sew over the cord, covering it



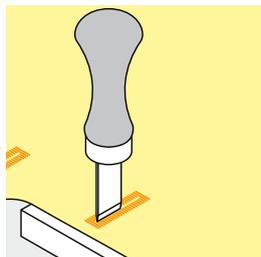
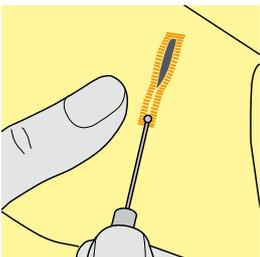
### Securing the cord

- pull the cord through the buttonhole until the loop disappears into the end of it
- pull the ends of the cord through to wrong side of the fabric, using a hand stitching-needle
- knot or secure with stitches



### Before cutting the buttonhole open

Place a pin in each end of the buttonhole to prevent accidental cutting into ends of buttonhole.



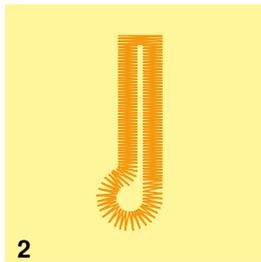
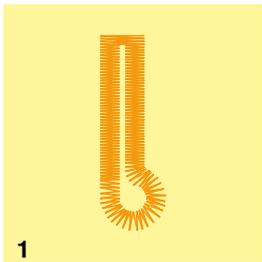
### Cutting buttonholes open with the seam ripper

- cut the buttonhole from the ends to the middle

### Cutting open buttonholes with the Buttonhole Cutter (optional accessory)

- place the fabric on the wood
- place the cutter in the centre of the buttonhole
- press down on the cutter with your hand

## Balance

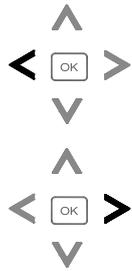


### Balance for automatic and manual buttonholes

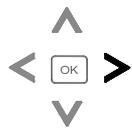
Any balance alterations to the manual and auto-length buttonholes affect both beads identically because they are sewn in the same direction.

The keyhole or eye is balanced as follows:

- sew straight stitches forward until
- ▶ the sewing computer switches to the eye
- stop the sewing computer
- press the «Balance»-button
- ▶ the balance display appears



- 1** the keyhole is distorted to the right
- press the left «Navigation»-button
  - ▶ the keyhole is corrected to the left
- Test-sewing!



- 2** the keyhole is distorted to the left
- press the right «Navigation»-button
  - ▶ the keyhole is corrected to the right
- Test-sewing!



When all buttonholes have been sewn, return balance to the normal setting! (see page 36)

## Standard and stretch buttonhole with auto-length, automatically



### Automatic buttonhole foot with slide No. 3A

### Automatic standard and stretch buttonhole No. 51, 52, 53

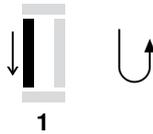
The lens on automatic buttonhole foot No. 3A automatically registers the length of the buttonhole for exact duplication.

#### Preparation

- select the desired buttonhole
- Display shows:
- ▶ the number of the selected buttonhole
  - ▶ Automatic buttonhole foot No. 3A



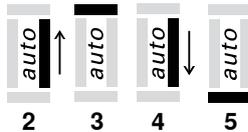
The slide foot must lie perfectly flat on the fabric! If the slide foot rests on a seam allowance, the length cannot be measured accurately.



1

#### Programming the buttonhole

- 1 ■ sew first bead forward
- stop sewing computer
- press «Quick reverse»-button
- ▶ «auto» is shown on the display
- ▶ the buttonhole length is programmed



2

3

4

5

The sewing computer sews automatically:

- 2 the straight stitches in reverse
- 3 the first bartack
- 4 the second bead forwards
- 5 the second bartack and securing stitches
- ▶ the sewing computer stops and returns automatically to buttonhole begin

#### Auto-buttonhole

- all subsequent buttonholes will be sewn to exactly the same length (no need to press the «Quick reverse»-button)
- the programmed buttonhole can be saved in the long-term memory (see page 58)
- press the «clr»-button
- ▶ the programmed settings are cleared



#### Exact duplication

The auto function ensures that each buttonhole will be exactly the same length as the previous one.

#### Sewing speed

- sew at moderate speed for best results
- sew all buttonholes at the same speed for a consistent bead density

## Automatic round and keyhole buttonhole



### Automatic buttonhole foot with slide No. 3A

### Automatic round and keyhole buttonhole No. 54, 56

#### Preparation

- select the desired buttonhole
- Display shows:
- ▶ the number of the selected buttonhole
  - ▶ Automatic buttonhole foot No. 3A

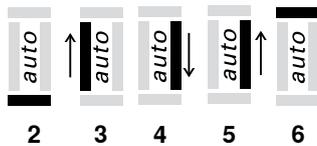


The slide foot must lie perfectly flat on the fabric! If the slide foot rests on a seam allowance, the length cannot be measured accurately.



#### Programming the buttonhole

- 1 ■ sew straight stitches forward
- stop sewing computer
- press «Quick reverse»-button
- ▶ «auto» is shown on the display
- ▶ the buttonhole length is programmed



The sewing computer sews the following automatically:

- 2 the eye
- 3 the first bead in reverse
- 4 the straight stitches forward
- 5 the second bead in reverse
- 6 the bartack and securing stitches
- ▶ the sewing computer stops and returns automatically to buttonhole begin

#### Auto-buttonhole

- all subsequent buttonholes will be sewn to exactly the same length (no need to press the «Quick reverse»-button)
- the programmed buttonhole can be saved in the long-term memory (see page 58)
- press the «Clr»-button
- ▶ the programmed settings are cleared



#### Exact duplication

The auto function ensures that each buttonhole will be exactly the same length as the previous one.

#### Double sewn keyhole buttonholes

- keyhole buttonholes can be sewn twice on thick fabrics - use a longer stitch length for the first run
- after sewing the first buttonhole, do not move the work
- reduce the stitch length manually and sew the buttonhole again

## Heirloom buttonhole

### Automatic buttonhole foot No. 3A

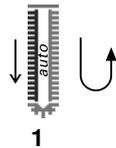
### Heirloom Buttonhole No. 63

#### Preparation

- select buttonhole

Display shows:

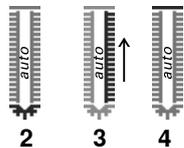
- ▶ the number of the selected buttonhole
- ▶ Automatic buttonhole foot No. 3A



1

#### Programming the buttonhole

- 1 ■ sew the first bead forwards
- stop the sewing computer
- press «Quick reverse»-button
- ▶ «auto» is shown on the display
- ▶ buttonhole length is programmed



2

3

4

The sewing computer sews the following automatically:

- 2 the round part
- 3 the second bead in reverse
- 4 the bartack and the securing stitches
- ▶ the sewing computer stops and returns automatically to buttonhole begin

#### Auto-buttonhole

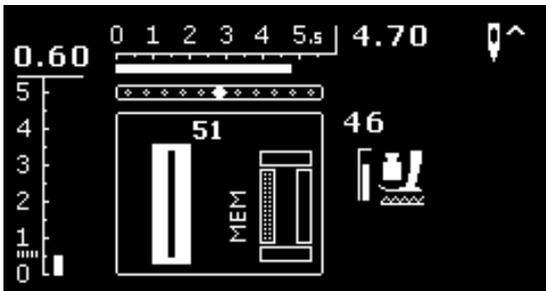
- ▶ all subsequent buttonholes will be sewn to exactly the same length (no need to press the «Quick reverse»-button)
- the programmed buttonholes can be saved in the long-term memory
- press the «clr»-button
- ▶ the programmed settings are cleared

## Buttonhole in long term memory

### Buttonhole in long term memory

- program buttonhole
- press «OK»-button
- ▶ the buttonhole is now saved in long term memory
- ▶ «mem» is displayed

## Selection of a saved buttonhole



Programmed saved buttonholes can be opened for re-use even after the sewing computer has been disconnected.

