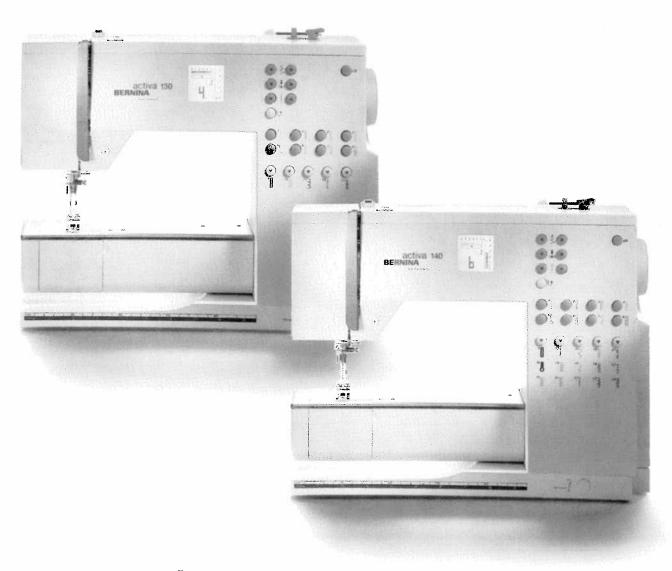
# **BERNINA®**

## Instruction Manual & Sewing Manual



activa 130 BERNINA

Made in Switzerland

activa 140 BERNINA

Made in Switzerland

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### **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 machine.

When the machine 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:

- A machine should never be left unattended when plugged in.
- 2. Always unplug this machine from the electric outlet immediately after using and before cleaning.
- 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:

- Do not allow to be used as a toy. Close attention is necessary when this machine is used by or near children.
- 2. Use machine 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 machine if
  - $\cdot$  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 machine to the nearest authorized **BERNINA** dealer or service center for examination, repair, electrical or mechanical adjustment.

- Never operate the machine with any air openings blocked. Keep ventilation openings of the sewing machine 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.
- 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 machine 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.
- 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 machine.
- 17. This machine is provided with double insulation.
  Use only identical replacement parts. See instructions for Servicing of Double-Insulated machines.

### 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 grounding 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 those parts in the product. A double insulated product is marked with the words «DOUBLE INSULATION» or «DOUBLE INSULATED».

The symbol may also be marked on the product.

## SAVE THESE INSTRUCTIONS!

This sewing machine is intended for household use only.

# **BERNINA®**



"Welcome to

the BERNINA

family"

#. P. June L.

WAY.

H. P. Ueltschi Owner BERNINA Sewing Machine Company Choosing **BERNINA** is a decision which will have **a positive impact** on your sewing **for years** to come. Customer satisfaction has been the driving force of our family company for over 100 years and **I intend to continue** that tradition of delivering superb Swiss quality, future-oriented sewing technology and unparalleled customer service.

The new BERNINA family of creative sewing machines gives you the unique opportunity to select a la carte what you need to satisfy your sewing needs and requirements.

In addition a wide range of sewing accessories together with supportive educational publications full of practical and creative ideas add to the joy of sewing the BERNINA

It gives me great pleasure to welcome you into the BERNINA family.

