"Welcome to the BERNINA family"

H.P. Ueltschi
Owner BERNINA
Sewing Machine Company

BERNINA®

In choosing **BERNINA**, you are assured of **years of rewarding sewing**.

For over 100 years my family has concentrated on providing complete satisfaction to our customers. And it is my personal wish to continue this tradition of offering you Swiss precision engineering combined with state of the art technology and an after sales service second to none.

The new **BERNINA activa 125** are characterized by a youthful appeal which is combined with a range of added value features to give you, dear Customer, **more sewing pleasure** than ever before.

Enjoy modern, creative sewing with BERNINA: our wide range of accessories as well as our **sewing publications** brimming with imaginative ideas and practical tips all add to the joy of sewing BERNINA style.

Any questions you have will be dealt with courteously and efficiently by our highly trained **BERNINA dealers**, who will also be glad to service your sewing computer for you.

Fritz Gegauf Ltd. • BERNINA Sewing Machines • CH-8266 Steckborn/Switzerland

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical machine, 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 electric shock:

1. A sewing computer should never be left unattended when plugged in.

2. Always unplug the sewing computer from the electric outlet immediately after using and before cleaning.

3. Always unplug before replacing light bulb. Replace the bulb with the same type rated 12 volts/5 watts.

WARNING

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

1. Do not allow to be used as a toy.
   Close attention is necessary when the sewing computer is used by or near children and infirm persons.

2. Use this sewing computer only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.

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 water

   Return the sewing computer to the nearest authorized **BERNINA** dealer or service center for examination, repair, electrical or mechanical adjustment.

4. Never operate the computer with any air openings blocked. Keep ventilation openings of the sewing computer and foot control free from accumulation of lint, dust and loose cloth.

5. Keep fingers away from all moving parts. Special care is required around the sewing needle.

6. Always use the BERNINA original needle plate. The wrong plate can cause the needle to break.

7. Do not use bent needles.

8. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.

9. Turn power switch to «0» when making any adjustments in the needle area, such as threading or changing the needle, threading the bobbin or changing the presser foot.

10. Always unplug the sewing computer from the electrical outlet when removing covers, lubricating or when making any other user servicing adjustments mentioned in this instruction manual.

11. Never drop or insert any object into any opening.

12. Do not use outdoors.

13. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.

14. Before disconnecting, turn all controls to the off («0») position then remove the plug from the outlet.

15. Do not unplug by pulling on the cord but grasp the plug.

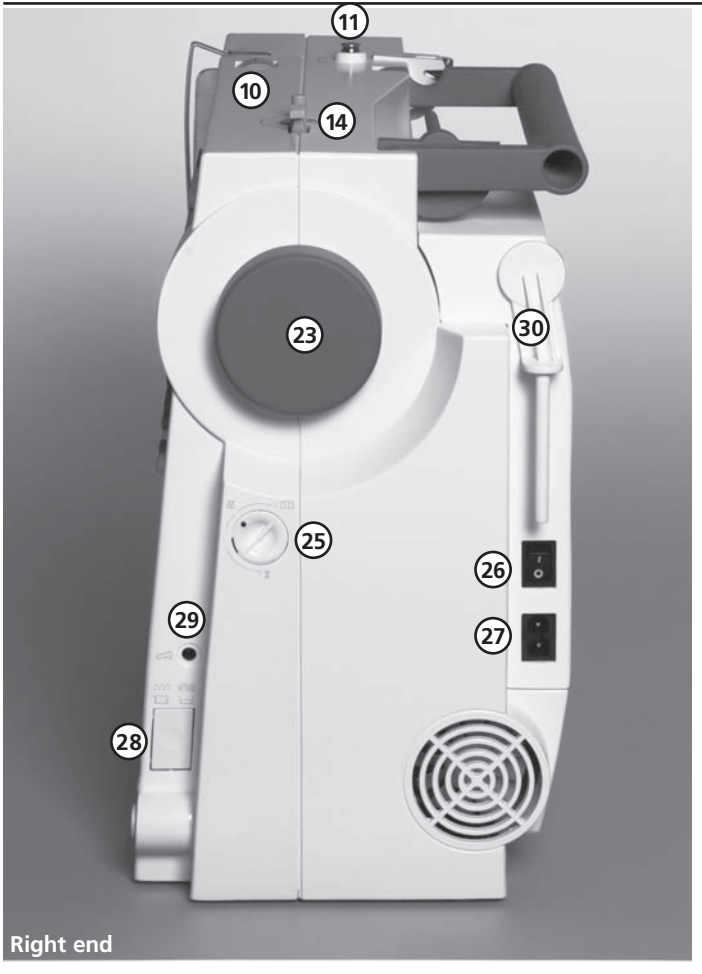
16. No responsibility will be taken for any possible damage as the result of misuse of the sewing computer.

This sewing computer is intended for household use only.

SAVE THESE INSTRUCTIONS!

Details of the sewing computer

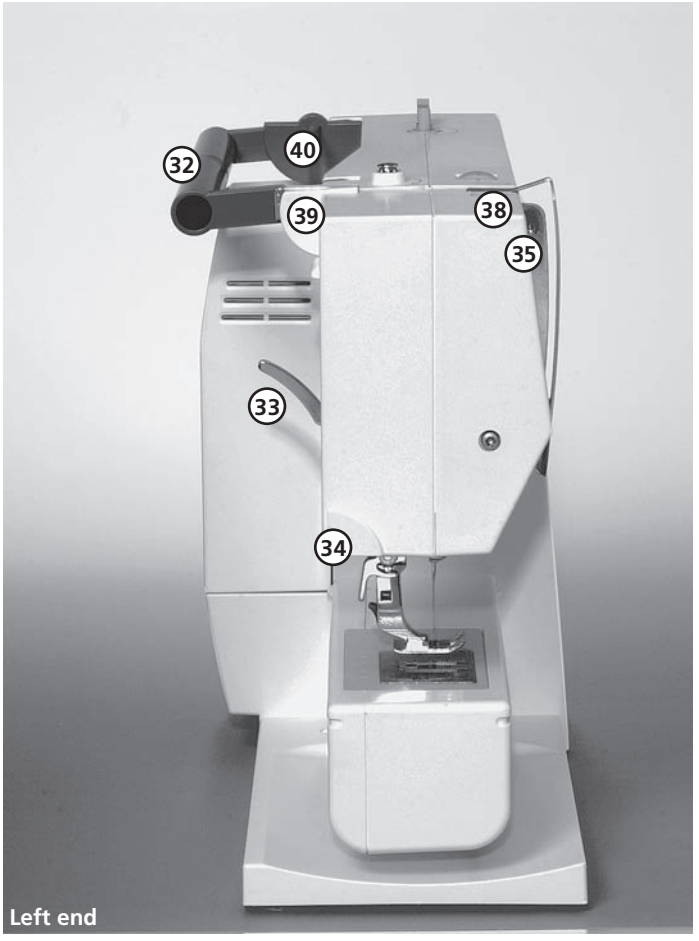
Front view



Right end

1 Bobbin cover
2 Stitch plate
3 Attachment base for special accessories
4 Sewing table socket
5 Presser foot
6 Needle clamp with fixation screw
7 Thread guide
8 Thread take up cover
9 Thread path
10 Thread tension adjustment
11 Bobbin pre-tension
12 Reverse button/quick and continuous
13 Screen
14 Bobbin winder with on/off switch and thread cutter
15 Stitch width button
16 Needle position button
17 Stitch length button
18 Needle stop up/down
19 1/2 speed
20 Stitch selection buttons
21 #-button
22 clr/del-button
23 Handwheel
24 FHS connection
25 Balance adjustment knob
26 Power switch on/off
27 Power plug socket
28 Drop feed-dog
29 Foot control socket
30 Spool pin (vertical, collapsible)
31 Start-stop-unit (optional)

Back view



Left end

32 Carrying handle
33 Presser foot lifter (manual)
34 Thread cutter
35 Thread take up
36 Darning ring connection
37 Accessory box connection
38 Thread tension disc
39 Rear thread guide
40 Horizontal spool pin

Accessories

- foot control
- instruction manual
- power cable
- warranty card
- fabric case for standard accessories

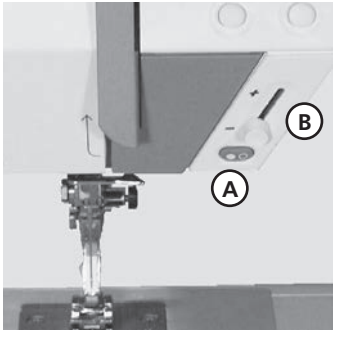
Standard accessories*:
4 bobbins (+ 1 in the capsule in the sewing computer)
Selection of 130/705H needles
Seam ripper
Screwdriver
Angle key Torx
Screwdriver Torx
Lint brush
Seam guide
Compensating plate
3 spool discs
Foam pad

Reverse pattern foot No. 1
Overlock foot No. 2
Buttonhole foot No. 3
Zipper foot No. 4
Blind stitch foot No. 5