- select the desired buttonhole type
- sew programmed buttonhole
- ▶ only one length per buttonhole can be saved
- when a new length is confirmed by «OK», the previously saved length will be overwritten

## Manual buttonhole (all types)

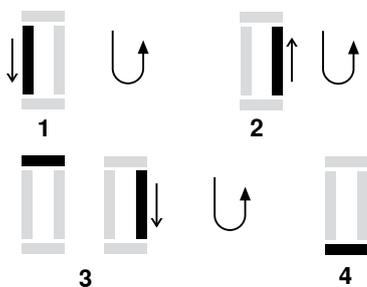


Sewing buttonholes manually is ideal if you only need to sew one; also for repairing existing buttonholes. The number of steps depends on the type of the selected buttonhole. Manual buttonholes cannot be saved.

### Buttonhole foot/sole No. 3 \*/\*\*

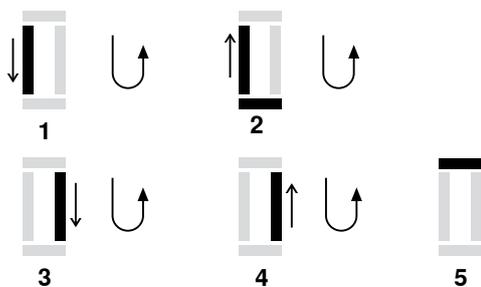
#### Preparation

- select the desired buttonhole
- The display shows:
- ▶ the number of the selected buttonhole
  - ▶ Automatic buttonhole foot No. 3A



#### Sewing a manual standard buttonhole

- 1 ■ sew the bead up to the end of the length marking
  - stop sewing computer
  - press «Quick reverse»-button
- 2 ■ sew straight stitch in reverse
  - stop sewing computer at height of the first stitch (buttonhole begin)
  - press «Quick reverse»-button
- 3 ■ sew upper bartack and second bead
  - stop sewing computer
  - press «Quick reverse»-button
- 4 ■ sew lower bartack and securing stitches



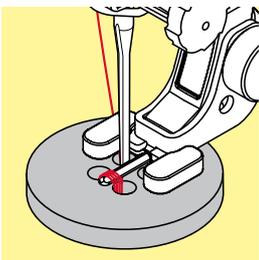
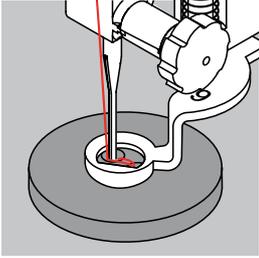
#### Sewing manual keyhole or round buttonhole

- 1 ■ sew straight stitches forward up to the end of the length marking
  - stop sewing computer
  - press «Quick reverse»-button
- 2 ■ sew keyhole and first bead in reverse
  - stop sewing computer at the height of the first stitch (buttonhole begin)
  - press «Quick reverse»-button
- 3 ■ sew straight stitches forwards
  - stop sewing computer at the keyhole
  - press «Quick reverse»-button
- 4 ■ sew second bead in reverse
  - stop sewing computer at the height of the first stitch (buttonhole begin)
  - press «Quick reverse»-button
- 5 ■ sew bartack and securing stitches



Sew both beads at the same speed.

## Button sew-on program



**Darning foot No. 9** \*/\*\*

**Button sew-on foot No. 18** \*/\*\*

### Button sew-on program No. 60

For buttons with 2 and 4 holes.

#### Sewing on buttons

Buttons sewn on for decorative purposes only are stitched without a thread shank.

The length of the shank (= thread between button and fabric) can be made shorter or longer as required with foot No. 18.

#### Sewing on buttons with darning foot No. 9 \*/\*\*

- select button sew-on program
- check distances between holes with the handwheel
- adjust stitch width if necessary
- hold the threads when starting to sew
- sew the first securing stitches into the left hole
- sewing the button sew-on program
- ▶ sewing computer stops automatically when program is completed and is ready for the next button

#### Beginning and ending threads

The threads are secured and can be trimmed.

#### For secure results

- pull on both bobbin threads until the ends of the upper threads are visible on the wrong side
- pull the threads out and knot the ends additionally
- trim the threads

#### Sewing on buttons with foot No. 18 \*/\*\*

- set the shank length with the screw on the foot
- select button sewing-on program and continue as with foot No. 9 \*/\*\*



#### Sewing 4-hole button

- sew the front holes first
- carefully move the button forward
- sew the back holes with the same program



For a increased stability the button sew-on program can be sewn twice.

## Eyelet program



Reverse pattern foot/sole No. 1

Eyelet with small zig-zag No. 61 \*  
Straight-stitch eyelet No. 62

### Sewing eyelets

- select eyelet
- position fabric under the presser foot and sew eyelet program
- ▶ sewing computer stops automatically and is at the beginning of the eyelet program again

### Punching eyelets

- use an awl, punch pliers or a hole punch to open the eyelet



Adjust the roundness of the eyelet if necessary with balance.  
For increased stability sew the eyelet twice.

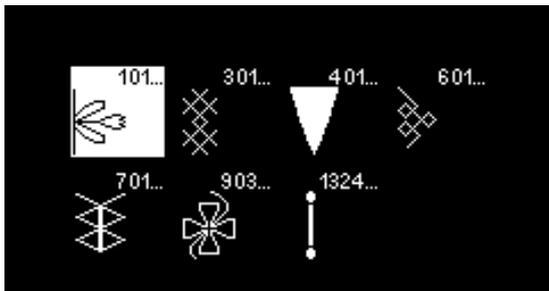
## Selecting a decorative stitch



- press «Home»-button



- select «Decorative Stitches»-icon via the «Navigation»-buttons
- press «OK»-button to confirm



- ▶ display shows an overview of the categories
- select the desired category via the «Navigation»-buttons
- press «OK»-button to confirm
- ▶ the desired category is activated
- select the desired stitch pattern
- press «OK»-button to confirm

## Application

Depending on the type of material, simple or more complex decorative stitches should be selected to best suit the material.