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

Setting up the machine

**Operating instructions** 

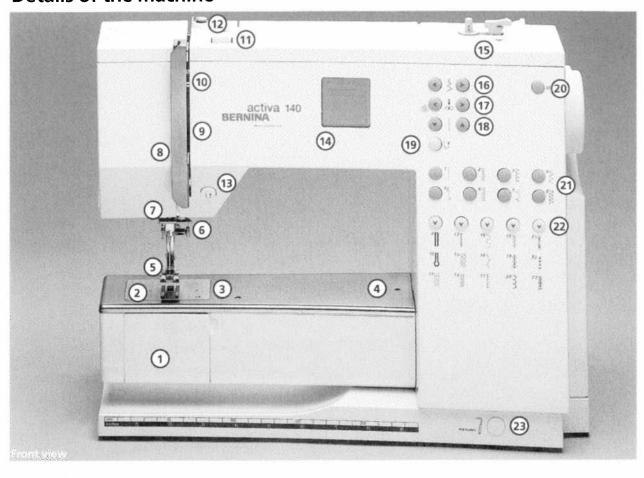
Stitches Presser feet

Needle and thread Fabric feed

Cleaning Maintenance Trouble shooting

Index

### **Details of the machine**



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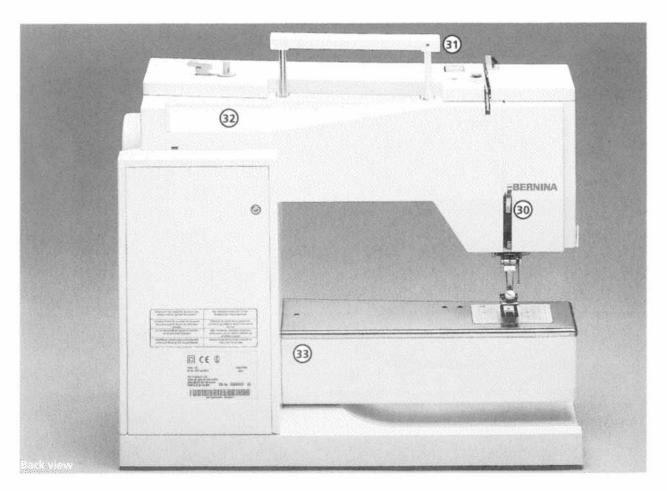
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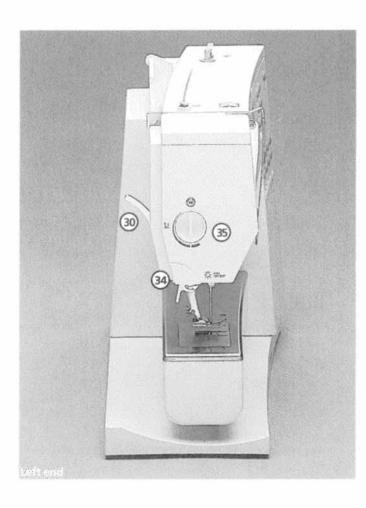
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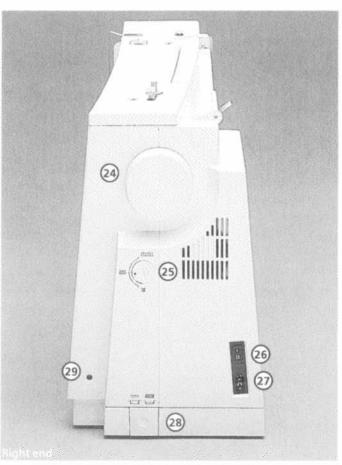
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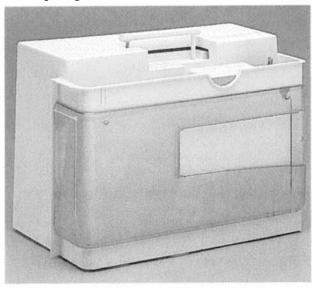






- Bobbin cover
- 2 Stitch plate
- 3 Attachment base
- 4 Darning ring fixation hole
- 5 Presser foot
- 6 Needle clamp
- 7 Thread guide
- 8 Thread take-up cover
- 9 Thread slit
- 10 Thread take-up
- 11 Tension adjustment wheel
- 12 **Bobbin pre-tension**
- 13 Quick reverse button
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- 15 **Bobbin winder with on/off switch** and thread cutter
- 16 Stitch width
- 17 Needle position
- 18 Stitch length
- 19 Continuous reverse button
- 20 Clear button
- 21 Stitch buttons
- 22 Stitch Row buttons
- Opening for presser foot lifter (FHS) (special accessory for activa 130, 140)
- 24 Handwheel
- 25 Balance
- 26 Power switch on/off
- 27 Plug socket
- 28 **Drop feed-dog**
- 29 Foot control socket
- 30 Presser foot lifter
- 31 Carrying handle
- 32 Spool pins
- 33 Sewing table socket
- 34 Thread cutter
- 35 Presser foot pressure

### **Carrying case**



#### Carrying case

- · protects machine from dust and dirt
- · compartment for accessories

#### Accessories

- · foot control
- · instruction manual
- · power cable
- · warranty card
- · presser foot lifter\*
- · sewing table\* (attached)

To remove the sewing table, lift slightly and remove.

\* Available as special accessory for activa 130, 140



#### To remove the case

- · grasp both sides
- · pull off vertically

#### Note

The separate spool pin must be removed to put the case on.

### **Accessory box**



### Enlarges the sewing surface

 To open, lower the cover to the back



#### To remove

· pull the box to the left to work in free-arm mode

#### To attach

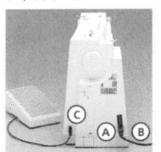
 push the box to the right until it engages

#### Note:

To remove the box, the hinged bobbin case cover on the free-arm must be closed.