* can vary from country to country; see presser foot selection p. 24

Fabric cover**
- protects from dust and dirt
- compartment for accessories

Start-stop-unit**

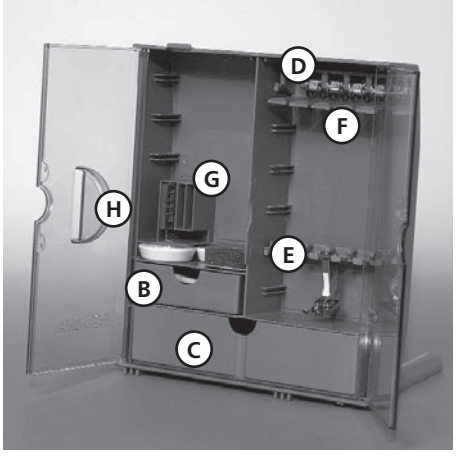


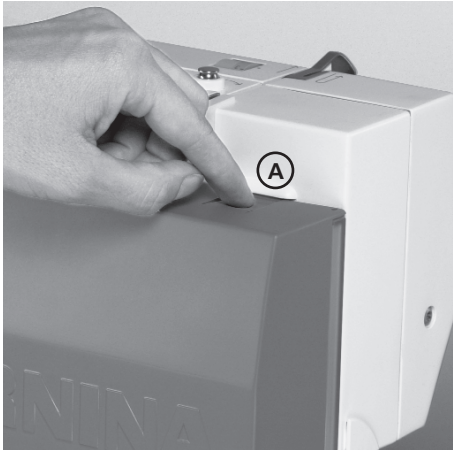
With the Start-stop-unit (SSU) the start-stop-function can be controlled by hand.
- press start-stop-button **A** = stitching starts
- with the speed regulator **B** the sewing speed can be regulated by hand
- to interrupt or stop sewing = press start-stop-button **A** again

Note:
If the foot control is connected with the sewing machine, the Start-stop-unit is out functions.

** available as a special accessory

Accessory box**





Free standing accessory box
- pull both feet out until they click into place
- stand box in chosen position

Storing accessories
Standard accessories are supplied in a plastic bag.
The box is equipped with one small and one large drawer (**B** and **C**) as well as compartments for bobbin holders **D** and presser feet **E**. (Additional compartments and drawers are available as optional extras.)

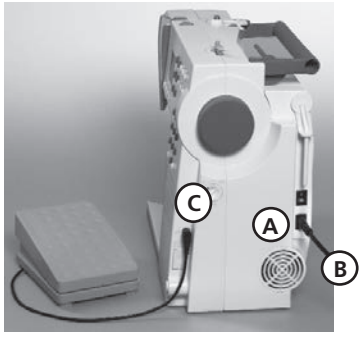
- push the bobbins into the compartments provided
- to remove a bobbin, press the compartment holder **F** lightly
- insert the presser foot shaft into the slot **E**
- the snap-on soles can be stored in the big drawer **C**
- the needle selection box can be stored in compartment **G**

Attaching the accessory box to the sewing computer
- close the doors
- push feet back into position
- attach the box to the sewing computer (catch **A** must engage); inserting the presser foot lifter into the opening **H**
  Note: first lower the presser foot lifter!

Removing the accessory box
- press catch **A** on the top of the box
- remove box to the rear

** available as a special accessory

Power cable

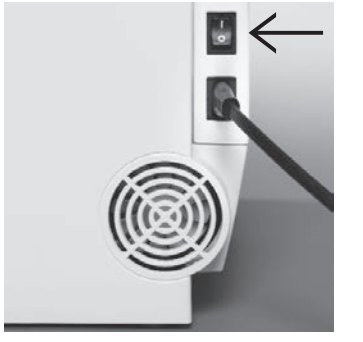


The power cable
- plug **A** into sewing computer
- plug **B** into wall socket

Foot control cable
- plug **C** into sewing computer

Important! (USA/Canada only)
This sewing computer has a polarized plug (one blade wider than the other). To reduce the risk of electric 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 electrican to install the proper outlet. Do not modify the plug in any way.

Power switch



The switch is on the hand-wheel side of the computer
1 the computer is switched on
0 the computer is switched off

The sewing light is switched on and off with the power switch.

Refer to the safety instruction!

Foot control

The foot control regulates the sewing speed
Sewing speed is adjusted by applying more or less pressure to the foot control.

Important! (USA/Canada only)
Use only foot controller type SR-1 with the sewing computer activa 125.

Self storing cord
- wind the cord on the reel
- insert the plug into the groove provided

When sewing
- unwind the cable

Sewing table*

Increases the sewing surface.

To attach
- raise the needle and presser foot
- place the table over the free arm and press firmly so that it engages on the fixing cam

To remove
- raise the needle and presser foot
- pull the table out of the fixing cam
- pull in horizontal position to the left

Scale
- «0» corresponds to the centre needle position

Seam guide
- insert into the groove (underside of table) from the right or left
- it can be freely adjusted over the whole width of the table
  Note: Should the occasion arise, remove the presser foot shaft when attaching the seam guide!

* available as a special accessory

Free-Hand-System (FHS) presser foot lifter* (knee-operated)

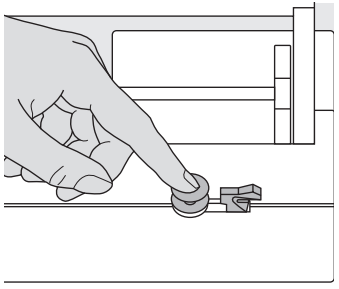
Attaching the presser foot lifter
Insert into the opening in the base plate: you should be able to operate the lifter with your knee in your normal sitting position.

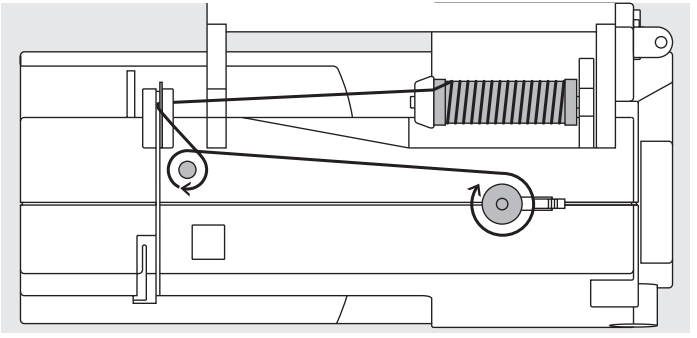
Note:
Your dealer can adjust it if necessary.

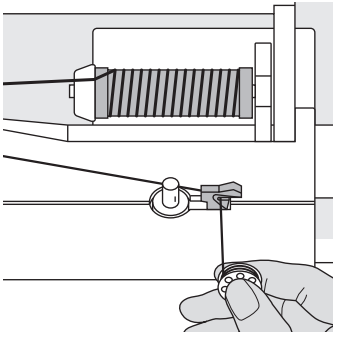
The presser foot lifter raises and lowers the presser foot
- push to the right
- the presser foot is raised
- the feed-dog is lowered simultaneously
- the feed-dog is raised as soon as the first stitch is sewn

* available as a special accessory

Winding the bobbin





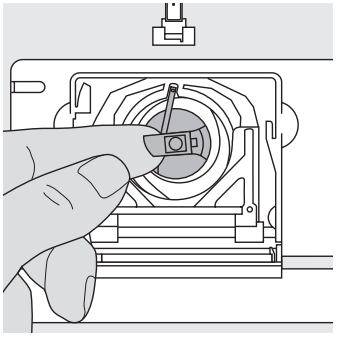


Winding the bobbin
- turn power switch on
- place empty bobbin on spindle
- following the direction of the arrow take thread through the rear guide and round the pre-tension stud
- wind it several times round the empty bobbin
- press the engaging lever against the bobbin
- press the foot control
- the motor will stop automatically when the bobbin is full
- remove the bobbin

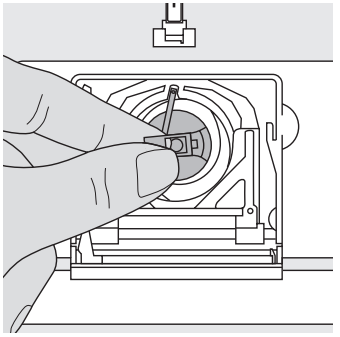
Thread cutter
- cut the thread on the thread cutter

Note:
When winding the bobbin on the vertical spool holder (p. 15), it may be necessary to adjust the speed.

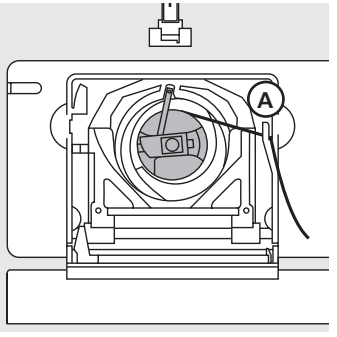
Bobbin case



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



To insert the bobbin case
- hold the bobbin case latch
- the finger on the case should point upwards
- insert so that it clicks into place

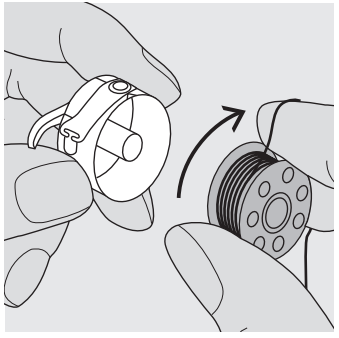


Bobbin thread cutter
- insert the bobbin case
- take the thread over cutter **A**
- thread is cut
- close the bobbin cover

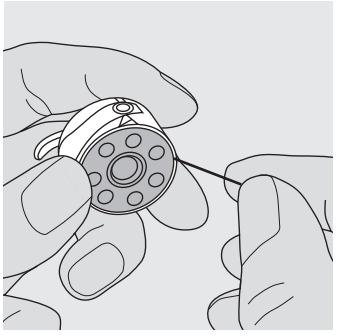
Note:
The bobbin thread does not have to be brought up as the loose end is just the right length to start sewing.