- decorative stitches which are programmed with simple straight stitches, are particularly appropriate for light weight materials, e.g. decorative stitch No. 101
- decorative stitches which are programmed with triple straight stitches or with a few satin stitches are particularly appropriate for medium weight materials, e.g. decorative stitch No. 615
- decorative stitches which are programmed with satin stitches are particularly appropriate for medium weight materials, e.g. decorative stitch No. 401



### Categories

- Cat. 100 = Florals
- Cat. 300 = Cross stitches
- Cat. 400 = Satin stitches
- Cat. 600 = Ornamental stitches
- Cat. 700 = Heirloom stitches
- Cat. 900 = Novelty
- Cat. 1300 = Quilt stitches

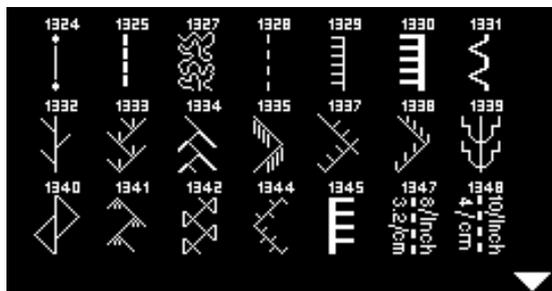


### Perfect stitch formation

- use the same thread color for upper and lower thread
- reinforce the fabric on the wrong side using stabilizer
- use an additional, water-soluble stabilizer on the right side of pile or longfiber materials (e.g. wool, velvet etc.) which can be easily removed after sewing

## Overview Quilt stitches

Various stitch patterns are available which are used especially in quilting, for patchwork or for appliqué.



- press «Home»-button
- select «Decorative Stitches»-icon via the «Navigation»-buttons
- press the «OK»-button to confirm
- ▶ display shows an overview of the categories
- select category quilt stitches
- press the «OK»-button to confirm
- select the desired stitch pattern



Quilters' securing program



Feather stitch



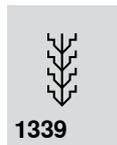
Quilting straight stitch \*



Feather stitch variations  
1333-1338 \* (partly)



Stippling stitch



Decorative quilt stitch variations  
1339-1342, 1344-1345 \* (partly)



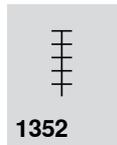
Handlook quilt stitch



Handlook quilt stitch variations \*  
1347-1348



Blanket stitch



Blanket stitch (dual)



Double blanket stitch



Double blanket stitch (dual) \*

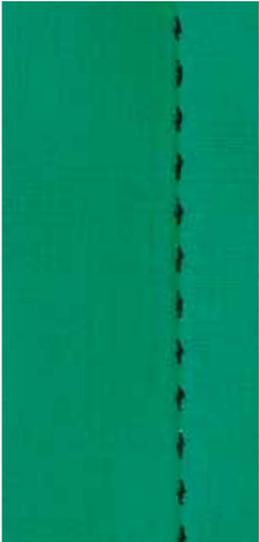


Blind stitch (narrow)



Satin stitch

## Handlook quilt stitch



10/inch  
4/cm  
8/inch  
2/cm

### Reverse pattern foot/sole No. 1

### Handlook quilt stitch No. 1328, 1347 \*, 1348 \*

Suitable for all fabrics and work which should look «hand sewn».

#### Thread

- Upper thread = Monofilament
- Lower thread = 30/2 cotton thread

#### Test-sewing

- ▶ the lower thread is pulled up by strong upper thread tension
- **one** stitch is visible (bobbin thread)
- **one** stitch invisible (monofilament) = hand-look effect

#### Upper thread tension

Depending on the fabric increase the tension (6-9).

#### Balance

Adjust stitch with the balance if necessary.



#### Perfect corners

- press «Needle stop»-button, needle down, press «Pattern end/pattern repeat»-button, turn fabric
- when pivoting make sure that the fabric does not become distorted

#### Monofilament breaks

- sew more slowly
- reduce upper thread tension slightly

## Free-motion quilting



**Darning foot No. 9 <sup>\*/\*\*</sup>**

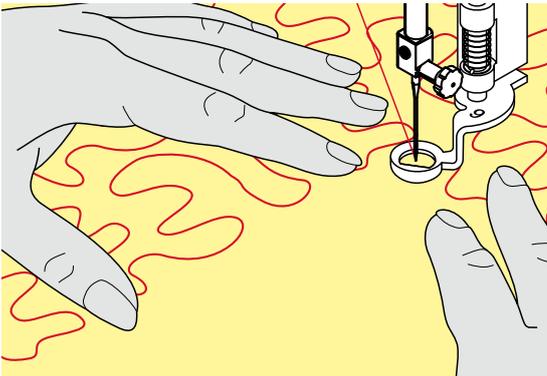
**Straight stitch No. 1**

### Free-motion quilting

For all types of free motion quilting work.

#### Preparation

- pin top layer, batting and backing together, or baste if necessary
- attach slide-on table
- use the Free Hand System
- lower the feed dog



#### Holding the work

- hold the work with both hands like an embroidery frame



Quilt gloves with rubber fingertips will help when guiding the work.

#### Quilting a design

- quilt from the center outwards
- guide the work using smooth, round movements to form the design of your choice

#### Stipple quilting

- this technique covers the entire surface of the fabric with quilt stitches
- the lines of stitching are rounded and never cross one another



#### Free-motion quilting and darning

The two techniques are based on the same Free Motion principles.

#### Poor stitch formation

- if thread is lying on top of the fabric, slow down the movement of the material
- if there are knots on the wrong side of the fabric, move the material more quickly

#### Monofilament thread breaks

Reduce the motor speed and/or loosen the upper thread tension.

#### Thread breaks

Guide the fabric more consistently.

## Quilting with BSR \*



### BSR-Function

The BSR presser foot reacts to the movement of the fabric under the foot and controls the speed of the sewing computer up to the maximum speed possible. The following applies: the faster the fabric is moved, the higher the speed of the sewing computer.

If the fabric is moved too fast, an acoustic signal (beep sound) is heard, if the Beeper is activated (see page 68).

### ATTENTION!

As long as the BSR presser foot is illuminated red, adjustments like threading and changing the needle, for example, must not be carried out, as the needle will engage while fabric is moved unintentionally! Without fabric feed the BSR mode is turned off after approx. 7 seconds and the red light goes off.

Please refer to Safety Instructions!

By activating the BSR function the sewing computer sews either continuously at reduced speed (mode 1, standard), or as soon as the fabric is moved (mode 2).

### BSR-function with straight stitch No. 1

This function using the BSR presser foot, allows for free-motion quilting (sewing) using the straight stitch and a pre-selected stitch length up to 4 mm. The regulated set stitch length is maintained within a certain speed, independent of the movement of the fabric.

### BSR-function with zig-zag No. 2

The zig-zag can be used e.g. for thread painting. The set stitch length will **not** be maintained when sewing with the zigzag stitch, but the BSR function simplifies the application.