Accessory box



**The power cable** is stored in the case

- · plug A into machine
- · plug B into wall socket

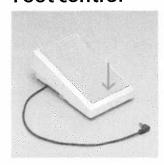
#### Foot control cable

plug C into machine

Important! (USA/Canada only)

This sewing machine 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.

### **Foot control**

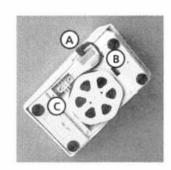


### The foot control regulates the sewing speed

raise or lower the needle by tapping on the foot control with your heel

#### Important!

(USA/Canada only) Use only foot controller type LV1 or LV2 with sewing machines activa 130/140.



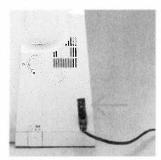
#### Self storing cord

- · wind the cord on the reel
- · insert the plug into A

#### When sewing

slip the cable unwound to the desired length in B or C

#### **Power switch**



The switch is on the handwheel side of the machine

- $\cdot$  **1** the machine is
- switched on
- **0** the machine is switched off

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

Refer to the safety instructions!

### Sewing table\*



### Increases the sewing surface

#### To attach

 place over the free arm and press firmly so that it engages on the fixing cam

#### To remove

- · pull to the left
- remove

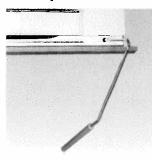
#### Seam guide

- insert into the groove (underside of table) from the right
- it can be freely adjusted over the whole width of the table

#### Scale

- number "0" corresponds to the centre needle position
- \* Available as a special accessory for activa 130, 140

### FHS (Free Hand System) presser foot lifter\*



## 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

## Attaching the presser foot lifter

The presser foot lifter is stored in the case

 insert the presser foot lifter into the opening in the base plate

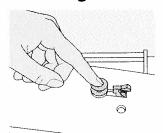
You should be able to operate the lifter with your knee in your normal sitting position

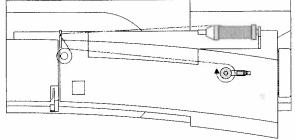
#### Note:

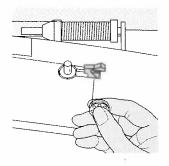
Your dealer can adjust it if necessary.

\* Available as a special accessory for activa 130, 140

### Winding the bobbin





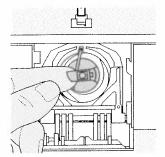


 cut the thread on the thread cutter

#### Winding the bobbin

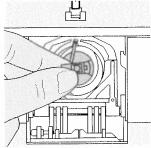
- · turn power switch on
- place empty bobbin on spindle
- following the direction of the arrow take thread through the rear guide and round the pre-tension stud
- · wind it several times round the empty bobbin
- press the engaging lever against the bobbin
- press the foot control
- · the motor will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

### **Bobbin case**



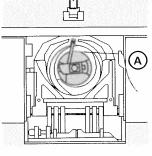
#### To remove

- raise the needle
- · turn power switch to 0
- open the accessory box
- open the bobbin cover
- · grasp the latch of the bobbin case
- · remove case



#### To insert

- hold the bobbin case latch
- the finger on the case should point upwards
- · insert so that it engages until it clicks
- · close the bobbin cover
- · close the accessory box cover



#### **Bobbin thread cutter**

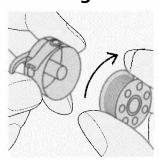
- · insert the bobbin case
- · take thread over cutter A
- · thread is cut

Refer to the safety instructions!

#### Note:

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

### Inserting the bobbin



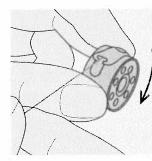
Insert the bobbin so that the thread runs clockwise.



Pull the thread counter clockwise into the slot.

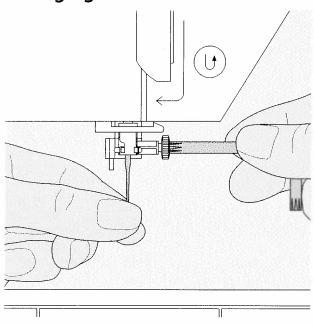


Pull the thread to the left under the spring until it lies in the T-shaped slit at the end of the spring.



The bobbin must turn clockwise when thread is pulled.

### Changing the needle



#### Removing the needle

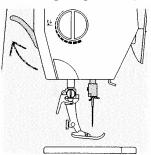
- · raise the needle
- · turn power switch to 0
- · remove the presser foot
- · loosen the needle clamp with the special screwdriver
- · pull the needle down to remove

#### Inserting the needle

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

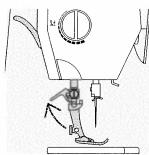
Refer to the safety instructions!