Refer to the safety instruction!

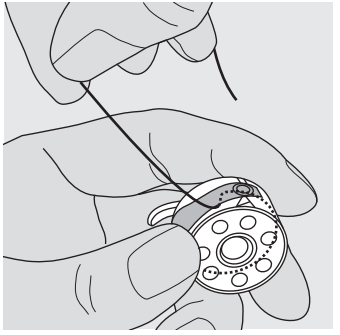
Inserting the bobbin



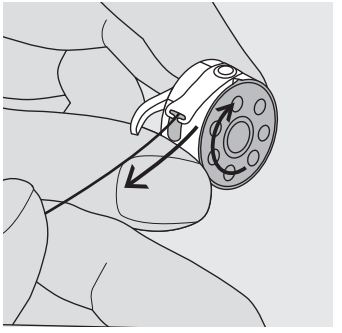
Insert the bobbin
Insert the bobbin so that the thread runs clockwise.



Pull the thread counter clockwise into the slot.

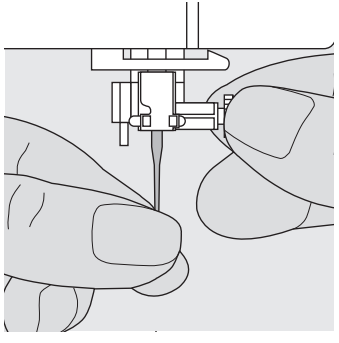


Pull the thread to the left under the spring until ...



... it lies in the T-shaped slit at the end of the spring.
The bobbin must turn clockwise when thread is pulled.

Changing the needle

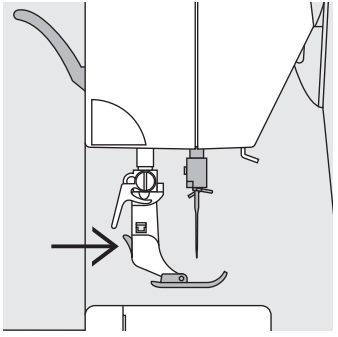


Removing the needle
- raise the needle
- turn power switch to 0
- lower the presser foot
- loosen the needle clamp screw
- pull the needle down to remove

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

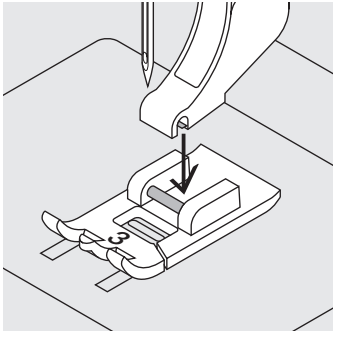
Refer to the safety instruction!

Changing the presser foot



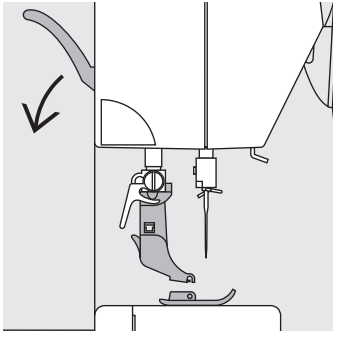
Changing the presser foot sole

- raise the needle and the presser foot shaft
- turn power switch to «0»
- press the button on the shaft to release the sole



Attaching the presser foot sole

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



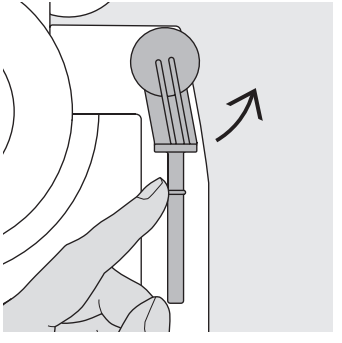
- lower the presser foot lifter and the foot sole will click into position

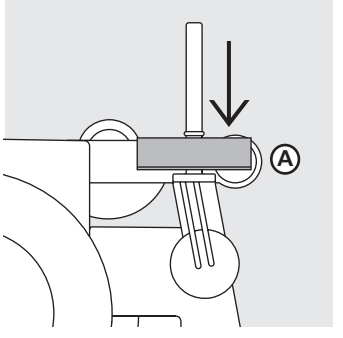
Refer to the safety instruction!

Supplementary spool pin

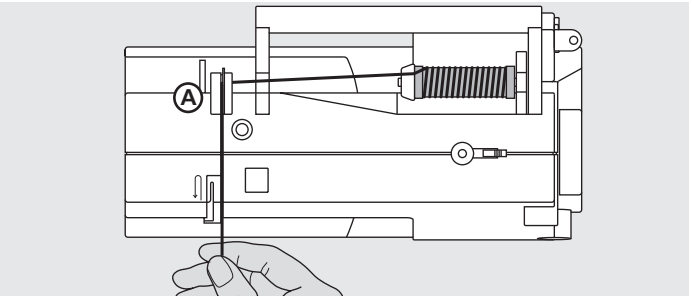
Collapsible vertical spool pin

- found on the back of the sewing computer behind the handwheel
- essential aid for sewing with more than one thread, i.e. double needle work
- raise the pin until it clicks into its vertical position
- when using large reels, add the foam pad **A** for stability

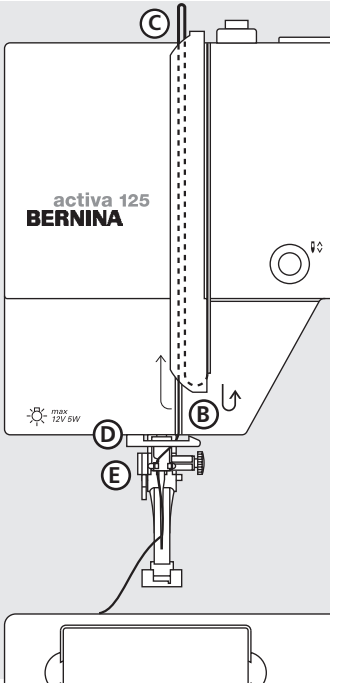


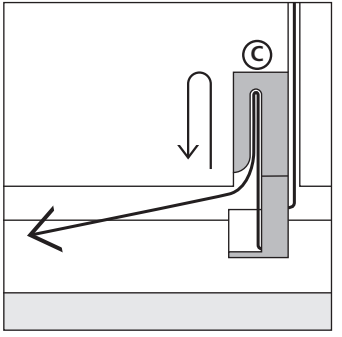


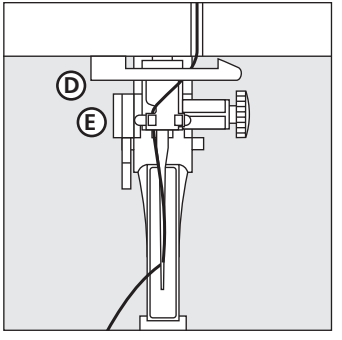
Threading the upper thread



- raise the needle and presser foot
- turn the power switch to 0
- place spool on pin and attach the appropriate spool disc (diameter of spool = disc size)
- take thread through rear guide **A**
- then into slit of upper thread tension
- pull thread down to the right of the take-up cover to **B**
- then up to the left of the cover to **C**
- and down through guides **D** and **E**

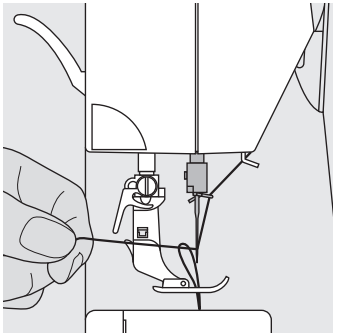






Refer to the safety instruction!

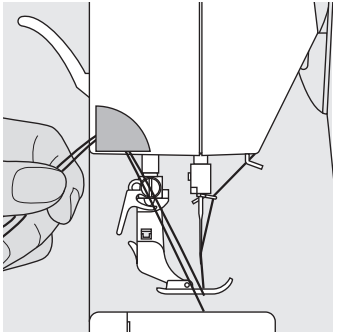
Bringing up the lower thread



- hold the upper thread
- sew one stitch
- pull the upper thread until the bobbin thread appears in the stitch plate hole
- pull bobbin thread out of the hole and insert both threads through the slit in the presser foot towards the back
- pull threads over the cutter

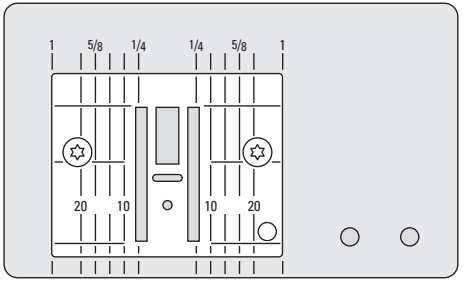
Note:
The bobbin thread must be brought up through the stitch plate for certain types of work. The length of thread is sufficient for most normal work if the lower thread cutter has been used.