### There are two different BSR modes

- **BSR 1-Mode** is the active standard
- the sewing computer runs continuously at a reduced motor speed, as soon as the foot control or the «Start/Stop»-button is pressed
- the sewing speed depends on the movement of the fabric
- through continuous needle movement, securing in the same position is possible without pressing an additional button
  
- by pressing the «BSR»-button (see page 29) the **BSR 2-Mode** is engaged
- the sewing computer will only engage if the foot control or the «Start/Stop»-button is pressed and the fabric is moved simultaneously
- the movement of the fabric determines the sewing speed
- for securing, the «Securing function»-button must be pressed
- by pressing the «BSR»-button again, mode 1 is engaged



For an even sewing start (the first stitch) the foot control must be pressed and the fabric moved simultaneously. This also applies for sewing points and straight stitching within a round form.

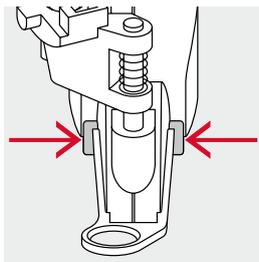
When resuming work with the BSR presser foot after exiting the function, the BSR mode that was active at the time of exiting the BSR function will be activated, even if the sewing computer was turned off in the meantime.

When exceeding a certain speed, adhering to regular stitch length cannot be guaranteed.

Make sure that the lens on the bottom of the BSR foot is clean (no fingerprints, etc.). Clean lens periodically with soft, slightly damp cloth.

### Preparation

- lower the feed dog
- presser foot pressure may be reduced depending on the material type and thickness
- use slide-on table
- use the Free Hand System

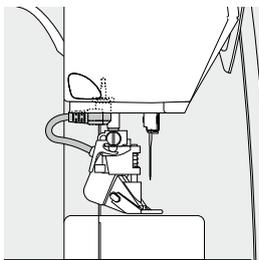


### Removing the presser foot sole

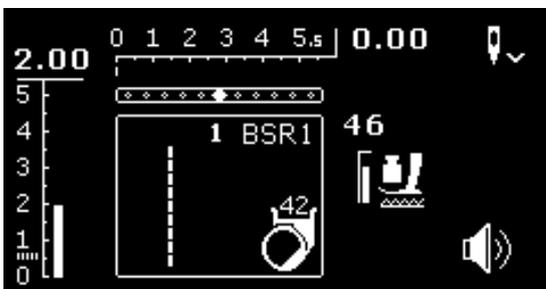
- press both buttons together
- slide the sole downwards out of the groove

### Attaching the presser foot sole

- slide the desired sole up in the groove until it clicks into its place



- attach the BSR presser foot to the sewing computer
- plug the cable in the outlet provided



- ▶ BSR-Display is opened automatically
- ▶ straight stitch is activated
- ▶ BSR 1 mode is engaged
- select the zig-zag or the straight stitch again by pressing the «Direct Selection»-button

- set the desired stitch length
  - the basic stitch length is 2 mm
  - when sewing small forms and stippings, stitch length of 1-1.5 mm is suggested

## Functions in the BSR mode

### Needle stop down (default)

- ▶ the arrow points down on the BSR-Display
- ▶ the sewing computer stops with needle down, when taking foot off foot control or engaging the «Start/Stop»-button

### Needle stop up

- press the «Needle stop»-button
- ▶ the arrow points up
- ▶ the sewing computer stops with needle up, when taking foot off foot control or engaging the «Start/Stop»-button

### Raise or lower the needle

- press «Needle stop»-button
- ▶ to raise or to lower the needle

### Securing with the «Start/Stop»-button (only Mode 1)

- place the fabric under the presser foot
- lower presser foot
- press the «Needle stop»-button twice
  - ▶ the lower thread is brought up
- hold upper and lower thread
- press the «Start/Stop»-button
  - ▶ BSR mode is activated
- sew 5-6 securing stitches
- press the «Start/Stop»-button
  - ▶ BSR mode is deactivated
- cut threads
- press the «Start/Stop»-button
  - ▶ BSR mode is activated
- continue the stitching process

### Securing function (only Mode 2)

- press the «Securing function»-button
  - press either the foot control or the «Start/Stop»-button
- By moving the fabric some short securing stitches are sewn, then the set stitch length will be activated and the securing function will be automatically deactivated.

### Beeper (Acoustic Signal) Activation/Deactivation

- select the «Setup»-Program
- select the icon «BSR Beep» via the «Navigation»-buttons
- press the «OK»-button to confirm
- select left icon
  - press «OK»-button to confirm
    - ▶ Beeper is activated
- select right icon
  - press «OK»-button to confirm
    - ▶ Beeper is deactivated
- press the «Back»-button
  - ▶ the main menu appears
- press «BSR»-button
  - ▶ the BSR-Display appears (mode 1 or 2)
- when the Beeper is activated, the signal is heard as soon as the sewing computer sews at maximal speed
- when the BSR mode is quit, the Beeper keeps the current setting (activated or deactivated)

## Activating the BSR Sewing Function

### Option 1:

BSR-Function via the foot control

- plug in the foot control
- lower the presser foot
- press the foot control
- ▶ BSR mode starts
- ▶ a red light appears on the presser foot
- press foot control while sewing
- the speed of the sewing computer is regulated by the movement of the fabric
- release the foot control
- ▶ the BSR mode is stopped

### Option 2:

BSR-Function via the «Start/Stop»-button

- lower the presser foot
- press «Start/Stop»-button
- ▶ BSR mode is activated
- ▶ a red light appears on the presser foot
- the speed of the sewing computer is regulated by the movement of the fabric
- press the «Start/Stop»-button again
- ▶ BSR mode is stopped

## Deactivating the BSR Sewing Function by using the «Start/Stop»-button Mode 1

If the fabric is not moved for approx. 7 seconds, the BSR mode is deactivated and the red light on the presser foot goes off.

### Mode 2

If the stitching process is ended by no longer moving the fabric, **one** additional stitch is made, depending on the needle position. The sewing computer always stops with needle up, even if the arrow on the display points down.



### Holding the work

- both hands hold and guide the fabric like a hoop
- abrupt movements (slowing down resp. speeding up) can result in slightly too short or too long stitches
- continuous movement (no abrupt movements) will provide best results
- do not pivot the fabric while sewing



Quilt gloves with rubber fingertips will help when guiding the work.



### Application example:

- BSR with zig-zag No. 2
- the zig-zag can be used for thread painting
- areas can be filled and therefore forms or pictures can be created

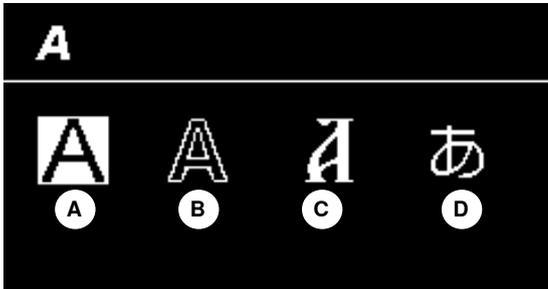
### BSR Function deactivation

- pull out the plug of the BSR presser foot connection cable on the sewing computer
- remove the BSR presser foot

## Alphabets



- press «Home»-button



- select the «Alphabet»-icon on the Main Display via the «Navigation»-buttons
- press the «OK»-button to confirm
- ▶ the Alphabet Display providing the following four alphabets appears:
  - A** Block alphabet
  - B** Double Block alphabet
  - C** Cyrillic alphabet
  - D** Hiragana