### Changing the presser foot

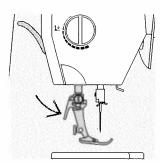


#### Presser foot with shank

- raise the needle and presser foot
- turn power switch to 0



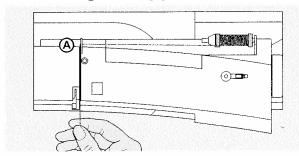
- · raise the clamping lever
- · remove the presser foot



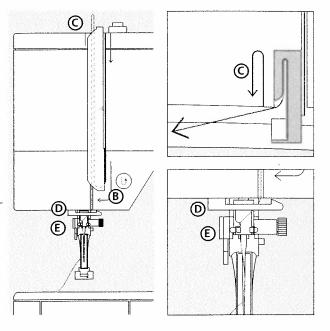
#### Attaching the presser foot

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

### Threading the upper thread

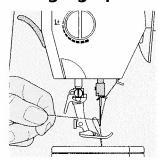


- · raise the needle and presser foot
- turn the power switch to 0
- place spool on pin and attach the appropriate spool disc diameter of spool = disc size
- · take thread through rear guide A
- · then into slit of upper thread tension
- pull thread down to the right of the take-up cover to B
- then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

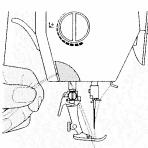


Refer to the safety instructions!

### Bringing up the lower thread

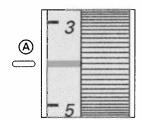


- · hold the upper thread
- sew one stitch
- · pull the upper thread to bring the lower thread up through the stitch plate hole
- take both threads through the slit on the presser foot to the back
- · pull threads over the cutter



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

### **Thread tension**



#### **Basic settings**

- 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

The tension can react differently when sewing with unusual threads and it is necessary to adjust the tension and select a needle which suits the thread.

#### For example:

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

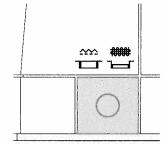
#### To reduce the tension

- Turn to between 3 and 1

#### To increase the tension

· Turn to between 5 and 10

### Feed-dog

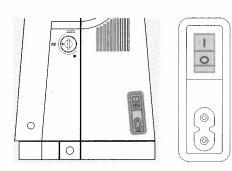


Button flush with base plate = sewing position

Button depressed = feed-dog is lowered

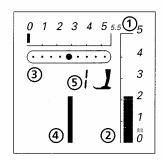
· for free-hand sewing (darning, embroidery, etc.) £III

### **General Instructions**



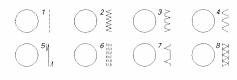
#### Main switch to 1

· The machine 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 stitch number
- **5** presser foot indicator (recommended foot for selected stitch)

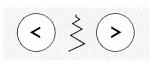


#### Stitch selection

· press the appropriate button - the number and basic stitch length and width settings appear on the screen



· These buttons are to select vertically arranged stitches



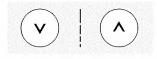
#### Stitch width

- · left button narrow the zig-zag · right button widen the zig-zag



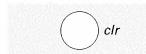
#### **Needle** position

- · left button needle to the left
- · right button needle to the right



#### Stitch length

- · left button shorten the length
- · right button elongate the length



#### clr button

- · deletes altered basic settings
- deletes selected functions

#### exceptions:

altered basic settings for buttonhole

### **Functions**

Functions are **activated** when the symbol appears on the screen.

Functions are **deactivated** when the symbols no longer appear on the screen.



#### Continuous reverse

· machine sews permanently in reverse



#### Quick reverse

- · for programming buttonholes
- · for programming darning
- conversion from sewing to securing program
- · manual securing for seam beginning and ending



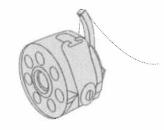
#### clear (clr)

deletes functions such as altered basic settings, stitch length, stitch width, needle position, permanent reverse sewing, securing seam beginning and ending

**Exceptions:** needle stop down, altered basic settings for buttonholes

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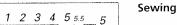
### **Buttonholes**

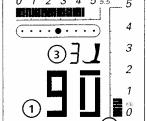


The method is the same for all buttonhole types.

#### Preparation

- · thread the bobbin thread in the bobbin case finger
- · use buttonhole foot no. 3





- Select the buttonhole of your choice Screen shows:
- 1 buttonhole number
- 2 buttonhole symbol
- **3** presser foot

Try to sew both bead with the same speed.