Thread cutter



- pull both threads from front to back over the cutter
- the threads release as soon as the first stitch is sewn

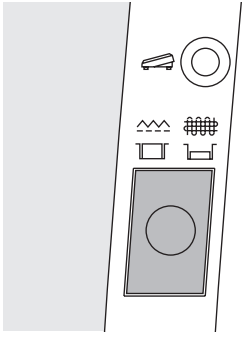
Stitch plate



Stitch plate markings

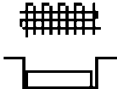
- the stitch plate is marked with seam guide lines in mm and inches
- the millimetre markings are at the front
- the inch markings are at the back
- the measurements show the distance (with needle position centre) from needle to line
- lines are provided to the right and left of the needle
- they are very useful guide lines for precise seaming
- the horizontal lines are useful for sewing corners, etc.

Feed-dog



Button below the handwheel

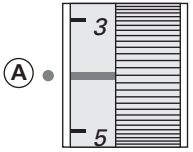
Button flush with housing =
sewing position



Button depressed = feed-dog is lowered

- for free-hand sewing (darning, embroidery, etc.)

Thread tension



The basic setting
- is indicated when the red line on the tension adjustment wheel is in line with the marking **A**
- the tension does not need adjusting for normal sewing work
- for special sewing work, the tension can be adjusted to suit the fabric

To reduce the tension
turn to between 3 and 1

To increase the tension
turn to between 5 and 10

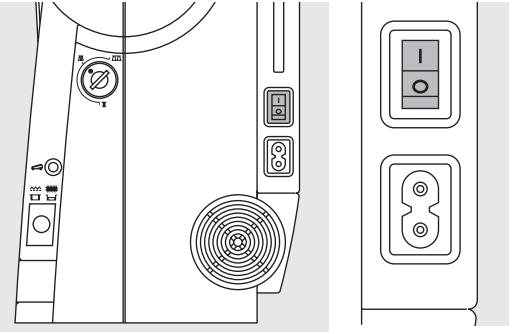
The tension is factory set for the best results. Metrosene 100/2 (Arova Mettler, Switzerland) is used to set both the upper and lower thread tension.

If other sewing or embroidery threads are used, the tension may need adjusting to suit the fabric and chosen stitch.

For example:

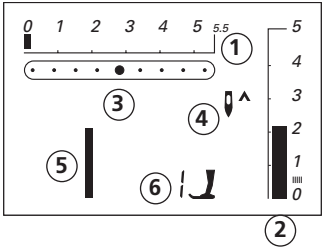
	Tension	Needle
Metallic thread	approx. 3	90
Monofilament	approx. 2–4	80

General instructions



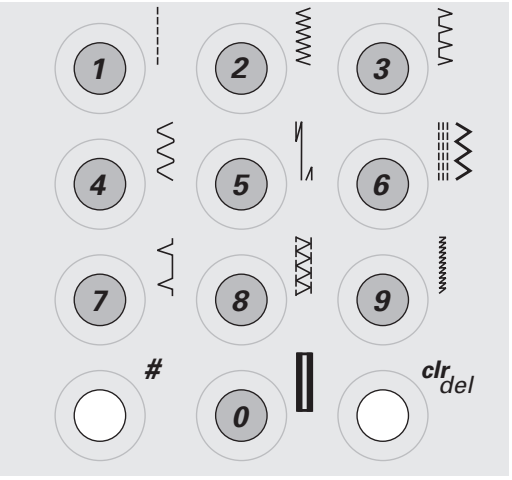
Main switch to 1

· the sewing sewing computer is ready to sew



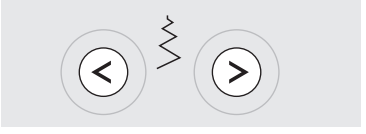
The screen shows

1 stitch width basic setting blinks constantly
2 stitch length basic setting blinks constantly
3 needle position (9 positions)
4 needle stop up/down (generally up)
5 stitch number 1 (straight stitch)
6 presser foot number 1 indicator (recommended foot for selected stitch)

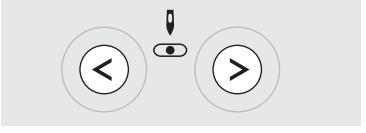


Stitch* selection
- stitches 1–10:
  touch the number of your choice; stitch number and basic width and length settings appear
  Note: touch 0 to select stitch number 10 (standard buttonhole)
- stitches 11–20:
  touch #-button and the appropriate number

* see p. 25 for the complete stitch selection



Stitch width
- left button = narrow the stitch width
- right button = widen the stitch width
- the basic settings of the chosen stitch blink constantly



Needle position
- left button = needle to the left
- right button = needle to the right

Stitch length
- left button = shorten the stitch length
- right button = increase the stitch length

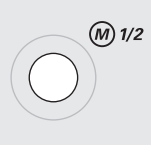
Functions

Functions are ...
activated when the symbol appears on the screen.
deactivated when the symbols no longer appear on the screen.

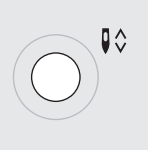
Reverse sewing
quick reverse:
- press button
- Sewing computer sews reverse until button is released (max. stitch length 3 mm)

Applications:
- programming buttonholes
- programming darning program
- switch to straight stitch securing program (stitch no. 5)
- manual securing (seam begin and end)

continous reverse:
- press button quickly twice
- the sewing computer sews the chosen stitch in reverse
- press button once again to cancel

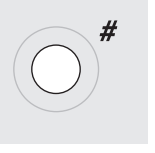


1/2 speed
- press the button and the sewing speed will be halved
- press the button again to revert to full speed

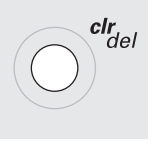


Needle stop
- basic setting needle stop up
- press button
- arrow points down = sewing computer stops with needle down
- press button again
- arrow points up = sewing computer stops with needle up

Note: Press key a bit longer = the needle will go automatically up or down.



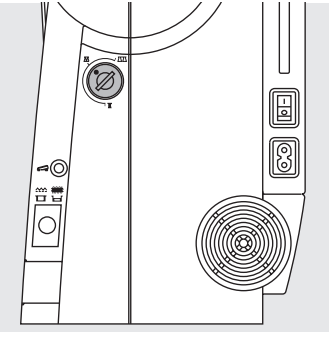
#-button
Stitch selection button (see p. 21)



clr/del (clear/delete)
- press button = reverts to basic settings
- other selected functions are cleared

Exceptions:
- needle stop down
- 1/2 speed

Balance



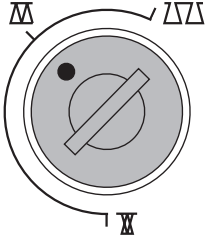
Your sewing computer has been tested and factory set using a double layer of cretonne fabric and Metrosene 100/2 threads (Arova Mettler, Switzerland).

Different fabrics, threads and stabilisers can naturally affect the stitch balance so that they are sewn too close together or not close enough.

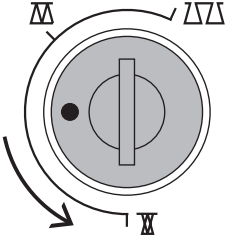
This can be remedied with Balance to suit the fabric and produce perfect results.

Applications:
Practical stitches, e.g. Honeycomb stitch on jersey, decorative stitches, fantasy stitches, letters, buttonholes, etc.

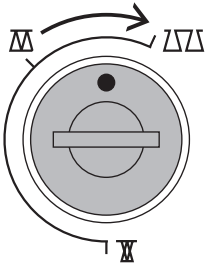
Note:
If the balance has been adjusted, return it to the normal setting once sewing is completed.



Normal position

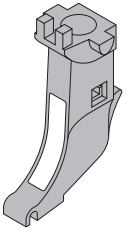


Denser stitch formation
(shorter stitch length)

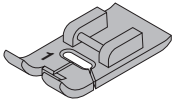


Finer stitch formation
(longer stitch length)

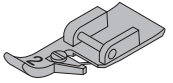
Presser foot selection (snap-on system)



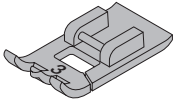
Presser foot shaft
for snap-on soles



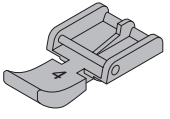
1
Reverse pattern sole
Practical stitches
Decorative stitches



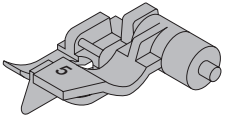
2
Overlock sole
Vari-overlock seam
Vari-overlock hem
Oversewing seam edges



3
Buttonhole sole
Buttonholes



4
Zip sole
Sewing in zips
Sewing close along raised seam



5
Blind stitch sole
Blind hemming
Edge stitching

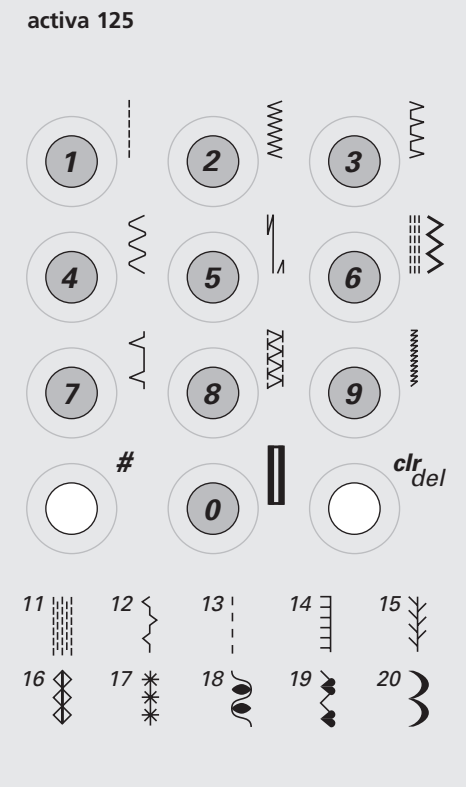
Stitches

Practical and decorative

1 Straight stitch
2 Zig-zag
3 Vari-overlock
4 Running stitch
5 Securing stitch
6 Triple straight and zig-zag
7 Blind stitch
8 Double overlock
9 Super stretch stitch
10 Standard buttonhole
11 Darning program
12 Gathering stitch