- select the desired alphabet via the «Navigation»-buttons
- press the «OK»-button to confirm
- ▶ the character set appears

## Combi mode/memory

### Programming practical stitches/decorative stitches/alphabets

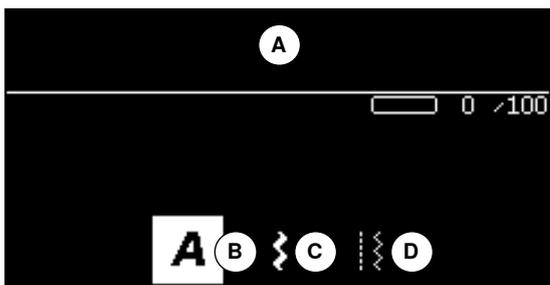
100 stitch patterns, lettering or numbers can be combined and saved in the combi mode/memory. The memory is long term. The contents are kept until they are deleted by the user. A power cut or switching off the sewing computer does not have any effect on the stored contents. Alterations concerning stitch length or stitch width as well as needle position can be made at any time. Single stitch patterns, lettering or numbers can be deleted or added.



- press «Home»-button



- select the «Combi mode»-icon via the «Navigation»-buttons
- press the «OK»-button to confirm



- A Edit-area
- B Alphabets
- C Decorative stitches
- D Practical stitches

- select the desired category and the desired stitch pattern
- press the «OK»-button to confirm

Stitch patterns can also be selected via the «Direct Selection»-buttons.

#### Application of the «Navigation»-buttons within one stitch pattern category/alphabet

- press and hold one of the «Navigation»-buttons
  - ▶ quick scrolling through the stitch pattern category/alphabet
- press the «right»-button at the end of the line
  - ▶ the first pattern of the next line is activated
- press the «left»-button at the beginning of the line
  - ▶ the last stitch pattern of the previous line is activated
- press the «right»-button at the end of the alphabet/stitch category
  - ▶ the first pattern of the alphabet/stitch category is activated
- press the «left»-button at the beginning of the alphabet/stitch category
  - ▶ the last pattern of the alphabet/stitch category is activated
- ▶ stitch pattern in the last row is activated
- press the «down»-button
  - ▶ letter/stitch pattern at the same position in the first row is activated
- ▶ the letter/stitch pattern in the first row is activated
- press «up»-button
  - ▶ the cursor jumps to the Edit-area



- ▶ the entered stitch patterns/letters are displayed in the Edit-area 1
- ▶ the cursor indicates where the desired stitch pattern/letter is added
- ▶ to the **right** of the cursor you can add, to the **left** of the cursor you can delete
- ▶ the number 2 of the active stitch pattern is shown
- ▶ if the complete combination can't be displayed, it will be indicated by arrow symbols on the right and on the left of the combination
- scroll through the combination via the «Navigation»-buttons «right/left»
- ▶ the occupied memory locations 3 are indicated
- jump from the selected category to the Edit-area and back via the «Navigation»-buttons «up/down»

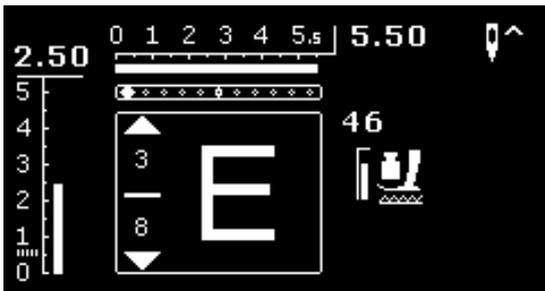
**These stitch patterns and programs can't be programmed:**

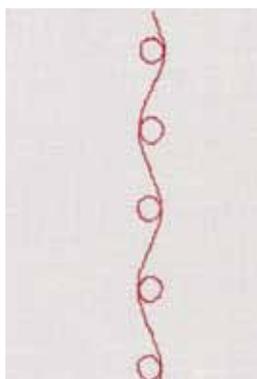
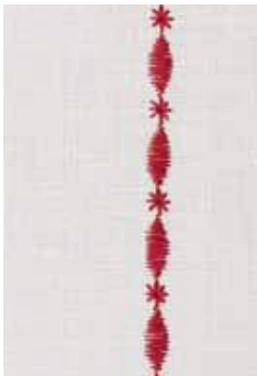
- Securing program No. 5
- Darning program No. 22
- Basting stitch No. 30
- Buttonholes
- Button sew-on program No. 60
- Eyelets No. 61, No. 62

**Sewing a combination**

Creating a combination.

- press the «Back»-button twice
- ▶ the Combi-mode-Display appears
- select the «Needle»-Symbol
- press the «OK»-button to confirm
- ▶ the Sewing Display of the combi mode appears
- sew combination
- you can scroll through the combination via the «Navigation»-buttons
- ▶ the displayed stitch pattern can be edited (e.g. mirroring etc.)





### Example A

Continued sewing of the stitch pattern combination.

- select the «Combi mode», see page 71
- select decorative stitches
- press the «OK»-button to confirm
- select the stitch pattern No. 711 in category 700
- press the «OK»-button to confirm
- press the «Back»-button
- select the stitch pattern No. 407 in category 400
- press the «OK»-button to confirm
- press the «Back»-button twice
- choose the sewing mode
- press the «OK»-button to confirm
- sew combination

### Example B

Combining stitch pattern and «Mirroring»-Function and sewing continuously.

- select the «Combi mode», see page 71
- select decorative stitches
- press the «OK»-button to confirm
- select stitch pattern No. 730 in category 700
- press the «OK»-button to confirm
- select the stitch pattern No. 730 again
- press the «OK»-button to confirm
- press the «Back»-button twice
- choose the sewing mode
- press the «OK»-button to confirm
- select the second stitch pattern via the «Navigation»-button «down»
- press the «Mirror image»-button
- press the «Pattern begin»-button
- sew combination



#### Combinations of decorative stitches sewn with embroidery thread

- stitch patterns appear fuller
- thread the bobbin thread into the bobbin finger for best results

#### Pattern combination on two layers of fabric

Bottom layer does not pucker.

#### Pattern combination on a single layer of fabric

- always use a (adhesive) stabilizer or a tissue paper as a backing
- remove stabilizer or tissue paper after sewing

### Example C

Programming lettering/numbers.

- select «Combi mode»-icon
- select desired alphabet and enter the text
- press the «Back»-button twice
- choose the sewing mode
- press the «Securing»-button
- ▶ the sewing computer sews securing stitches at the beginning of the entered combination
- sew the combination
- press the «Securing»-button while sewing
- ▶ the sewing computer sews securing stitches at the end of the entered combination and stops
- trim connecting threads after sewing

## Correcting the combination



### Delete the complete combination

- press «Home»-button
- select the «Combi mode»-icon via the «Navigation»-buttons
- press the «OK»-button to confirm
- ▶ the Combi-mode-Display appears
- select the «Delete»-icon
- press the «OK»-button to confirm
- ▶ the complete combination is deleted



### Deleting a single stitch pattern/letter

- press the «Navigation»-button «up» until the cursor is in the Edit-area
- place the cursor to the right of the stitch pattern/letter to be deleted via the «Navigation»-buttons «right/left»
- press the «clr»-button
- the stitch pattern/letter to the **left** of the cursor is deleted



### Adding stitch patterns/letters

- press the «Navigation»-button «up» until the cursor is in the Edit-area
- place the cursor at the desired position via the «Navigation»-buttons «right/left»

Adding the stitch pattern/letter at the beginning of a combination.