- · sew first bead, stop machine
- press the quick reserve button (over the needle in the front head)
- · sew bottom bartack and second bead, stop machine
- · press the quick reserve button (over the needle in the front head)
- sew top bartack and securing stitches machine stops automatically

auto

screen shows <auto> = the buttonhole is now programmed

- · sew all further buttonholes without interruption
- machine stops automatically at the end of each buttonhole
- · delete programmed buttonholes with the clr button

#### Corrections

#### Stitch length, stitch width

- stitch length and width alterations affect both beads (denser or spread apart)
- · when the stitch length has been altered, save buttonhole again
- · altered stitch lengths and widths cannot be deleted with clr

#### Return to basic settings

- · delete altered settings manually
- · press any stitch button and press buttonhole button again

#### Balance

- · affects both beads
- after altering the balance, delete the previously programmed buttonhole with clr

save again with altered balance settings



2. Finer bead



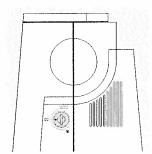
2. Denser bead

7777

#### Note:

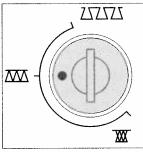
After sewing the buttonhole, return the balance to its normal setting!

### **Balance**

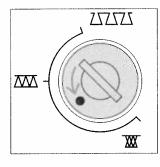


#### **Balance**

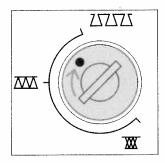
For balancing forward and reverse sewn stitches and for fine stitch length adjustments.



Normal position



**Denser stitch formation** (shorter stitch length)

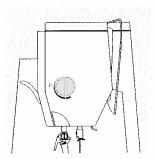


Finer stitch formation (longer stitch length)

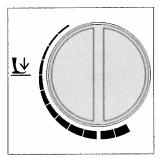
#### Applications:

Practical stitches, e.g. Honeycomb stitch on jersey, decorative stitches, buttonholes

### **Presser foot pressure**

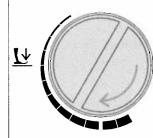


Pressure adjustment left end of machine



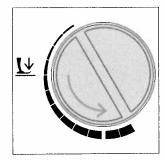
Standard pressure

· for normal sewing work



#### Reduced pressure

- · for jerseys and loose knits
- to prevent fabric stretching
- adjust pressure so that the fabric still feeds correctly



#### Increased pressure

 slippery, light weight fabrics improves fabric feed

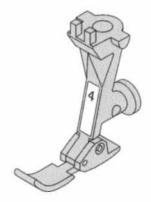
### **Presser foot selection**



1 Reverse pattern foot Practical and decorative stitches



**Buttonhole foot**Buttonholes



4
Zipper foot
Sewing in zippers and topstitching raised seams



5 Blind stitch foot Blind hems, edge stitching

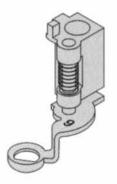
### **BERNINA** special presser feet

The standard selection of presser feet covers most normal sewing requirements but we recommend the use of **BERNINA** purpose-designed feet for special sewing tasks such as quilting, patchwork etc.

As special requirements vary, these special feet are not included as standard but you can select 2 special feet from a wide range to suit your particular needs at **no extra** cost. They are available from your **BERNINA** dealer.



32
Pintuck foot – 7 Groove
(2 mm Double needle)
Pintucking in fine to
medium-weight fabrics



9 Darning foot Darning Monograms Free-hand sewing

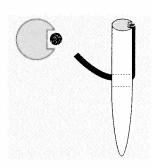
### Important facts about sewing machine needles

#### Sewing machine, needle and thread

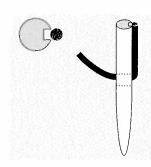
Your BERNINA uses needle system 130/705H.

#### 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. The needle you use depends on the thread. The needle must be suitable for the thread.



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

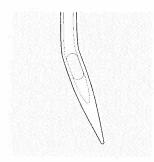


If the needle is too fine the groove cannot take the thread and faulty stitching occurs.

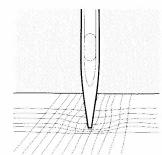
#### 70 Needle 80 90 100 110-120 **Darning thread** 0 **Embroidery** 0 thread Mercerised cotton thread Synthetic 0 thread Thick threads, synthetic mercerised thread **Buttonhole thread** 0 for decorative seams (cordonnet)

#### Needle and fabric Condition of needle

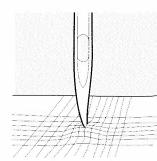
The needle must be in perfect condition. Problems can occur with damaged needles.



bent needle



blunt needle



hooked needle

## Important facts about sewing machine needles

Special materials are easier to sew if the appropriate needle is used.

needie 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, 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 DO	Widths: 1,6 / 2,0 / 2,5 / 3,0 / 4,0	Visible hems in stretch fabrics, pintucks, decorative sewing
Triple needle	130/705 H TRI	Widths: 2,5 / 3,0	Decorative sewing
Hemstitch needle	130/705 H	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.