Quilting- and Decorative stitches

13–15 Quilting stitches
16–20 Decorative stitches



Stitch selection

1 Straight stitch

All non-stretch fabrics. All straight stitch work

2 Zig-zag

Most fabric types; all simple zig-zag such as oversewing fine fabrics. Sewing on elastic and lace

3 Vari-overlock

Primarily for fine jerseys, stretch overlock seams and hems

4 Running stitch

Most types of fabric. Mending, patching, reinforcing seams

5 Securing stitch

All types of fabric. Secures the beginning and end of seams sewn with straight stitch

6 Triple straight and triple zig-zag

Reinforced seams in tough, heavy fabrics

7 Blind stitch

Most types of fabric; blind hems, shell edging on soft jerseys and fine fabrics, decorative seams

8 Double overlock

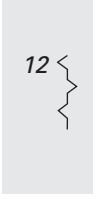
All types of knit; Overlock = sew and neaten in one operation

9 Super stretch

Open seam for all super-stretch fabrics

10 Standard buttonhole

Fine to medium weight woven fabrics; blouses, shirts, trousers, bedlinens, etc.



11 Darning program

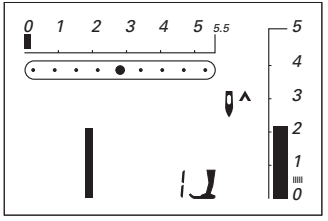
Automatic darning for fine and medium weight fabrics

12 Gathering stitch

Most types of fabric.
Gahering with shirring elastic.
Butted seams = butting two pressed edges and sewing together.

Straight stitch

Stitch: **Straight stitch No. 1**
Needle: **size and type suitable for the fabric selected (see p. 42)**
Thread: **cotton/polyester**
Feed-dog: **up (sewing position)**
Presser foot: **Reverse pattern foot No. 1**



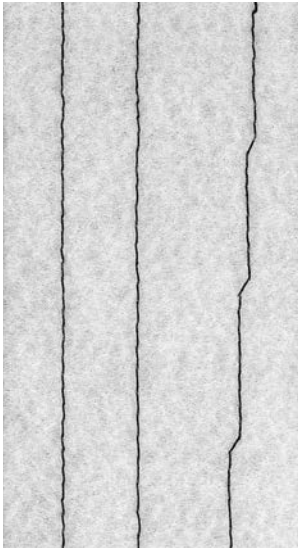
Straight stitch (A)
The sewing computer is ready to sew as soon as you switch on

The screen shows
- Stitch No. 1
- Presser foot No. 1
- basic setting (length and width) for straight stitch
- basic setting bliks contstantly

Altering the stitch length (B)
You can alter the length while you sew:
(v) shorter
(^) longer

Change the needle position (C)
(<) 4 positions to the left
(>) 4 positions to the right

Securing with the reverse button
- press the button and the sewing computer sews in reverse
- release the button and the sewing computer sews forward

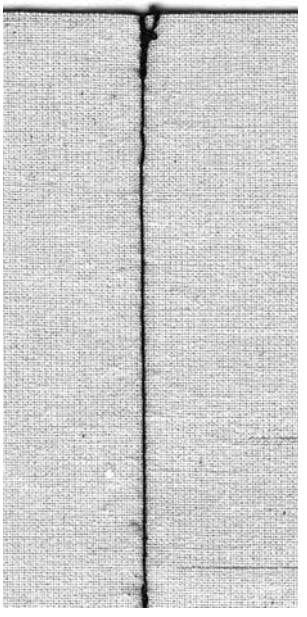


A **B** **C**

A Straight stitch with length of 2,25 mm preset length
B Straight stitch with altered length
C Straight stitch with altered needle positions

Securing program

Stitch:	**Securing program No. 5**
Needle:	**size and type suitable for the fabric selected (see p. 42)**
Thread:	**cotton/polyester**
Feed-dog:	**up (sewing position)**
Presser foot:	**Reverse pattern foot No. 1**



Securing program
- for all fabrics
- secures seam begin and end
- sews exactly over the previous stitches

Seam begin
- sewing computer secures automatically (5 stitches forwards, 5 reverse)
- continues sewing straight stitch forwards

Seam end
- press the reverse button = sewing computer secures automatically (5 stitches reverse, 5 forwards)
- stops automatically when securing is complete

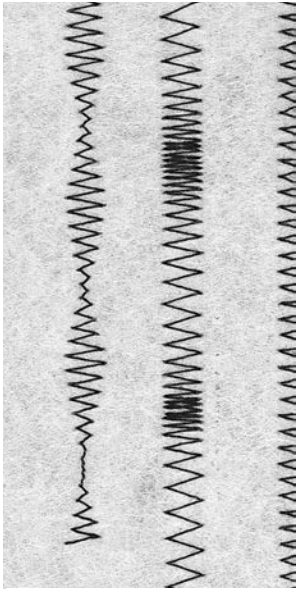
Zig-zag stitch

Stitch:	**Zig-zag No. 2**
Needle:	**size and type suitable for the fabric selected (see p. 42)**
Thread:	**cotton or polyester**
Feed-dog:	**up (sewing position)**
Presser foot:	**Reverse pattern foot No. 1**

Zig-zag stitch
for all fabrics
for neatening edges
for decorative work

Satin stitch
- dense (shorter) zig-zag stitch = filled in zig-zag
- adjust the stitch width as you sew for new effects

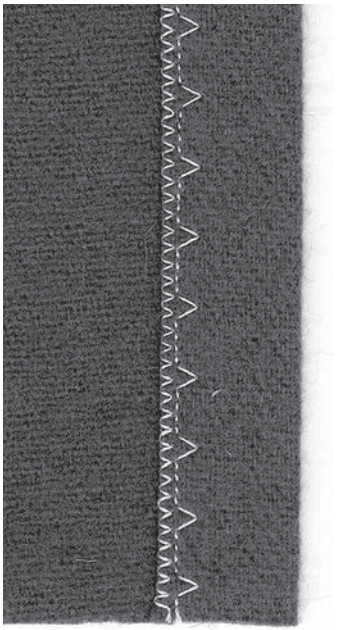
Oversewing edges (C)
- guide edge of fabric under the center of the presser foot
- needle goes into fabric on one strike and over the edge of the fabric on the next stroke
- do not select too wide a width or too long a stitch – the edge should lie flat and not roll
- use darning thread for fine fabrics



A Zig-zag stitch with altered stitch width
B Zig-zag stitch with altered stitch length
C Fabric edges finished with zig-zag stitch

Blind hem

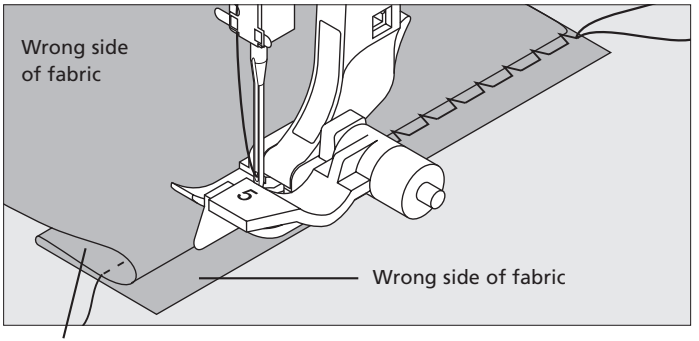
Stitch:	**Blind hem No. 7**
Needle:	**size and type suitable for the fabric selected (see p. 42)**
Thread:	**cotton or polyester**
Feed-dog:	**up (sewing position)**
Presser foot:	**Blind stitch foot No. 5**



Blind hem
for «invisible» hems in medium to heavy cotton, wool and blended fabrics

Preparation
- neaten raw edges
- prepare seam as for sewing by hand
- place work under the presser foot (see drawing)

Sewing
- the needle should just pierce the edge of the fold (same as hand sewing)
- adjust the stitch width to suit the fabric
- after sewing about 10 cm (4"), check both sides of fabric and adjust width again if necessary

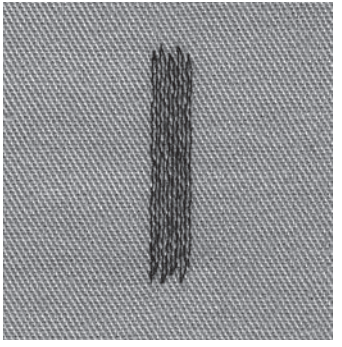


TIP

Fine stitch width adjustment
Guide the folded edge evenly along the metal guide on the foot = even depth

Darning program

Stitch: **Darning Program No. 11**
Needle: **size and type suitable for the fabric selected (see p. 42)**
Thread: **darning thread**
Feed-dog: **up (sewing position)**
Presser foot: **Reverse pattern foot No. 1**



Quick darning of holes or worn areas
Replacement of damaged fibres/threads

Darning with Reverse pattern foot No. 1 (auto stitch counter)
- insert needle in top left of damaged area
- sew the first length and stop the sewing computer
- press the securing button: length is programmed
- complete the darn; the sewing computer stops automatically
- clear the programme by pressing the «clr/del»-button