- place the cursor to the «left» of the first stitch pattern/letter via the «Navigation»-buttons
- press the «Navigation»-button «down»
- select the desired stitch pattern/letter in the selected category
- press the «OK»-button to confirm
- ▶ the stitch pattern/letter is inserted to the **right** of the cursor in the Edit-area



### Leaving the combi mode/memory

- press «Home»-button
- ▶ the Main Display appears
- ▶ the combination is saved

## Cleaning

### ATTENTION!

Disconnect plug from the socket before cleaning or lubricating!  
Never use alcohol, petrol, white spirit or any type of solvent to clean the sewing computer!



#### Cleaning the display and the sewing computer

Wipe with a soft, damp cloth.

#### Feed dog area

Clean the sewing computer after every use - remove any lint from under the stitch plate and in the hook area.

- turn power switch to «0» (off)
- pull out plug from electrical outlet
- remove presser foot and needle
- open the bobbin door
- press the stitch plate down at the right back corner until it flips up
- remove the stitch plate
- clean the area with the lint brush
- replace the stitch plate



#### Cleaning the hook

- turn power switch to «0» (off)
- pull out plug from electrical outlet
- remove bobbin case
- push the release lever to the left
- let down the locking lever and the black hook race cover
- remove the hook



- clean the hook race with a cloth or brush, never use a sharp instrument
- replace the hook, turning the handwheel if necessary until the hook driver is on the left
- close the hook race cover and secure with the locking lever, the locking pin must engage
- check by turning the handwheel
- insert the bobbin case



#### Lubricating

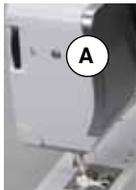
- turn power switch to «0» (off)
- pull out plug from electrical outlet
- squeeze 1 or 2 drops of BERNINA oil into the hook race
- turn power switch to «I» (on)
- run the sewing computer for a short time (without thread)
- ▶ this prevents the fabric from getting dirty

## Troubleshooting

In most cases you will be able to identify and remedy faults by checking the following.

### Check if:

- the upper and lower threads are threaded correctly
- the needle is inserted correctly
- the needle size is correct - check the needle/thread table page 24
- the needle tip and shaft are undamaged
- the sewing computer is clean - brush out any thread lint
- the hook race is clean
- any threads are trapped between the tension discs or under the bobbin case spring

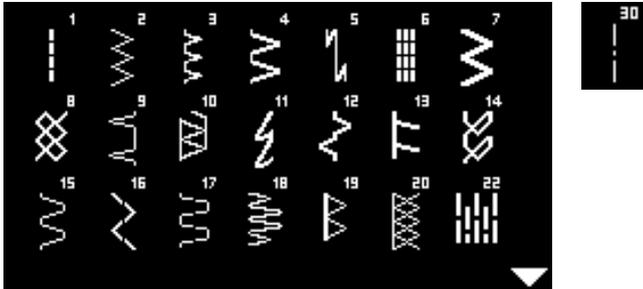
Fault	Cause	Repair
<b>Uneven stitch formation</b>	<ul style="list-style-type: none"> <li>– Upper thread too tight/too slack</li> <li>– Needle blunt or bent</li> <li>– Poor quality needle</li> <li>– Poor quality thread</li> <li>– Needle/thread combination is incorrect</li> <li>– Incorrectly threaded</li> </ul>	<ul style="list-style-type: none"> <li>■ reduce/increase upper thread tension</li> <li>■ use new BERNINA quality needles</li> <li>■ use new BERNINA quality needles</li> <li>■ use quality thread (Isacord, Mettler, Gütermann etc.)</li> <li>■ match the needle to the thread size</li> <li>■ check upper and lower thread</li> </ul>
<b>Skipped stitches</b>	<ul style="list-style-type: none"> <li>– Incorrect needle system</li> <li>– Needle bent or blunt</li> <li>– Poor quality needle</li> <li>– Needle inserted incorrectly</li> <li>– Incorrect needle point</li> </ul>	<ul style="list-style-type: none"> <li>■ use needle system 130/705H</li> <li>■ use new BERNINA quality needles</li> <li>■ use new BERNINA quality needles</li> <li>■ insert needle as far up as it will go</li> <li>■ match the needle point to the texture of the fabric</li> </ul>
<b>Faulty stitching</b>	<ul style="list-style-type: none"> <li>– Remnants of thread between the tension discs</li> <li>– Incorrectly threaded</li> <li>– Remnants of thread under the bobbin case spring</li> </ul>	<ul style="list-style-type: none"> <li>■ fold a piece of thin material and slide the folded edge (not the raw edges) between the thread tension discs, moving the fabric back and forth to clean the right and left side of the thread tension</li> <li>■ check upper and lower thread</li> <li>■ carefully remove any thread remnants from under the spring</li> </ul>
<b>Thread is caught in the area of the take-up lever</b>	<ul style="list-style-type: none"> <li>– Upper thread breaks</li> </ul> 	<p>If the upper thread breaks and the thread is trapped in the area of the take-up lever, proceed as follows:</p> <ul style="list-style-type: none"> <li>■ power switch to «0» (off)</li> <li>■ remove the screw <b>A</b> on the headframe with the angular Torx button</li> <li>■ turn headframe cover slightly to the left, then slide it upwards and remove</li> <li>■ remove remnants of thread</li> <li>■ attach headframe and retighten screw</li> </ul>
<b>Upper thread breaks</b>	<ul style="list-style-type: none"> <li>– Upper thread tension too tight</li> <li>– Incorrectly threaded</li> <li>– Poor-quality or old thread</li> <li>– Stitch plate or hook tip damaged</li> </ul>	<ul style="list-style-type: none"> <li>■ reduce upper thread tension</li> <li>■ check upper thread</li> <li>■ use quality threads (Isacord, Mettler, Gütermann)</li> <li>■ take the sewing computer to the nearest authorized BERNINA dealer</li> </ul>