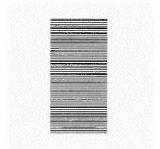
#### Important



Let the fabric feed evenly!

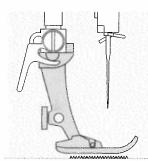


Pulling or pushing will result in gaps.

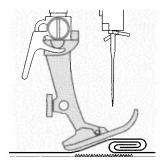


Holding back will result in knots.

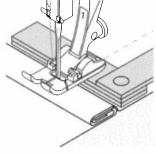
#### Feed-dog and fabric feed



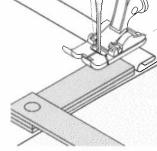
The feed-dog can work normally when the foot is level.



If the foot is at an angle, e.g. when sewing over thick to thin or vice-versa, the feed-dog can not grip and feed the fabric and the fabric hangs up.

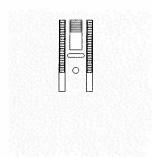


To solve this problem, place one, two or three compensating plates as required behind the needle under the presser foot.

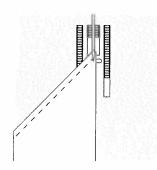


To correct the height in front of the foot, place one or more plates to the right of the foot next to the needle. Sew until the foot is level again and remove the plates.

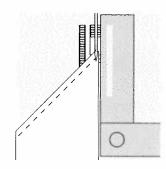
#### Feed-dog and sewing corners



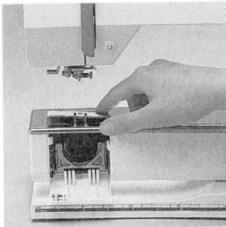
The gap between the two rows of teeth is relatively large due to the width of the stitch plate hole.

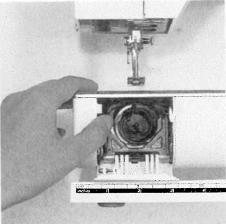


When sewing corners only a small section of the fabric is actually on the feed-dog so that it cannot grip the fabric well.



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





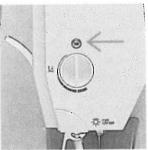
Important! Never use solvents of any kind!

#### Cleaning

- turn power switch to 0

- corner
- · lift and remove it

### **Sewing light**



- loosen the screw

Lubricating Cleaning the hook This machine is equipped · turn power switch to 0 Clean the machine after every use with a new developed LM · remove the bobbin case (Low Mass) hook system · push the release lever to the left · remove presser foot and needle which require no lubricapush the locking lever to the left and · open the free-arm cover tion. Any lubrication will fold down the hook race cover · press the stitch plate down at back right result in oiling on the remove the hook fabric. · clean the hook race with a cloth or brush, never use a sharp instrument · clean the area with the brush · replace the hook, turning the · replace the stitch plate handwheel if necessary so that the hook driver is on the left Cleaning the screen and the machine close the hook race cover and secure · wipe with a damp cloth with the locking lever, the locking pin must engage check by turning the handwheel · insert the bobbin case Refer to the safety Note: instructions! Use bulb type 12 V 5 W. The light bulb creates high W 2.1 x 9.5 d. temperatures. Let the light bulb cool down prior to renoval. Replacing the bulb · remove the cover · turn power switch to 0 · remove the bulb · insert the new bulb · replace cover and tighten screw

### **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 with the flat side to the back
- · the needle size is correct check the needle/thread table
- · the machine 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

#### 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 has been inserted incorrectly. The flat side of the shank must be to the back.
- · 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 machine 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 of instead of behind the 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.

#### 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.
- · Incorrect threading. Check upper and lower threads.
- · Use the correct spool disc.

#### Machine fails to run or runs slowly

- · Plug not fully inserted.
- · Power switch in off position.
- · Machine has been standing in a cold room.
- Bobbin winder still switched on.

#### Machine sews in reverse

Reverse sewing function is still activated.