Large areas:
- the darning area can be extended by moving the work under the foot

☞ TIP

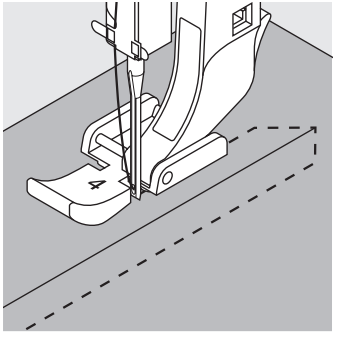
Reinforcement
use fine fabric or interlining as a backing

Preparation
stretch fabric into darning ring* prevents puckering

*The darning ring is available as special accessory

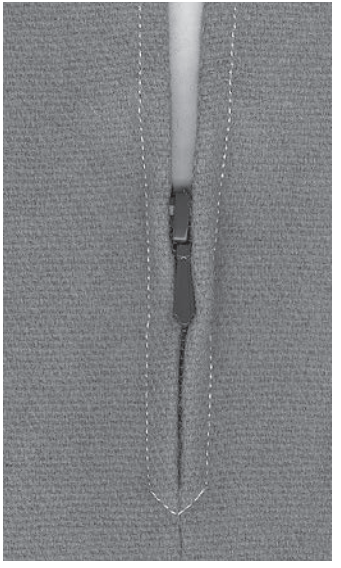
Zippers

Stitch:	**Straight stitch No. 1**
Needle:	**size and type suitable for the fabric selected (see p. 42)**
Thread:	**cotton or polyester**
Feed-dog:	**up (sewing position)**
Presser foot:	**Zipper foot No. 4**
Needle position:	**far right or far left**



Preparation:
- baste in zipper
- fabric edges should meet over the center of the zipper

Sewing
- sew in the zipper, each side from bottom to top
- once with needle position far right and once with needle position far left
- the edge of the foot runs along the teeth of the zip
- the needle inserts close to the teeth



TIP

To sew around zipper pull
- close zipper and sew up to about 5 cm (2") away from the pull
- insert needle, raise the presser foot, open the zipper, lower the foot and continue to sew

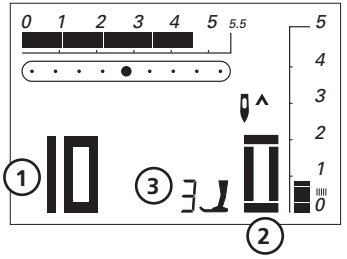
Seam begin
hold thread firmly when starting to sew = pull fabric slightly to the back (fewer stitches)

Zipper or fabric is thick or densely woven
use a 90–100 needle for even stitch formation

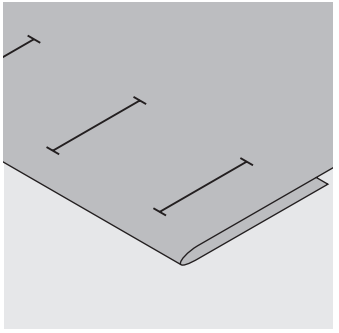
Manual buttonhole

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

Select the buttonhole stitch No. 10; the following appears on the screen:

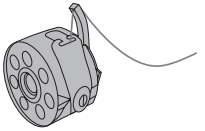


1 Buttonhole number
2 Buttonhole symbol (blinks)
3 Presser foot number



Mark the length of buttonholes
- mark the buttonhole length in the appropriate position

Note:
When all buttonholes have been sewn, return balance to the normal setting.



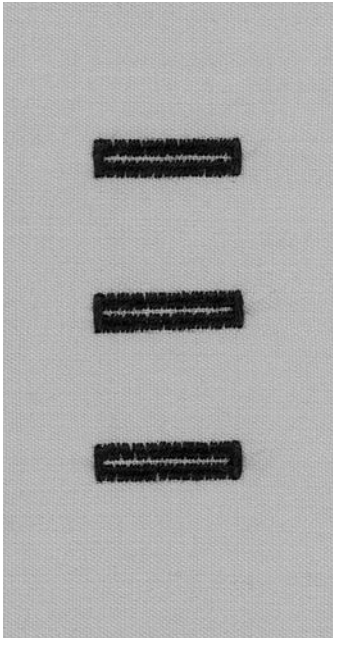
Thread tension
- thread the bobbin thread through the finger of the bobbin case = the bobbin tension is a little tighter
- this gives the beads on the right side of the fabric a slightly rounded appearance
- the buttonhole looks more attractive
- gimp reinforces buttonholes and enhances their appearance (pages 36, 37)

Test sewing
- always test sew on the fabric and stabilizer you intend to use
- sew the buttonhole in the same direction on the fabric (with or against the grain)
- cut the buttonhole open
- push the button through and adjust the buttonhole length if necessary

Corrections
- to adjust the bead width = alter the stitch width
- any alterations to the stitch length affect both beads (denser or less dense)

Balance
Any balance alterations to the 6-step manual buttonhole affects both beads identically because they are sewn in the same direction.

Stitch: **Buttonhole No. 10**
Needle: **size and type suitable for the fabric selected (see p. 42)**
Thread: **cotton or polyester**
Feed-dog: **up (sewing position)**
Presser foot: **Buttonhole foot No. 3**

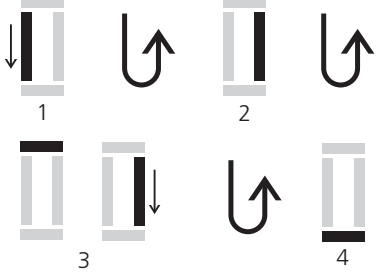


Preparation

- select the buttonhole (stitch No. 10)
- screen shows the buttonhole number (10), the presser foot No. 3 and the buttonhole symbol (the first step blinks)
- insert the lower thread in the finger of the bobbin case (see p. 34)

Sewing a manual standard buttonhole

Both beads are sewn in the same direction.
The individual steps blink on the screen.



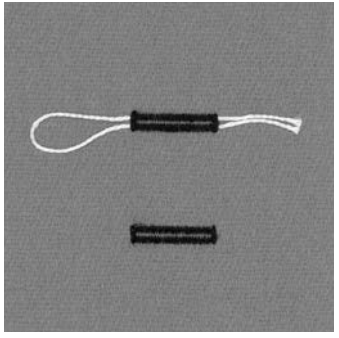
1 sew the first bead forward, stop the sewing computer
- press the reverse button

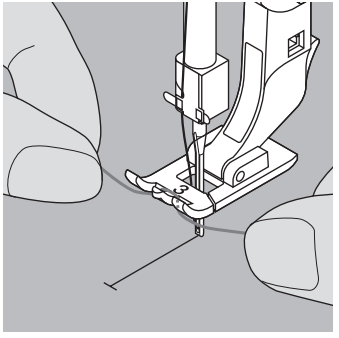
2 sew reverse straight stitch, stop the sewing computer at the first stitch (buttonhole begin)
- press the reverse button

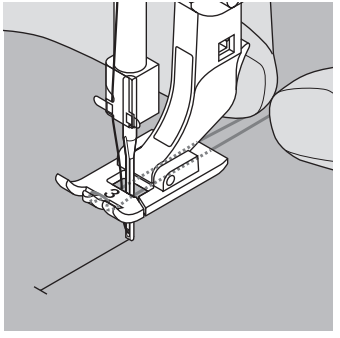
3 sew the bartack and the second bead, stop the sewing computer
- press the reverse button

4 sew the bartack and the securing stitches

Buttonhole with gimp





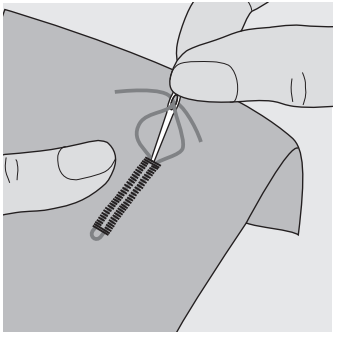


Gimp
- gimp cord reinforces buttonholes and enhances their appearance
- the loop of the cord should be at the end of the buttonhole most subject to wear cord loop = where button is sewn on
- position the work accordingly

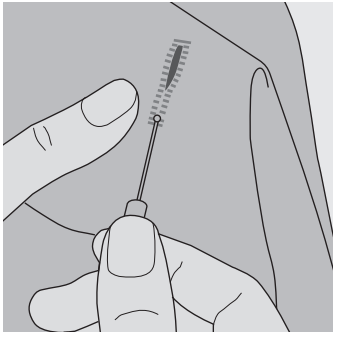
Ideal cords
- Perle yarn No. 8
- strong hand sewing thread
- fine crochet yarn

Hooking the cord onto presser foot No. 3
- insert the needle at the beginning of the buttonhole
- raise the presser foot
- hook the cord over the centre pin on the front of the foot
- place both ends of the cord in the grooves on the sole of the foot and pull them to the back
- lower the presser foot

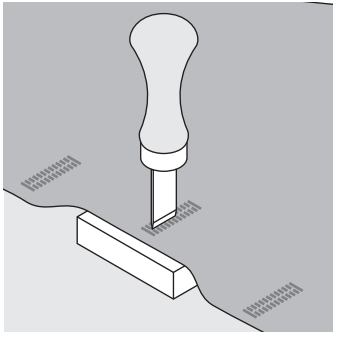
Sewing
- sew the buttonhole in the usual manner
- do not hold the cord tightly
- the buttonhole will form over the cord, covering it