Fault	Cause	Repair
<b>Lower thread breaks</b>	<ul style="list-style-type: none"> <li>– Lower thread tension too tight</li> <li>– Stitch hole in the stitch plate has been damaged</li> <li>– Needle blunt or bent</li> </ul>	<ul style="list-style-type: none"> <li>■ increase the upper thread tension</li> <li>■ take the sewing computer to the nearest authorized BERNINA dealer</li> <li>■ use new needle</li> </ul>
<b>Needle breaks</b>	<ul style="list-style-type: none"> <li>– Needle not correctly inserted</li> <li>– Fabric was pulled</li> <li>– Fabric was pushed when thick material used</li> <li>– Poor-quality thread, unevenly wound or knotted</li> </ul>	<ul style="list-style-type: none"> <li>■ tighten the needle clamp screw</li> <li>■ do not pull the fabric during sewing</li> <li>■ use the correct presser foot for thick material (e.g. Jeans foot No. 8) use height compensating tool when sewing over a thick seam</li> <li>■ use quality thread (Isacord, Mettler, Gütermann etc.)</li> </ul>
<b>Sewing computer</b>	<ul style="list-style-type: none"> <li>– Sewing computer fails to run or runs slowly</li> </ul>	<ul style="list-style-type: none"> <li>■ plug not properly inserted</li> <li>■ power switch to «0» (off)</li> <li>■ sewing computer has been standing in a cold room</li> <li>■ take the sewing computer to the nearest authorized BERNINA dealer</li> </ul>
<b>Message Assert in File</b>	<ul style="list-style-type: none"> <li>– Internal calculation error</li> </ul>	<ul style="list-style-type: none"> <li>■ switch the sewing computer off and on again</li> </ul>

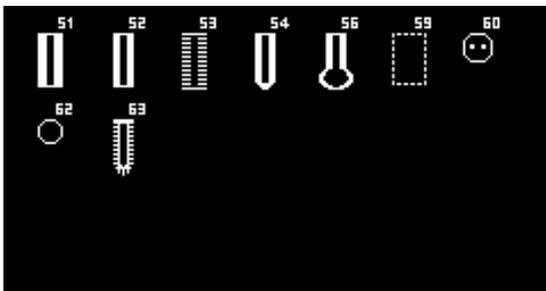
## Stitch Pattern Summary

### BERNINA 530

#### Practical stitches

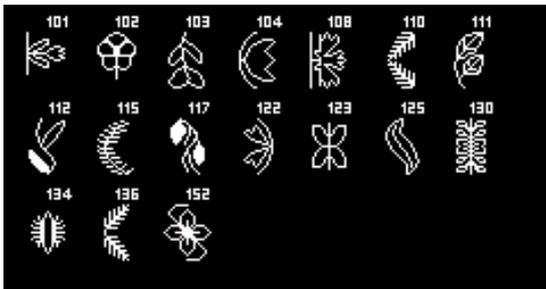


#### Buttonholes



#### Decorative stitches

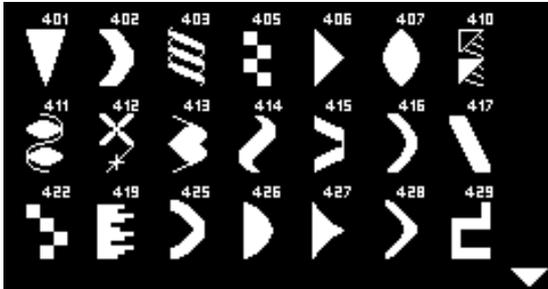
##### Floral stitches



#### Cross stitches



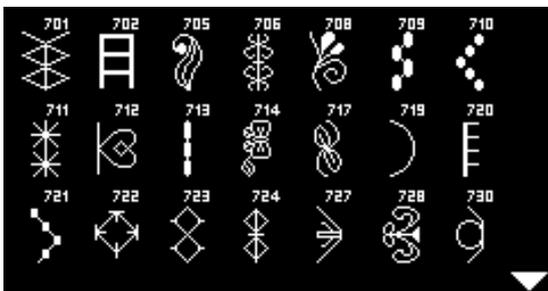
Satin stitches



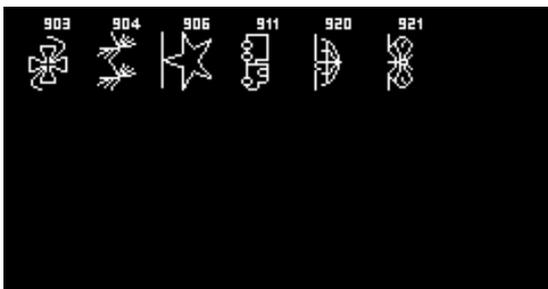
Ornamental stitches



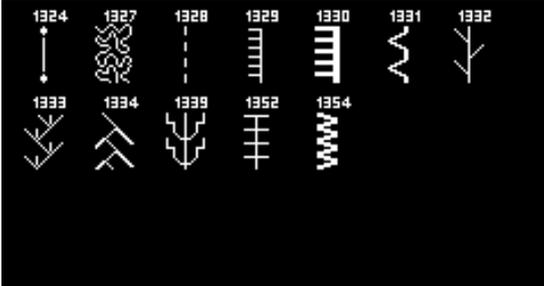
Heirloom stitches



Novelty stitches

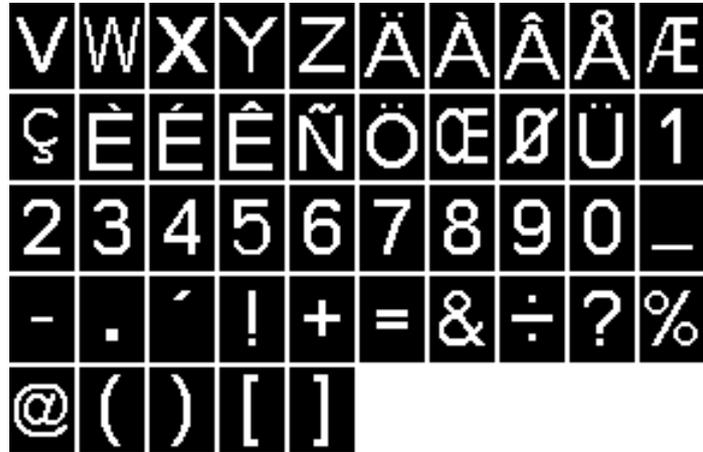


Quilt stitches

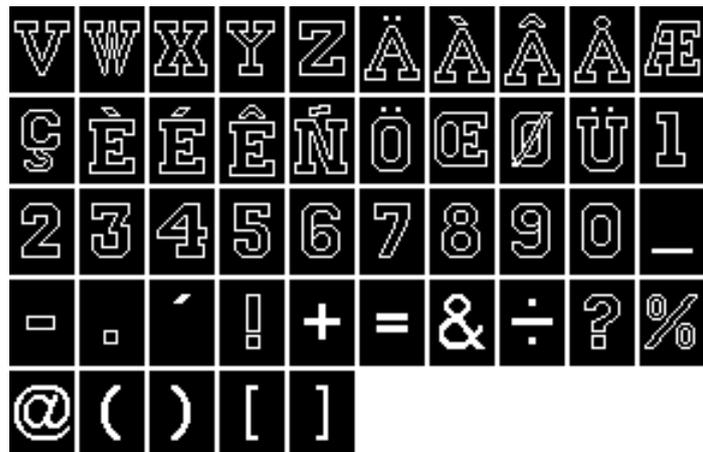
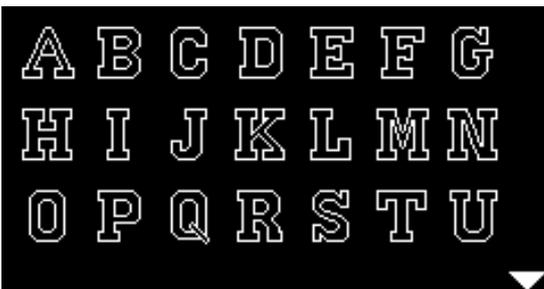