Securing the cord
- pull the cord through the buttonhole
- pull cords through to back of fabric
- knot or secure with stitches



Cutting buttonholes open with the seam ripper
- use the back of the seam ripper to nick the stitches
- cut from both ends towards the middle



Buttonhole cutter and block (special accessory)
- place the fabric on the wood
- place the cutter in the centre of the buttonhole
- press down on the cutter with your hand or a hammer

Handlook quilt stitch

Stitch:	**Quilt stitch No. 13**
Needle:	**size and type suitable for the fabric selected (see p. 42)**
Upper thread:	**monofilament**
Bobbin thread:	**30/2 cotton thread**
Feed-dog:	**up (sewing position)**
Presser foot:	**Reverse pattern foot No. 1**

Quilt/hand stitch
for all fabrics and all types of work which should have a hand-sewn look

Sewing test
the bobbin thread must come through to the right side:
1 stitch is visible
1 stitch is invisible (monofilament) = hand stitched effect

Upper thread tension
depending on the fabric = increase the tension (6–9)

Balance
adjust if necessary

Sewing
Quilt stitch can be sewn with any needle position

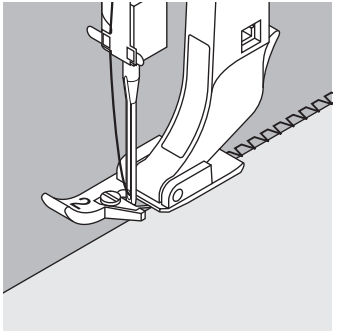
☞ TIP

Perfect corners
- activate needle-stop down and then turn work

Monofilament breaks
- sew more slowly
- reduce upper thread tension slightly

Vari-overlock seam

Stitch:	**Vari-overlock No. 3**
Needle:	**size and type suitable for the fabric selected (see p. 42)**
Thread:	**cotton or polyester**
Feed-dog:	**up (sewing position)**
Presser foot:	**Overlock foot No. 2 or Reverse pattern foot No. 1**



Overlock foot No. 2 is specially designed for overlock stitches. The pin on the foot produces more thread in each stitch so that the elasticity of the seam is maintained.

Closed seam
Stretchy seam in fine, soft knits such as silk jersey and interlock.

Sewing
- guide the raw edge along the pin on the overlock foot
- the stitch will form over the pin and over the edge of the fabric

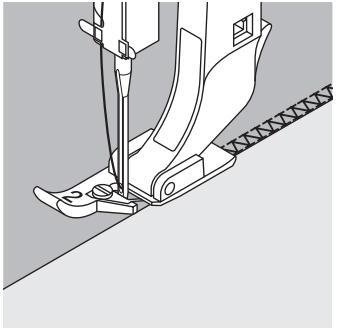
TIP

Knits and jersey
use a new needle to prevent damaging the loops

Sewing stretch fabrics
if necessary use a stretch needle (130/705H-S) = needle point slides between the fibers

Double overlock seam

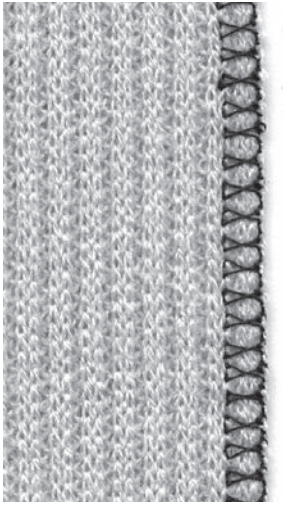
Stitch:	**Double overlock No. 8**
Needle:	**size and type suitable for the fabric selected (see p. 42)**
Thread:	**cotton or polyester**
Feed-dog:	**up (sewing position)**
Presser foot:	**Overlock foot No. 2 or Reverse pattern foot No. 1**



Overlock foot No. 2 is specially designed for overlock stitches. The pin on the foot produces more thread in each stitch so that the elasticity of the seam is maintained.

Closed seam
overlock seam in loose knits and cross seams in knits and jerseys

Sewing
- guide the raw edge along the pin on the overlock foot
- the stitch will form over the pin and over the edge of the fabric



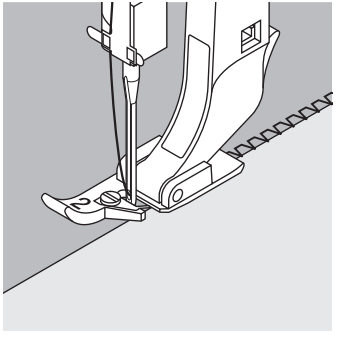
TIP

Knits and jersey
use a new needle to prevent damaging the loops

Sewing stretch fabrics
if necessary use a stretch needle (130/705H-S) = needle point slides between the fibers

Ribbing with overlock seam

Stitch:	**Vari-overlock No. 3**
Needle:	**size and type suitable for the fabric selected (see p. 42)**
Thread:	**cotton or polyester**
Feed-dog:	**up (sewing position)**
Presser foot:	**Overlock foot No. 2 or Reverse pattern foot No. 1**

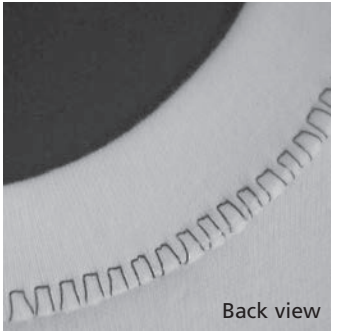


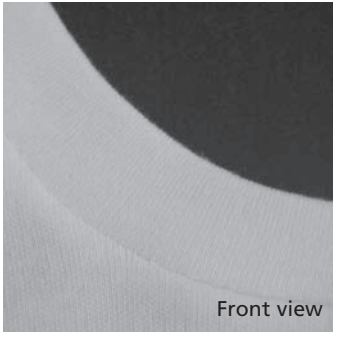
Overlock foot No. 2 is specially designed for overlock stitches. The pin on the foot produces more thread in each stitch so that the elasticity of the seam is maintained.

Ribbing with overlock seam
for all fine cotton, synthetic and mixed fiber jersey

Preparation
- fold ribbing in half
- pin and baste to opening, right side outside

Sewing
- sew Vari-overlock over the raw edge
- guide the edge along the pin on the foot


Back view


Front view

TIP

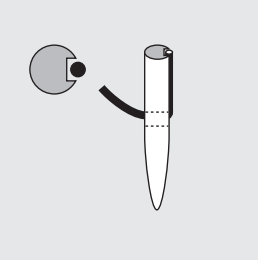
Needle stop down
needle stays in fabric when you stop to adjust the ribbing

Important facts about sewing computer needles

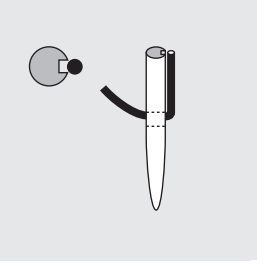
Sewing computer, needle and thread
Your **BERNINA** uses needle system 130/705H.

Needle and thread
The most commonly sold needles are nos. 70–120.
The finer the needle, the lower the number. The table shows which needle is suitable for which threads.

Needle	70	80	90	100	110–120
Darning thread	●	●			
Embroidery thread		●			
Mercerised cotton thread		●	●		
Synthetic thread		●	●		
Thick threads, synthetic mercerised thread			●	●	
Buttonhole thread for decorative seams (cordonnet)				●	●

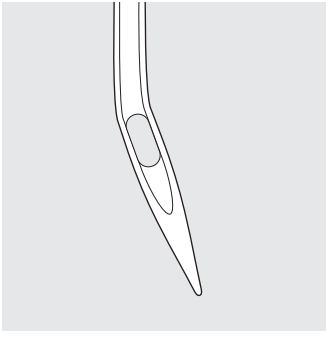


Needle appropriate for thread
When sewing, the thread runs in the long groove on the needle.

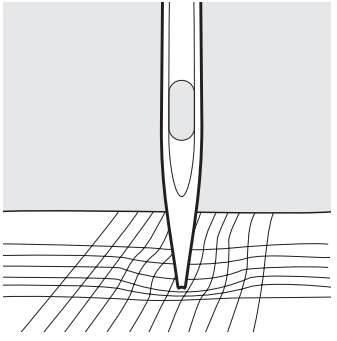


Needle inappropriate for thread
If the needle is too fine, the groove will be too narrow for the thread and faulty stitching or thread breakage can occur.

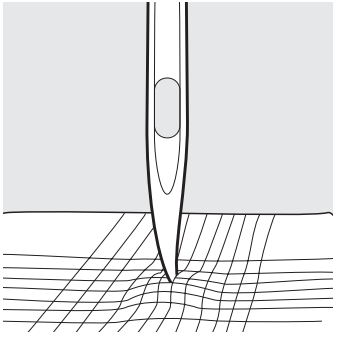
Needle and fabric
Condition of needle
The needle must be in perfect condition.
Problems can occur with damaged needles.



bent needle



blunt needle



hooked needle

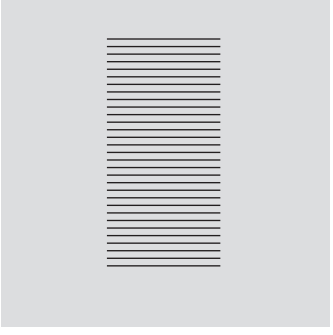
Special materials are easier to sew if the appropriate needle is used.
Special needles are available at your **BERNINA** dealer.

Needle table	Description	Needle point	Suitable for	
Standard needle	130/705 H	Normal point, slightly rounded	Universal needle for woven, needle synthetic and natural fibers, e.g. linen, chiffon, batiste, organdie, wool, satin, decorative stitching, embroidery	
Special needles	130/705-SES	Fine ball point	Fine knits, especially for synthetic fibers	
	130/705 H-SUK	Medium ball point	Heavier knits in synthetic or natural fibers	
	130/705 H-S	Medium ball point	Special needle for delicate or difficult stretch fabrics	
	130/705 H-J	Extra fine point	Overalls, heavy linen, denim, canvas. Pierces dense fabrics easily	
	130/705 H-LR + H-LL	Cutting point	Natural and synthetic leather, plastic, coated and waxed fabric	
Double needle	130/705 H ZWI	Widths: 1,6 / 2,0 / 2,5 3,0 / 4,0	Visible hems in stretch fabrics, pintucks, decorative sewing	
Triple needle	130/705 H DRI	Widths: 2,5 / 3,0	Decorative sewing	
Hemstitch needle	130/705 H HO	Width: 2,0	Hemstitch in loose weaves	

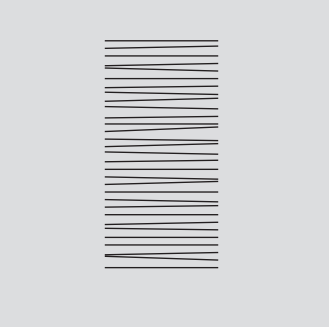
Feed-dog and fabric feed

Feed-dog and stitch length
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 short. The fabric moves under the foot quite slowly, even at full sewing speed. Buttonholes, satin stitch and decorative stitches are all sewn with a very short stitch length.

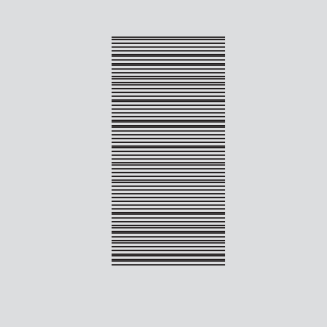
Important



Let the fabric feed evenly!

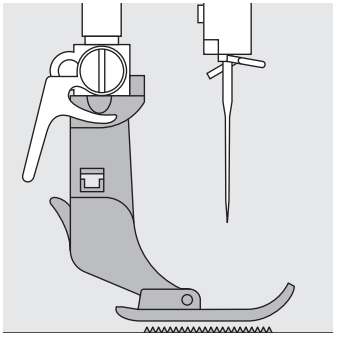


Pulling or pushing will result in gaps.

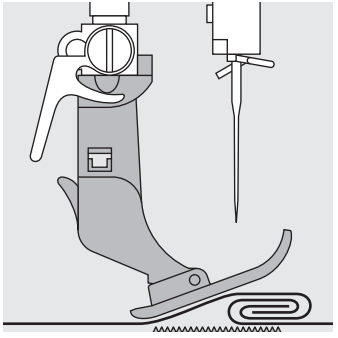


Holding back will result in knots.

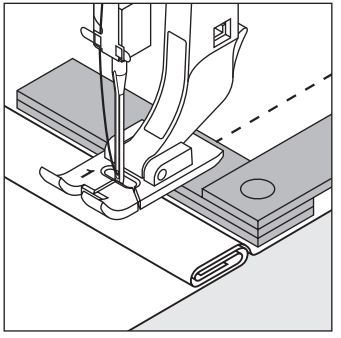
Feed-dog and fabric feed with compensating plates



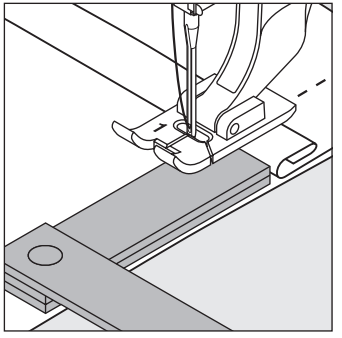
The feed-dog can work normally when the foot is level.



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 and the fabric hangs up.

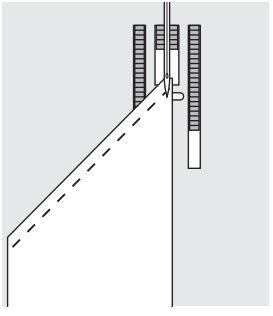


Uneven layers
To solve this problem, place one, two or three compensating plates as required behind the needle under the presser foot.

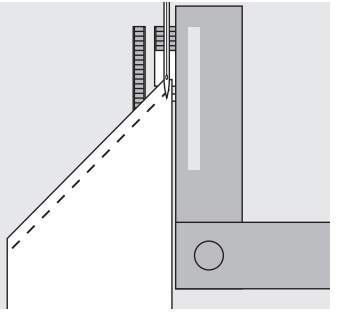


To correct the height in front of the foot, place one or more plates to the right of the foot close to the needle. Sew until the foot is level again and remove the plates.

Thick fabrics: feed-dog and sewing corners



The gap between the two rows of teeth is relatively large due to the width of the stitch plate hole.
When sewing corners only a small section of the fabric is actually on the feed-dog so that it cannot grip the fabric well.



Correct this by placing one or more compensating plates as close as possible to the edge of the fabric.

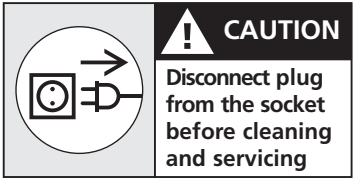
Cleaning

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

Cleaning
Clean the sewing computer after every use
- turn power switch to 0
- remove presser foot and needle
- open the free-arm cover
- unscrew the stitch plate (with screwdriver TORX)
- lift and remove it
- clean the area with the brush
- replace the stitch plate

Cleaning the hook
- turn power switch to 0
- remove the bobbin case
- push the release lever to the left
- push the locking lever to the left and fold down the 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 so that 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

Cleaning the screen and the sewing computer
- wipe with a damp cloth



Lubricating
This sewing computer is equipped with a LM (low mass) hook system which requires no lubrication.
If however you do lubricate any parts, always run the sewing computer immediately afterwards on scrap material to avoid soiling your work.

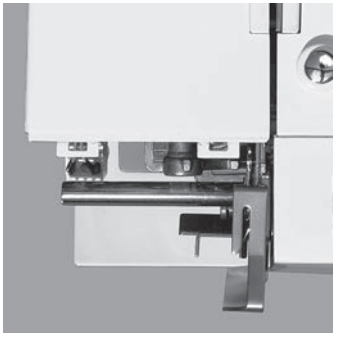
Important!
Never use alcohol, petrol, white spirit or any type of solvent to clean the sewing computer!

Refer to the safety instruction!

Sewing light

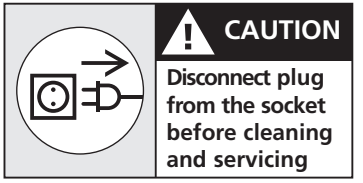
Replacing the bulb

- turn power switch to «0»
- loosen the screw



- remove the cover by lifting it slightliy and detaching from the top

- remove the bulb
- insert the new bulb
- replace cover and tighten screw



Note:
Use bulb type
12 V 5 W.
W 2.1 x 9.5 d.

Light bulbs get hot.
Allow to cool down before removal.

Refer to the safety instruction!

Trouble shooting

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

Check whether:
- the upper and lower threads are threaded correctly
- the needle is inserted correctly
- the needle size is correct – check the needle/thread table p. 42
- the sewing computer is clean – brush out any thread fluff
- the hook race is clean
- any threads are trapped between the tension discs or under the bobbin case spring
- the bobbin runs smoothly in the case or if remnants or lint need removing

Upper thread breaks
- The upper thread tension is too tight.
- The needles are of a poor quality. Ideally needles should be purchased from your **BERNINA** dealer.
- The needle is bent or blunt.
- Poor quality, knotted or dried out thread has been used.
- Use the correct spool disc.
- Stitch plate or hook tip damaged. Take your sewing computer to your **BERNINA** dealer.

Lower thread breaks
- The lower thread tension is too tight.
- The bobbin is jamming in the bobbin case. Remove and replace the bobbin.
- The hole in the stitch plate has been damaged by the needle. This must be repolished by an expert.
- The needle is blunt or bent.

Skipped stitches
- Wrong needles used. Use only 130/705H system.
- The needle is blunt, bent or incorrectly inserted.
- Push right to the top when inserting.
- Needle inserted all the way to the top.
- The needle point does not suit the fabric being sewn. If necessary use a ball point for knitted fabrics and cutting point for hard leather.

Needle breaks
- Needle clamp screw loose.
- Fabric taken out in front instead of behind presser foot.
- When sewing over thick area, the fabric was pushed with the needle still in the fabric.
- Poor quality thread, unevenly wound or knotted.
- See pages 42–44 for information about needles

Faulty stitching
- Remnants of thread between the tension discs.
- Remnants of thread under the bobbin case spring.
- Lower thread still threaded in the bobbin case finger.
- Sewing computer threaded with foot down.
- Incorrect threading. Check upper and lower threads.
- Use the correct spool disc.

Sewing computer fails to run or runs slowly
- Plug not properly inserted.
- Power switch in off position.
- Sewing computer has been standing in a cold room.
- Bobbin winder still switched on.

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