Alphabets

Block alphabet



Double Block alphabet



## Cyrillic alphabet

А Б В Г Д Е Ё  
 Ж З И Й К Л М  
 Н О П Р С Т У

Ф Х Ц Ч Ш Щ Ъ Ы Ь Э  
 Ю Я

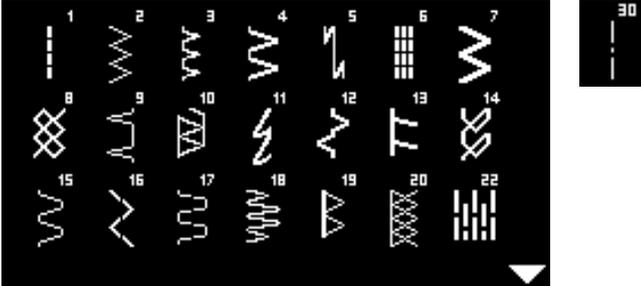
## Hiragana

あ い う え お か き  
 く け こ さ し す せ  
 そ た ち つ て と な

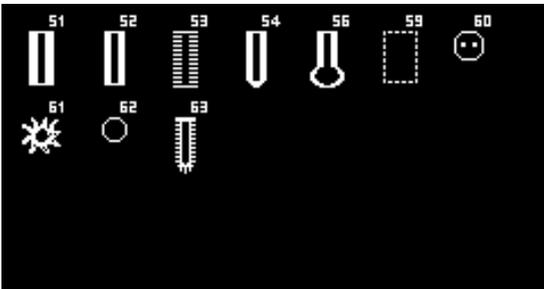
に	ぬ	ね	の	は	ひ	ふ	へ	ほ	ま
み	む	め	も	や	ゆ	よ	ら	り	る
れ	ろ	わ	を	ん	あ	い	う	え	お
や	ゆ	よ	つ	が	ぎ	ぐ	げ	ご	さ
じ	ず	ぜ	そ	た	ち	つ	て	ど	ば
び	ぶ	べ	ぼ	ぱ	ぴ	ぷ	ぺ	ぽ	

## BERNINA 550 QE

### Practical stitches

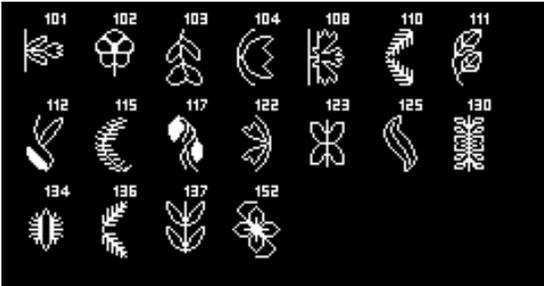


### Buttonholes

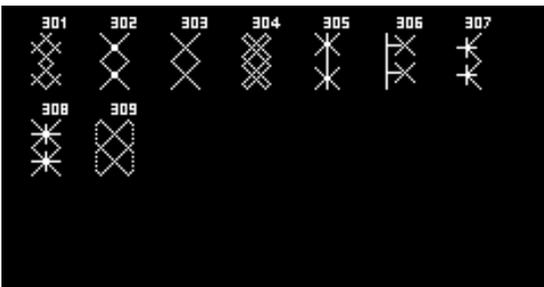


### Decorative stitches

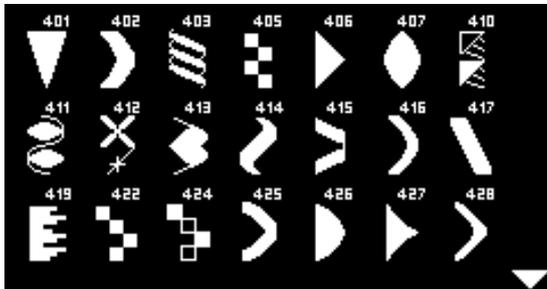
#### Floral stitches



#### Cross stitches



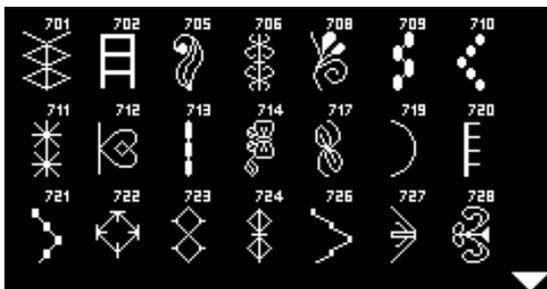
Satin stitches



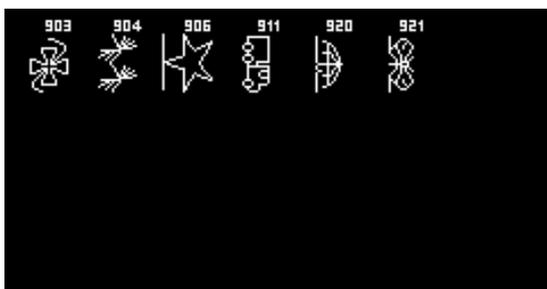
Ornamental stitches



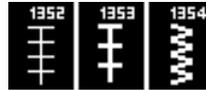
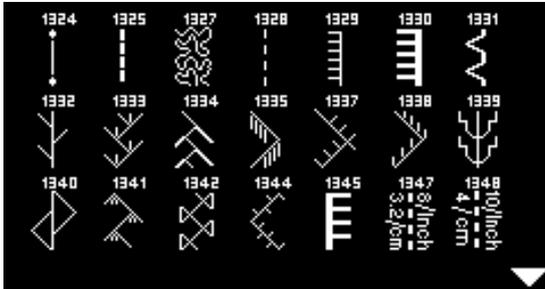
Heirloom stitches



Novelty stitches



Quilt stitches

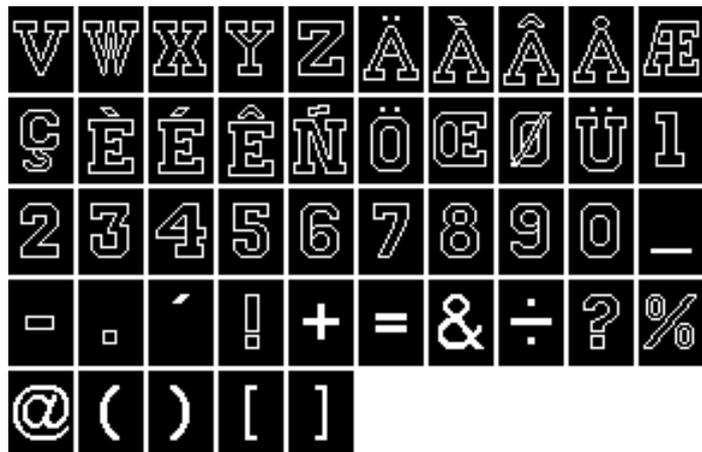


Alphabets

Block alphabet



Double Block alphabet



## Cyrillic alphabet



## Hiragana



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