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# Sewing Manual



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### Straight stitch

Straight stitch Stitch: Needle: 80/70

Thread: machine/darning thread

Feed-dog: sewing

Presser foot: Reverse pattern foot no. 1

#### Straight stitch (A)

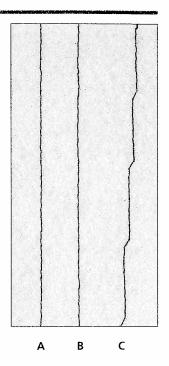
The machine is ready to sew as soon as you switch on

- · select straight stitch
- presser foot display
- · basic settings (length and width) for straight stitch
- · basic settings blink constantly

#### Altering the stitch length (B) 5

You can alter the length while you sew:

- lengthen





4

3

#### Change the needle position (C)

Only change the needle position if the needle does not go into the fabric:

- (>) to the right



#### Securing with continuous reverse button (frame)

- · press the button and the machine sews in reverse
- release the button and the machine sews forwards



#### TIP

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

 $\cdot$  e.g. denim = longer stitch length (approx. 3–4)

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

• e.g. cordonnet for top stitching = longer stitch length (approx. 3–5)

3

### Securing stitch (straight stitch)

Stitch:

Securing stitch 80/70 Needle:

Thread: machine/darning thread

Feed-dog: sewing

Presser foot: Reverse pattern foot no. 1

Securing stitch

for all fabrics

secures beginning and end of seam

#### Stitch selection

· press the appropriate button

#### On-screen

- · presser foot
- · basic settings (width and length)

#### Sewing

#### Seam begin

- machine secures seam automatically (4 stitches forward, 4 stitches reverse)
- continue with straight stitch

#### Seam end

- · press the quick reverse button machine secures automatically (4 stitches forward, 4 stitches reverse)
- machine stops automatically when securing is complete







TIP

**Sewing long seams** 

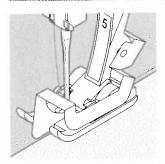
· quick and easy securing at beginning and end of seam

### Edge stitching

Stitch: Straight stitch
Needle: 80/90–110
Thread: machine/cordonnet

Feed-dog: **sewing** 

Presser foot: Reverse pattern foot no. 1



#### Narrow edge stitching

#### **Needle position**

left for outer edgeright for inner edge

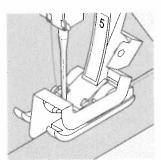
#### **Presser foot**

· Blind stitch foot no. 5



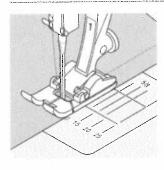
#### Outer edge

- · place edge of fold against the guide on the foot
- · select needle position at desired distance from the edge



#### Hem edges

- · place edge of fold against the guide on the foot
- · select needle position right



#### Wide edge stitching

#### **Needle position**

. all

#### Presser foot

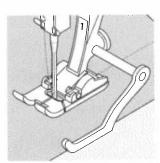
· Reverse pattern foot no. 1

#### At a foot's width (A)

 $\cdot$  guide the fold along the edge of the presser foot sole

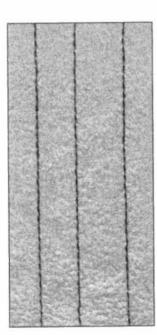
#### At 1-3 cm (B)

- guide the folded edge along the markings on the stitch plate



#### Seam guide (C)

- · insert the seam guide into the hole on the presser foot shaft
- · adjust as desired
- · guide the folded edge along the seam guide
- to sew parallel lines, guide the fabric along a previously sewn line of stitches



В

Α

c



### TIP

#### Edge stitching with seam guide

· a big help when sewing parallel lines and criss-cross

### Zig-zag stitch

Stitch: Zig-zag 80/70 Needle:

Thread: machine/darning thread Feed-dog: sewing

Reverse pattern foot no. 1 Presser foot:

#### Zig-zag stitch

for all fabrics for neatening edges for decorative work

#### Stitch selection

· press the appropriate button (zig-zag)

#### On-screen

- presser foot
- · basic settings (length and width)

c

В Α

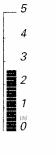


#### Altering the stitch width (A)

- · the width can be altered while you sew
- Swider
- < narrower

#### Altering the stitch length (B)

- · the length can be altered while you sew
- ♠ longer



|||||

#### Satin stitch

dense (shorter) zig-zag stitch = filled in zig-zag

#### Oversewing edges (C)

- guide edge of fabric under the center of the presser foot
- needle goes into fabric on one stroke 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



#### TIP

#### Oversewing edges with zig-zag

· if edges roll, use Vari-overlock stitch and foot no. 2 (optional foot)

#### Embroidery with satin stitch

· adjust the stitch width as you sew for new effects

### **Decorative stitches**

Stitch: Decorative stitch

Needle: 80/90

machine/embroidery Thread:

Feed-dog: sewing

Reverse pattern foot no. 1 or no. 6 (depending on stitch) Presser foot:

#### **Decorative stitches**

for all fabrics, for embellishing

#### Stitch selection (A)

· press appropriate button

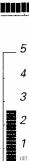
#### Altering the basic settings

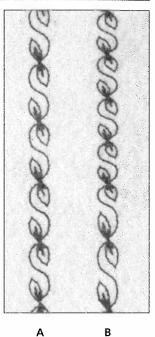
#### Stitch width

- Swider
- < narrower

#### Stitch length (B)

- Shorter
   Shorter
- ♠ longer





B

### TIP

#### Altering the basic settings

- · stitches can be adjusted to suit your own tastes, e.g. for dolls clothes, reduce the width
- the size of motifs can be adjusted to suit small items

#### Decorative stitches on single layer of fabric:

- · always use stabilizer underneath
- · remove after sewing is complete

### **Practical stitch seams**

#### Open seams

Seams which are pressed open

- · seam allowance width as wide as wanted
- · seam lies flat
- · seam does not stretch open

Application: primarily for woven fabrics

#### Closed seam (overlock seams)

Seams which cannot be pressed open

- · sewn and neatened in one operation
- · narrow seam allowances

Application: primarily for knits and jerseys

#### Flat joining seams

Seams where the edges are overlapped and then oversewn

sewing is on the seam allowances

Application: particularly good for towelling and lycra





### Zig-zag seam

**\\\\\** 

Stitch: Stitch width: Stitch length: Zig-zag approx. 1 approx. 1/2

Needle: 80

Thread: ma

machine thread

Feed-dog:

sewing

Presser foot:

Reverse pattern foot no. 1

#### Open seam

in knits and jerseys





TIP

Seam in jersey or knits waves

reduce presser foot pressure to suit the fabric

### Triple straight stitch seam

Stitch:

Triple straight stitch

80/90 Needle:

Thread: machine thread

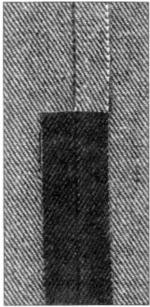
Feed-dog: sewing

Presser foot:

Reverse pattern foot no. 1

#### Open seam

strong seam for firm and densely woven fabric such as denim and corduroy





TIP

Use a Jeans needle for densely woven fabrics

### Super stretch seam

Stitch:

Super stretch (only activa 140)

Needle.

80

Thread:

machine thread

Feed-dog:

sewing

Presser foot:

Reverse pattern foot no. 1

flexible seam for very stretchy fabrics, particularly for

sports and leisure wear



TIP

#### Knits and jersey

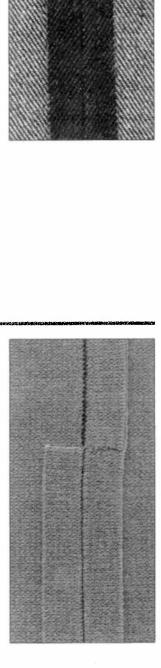
· use a new ball point needle to prevent damaging the loops

#### Sewing stretch fabrics

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

#### Seam in knits or jersey waves

· reduce presser foot pressure to suit the fabric



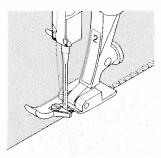
### Vari-overlock seam

Stitch: **Vari-overlock** Needle: **80/70** 

Thread: machine/darning thread

Feed-dog: sewing

Presser foot: Overlock foot no. 2 (optional)

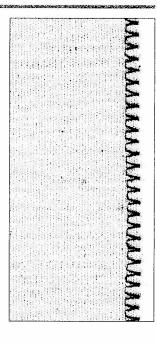


#### Closed seam

stretchy seam in fine, soft knits such as silk jersey and interlock

#### Sewing

guide the raw edge along the pin on the overlock foot





### 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
Needle: 80
Thread: machine thread

Feed-dog: sewing
Presser foot: Overlock foot no. 2 (optional)

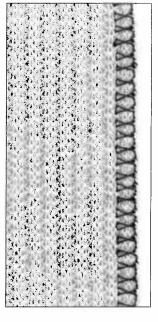


#### Closed seam

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

#### Sewing

guide the raw edge along the pin on the overlock foot





#### TIP

#### Knits and jersey

 $\cdot$  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

### Hems with practical stitches

#### Preparation

press hem and baste if desired

#### Sewing

- · sew hem at desired depth (right side)
- · trim surplus fabric (wrong side)

### Visible hem with Jersey stitch



Stitch:

Jersey stitch (only activa 140)

Needle:

Thread: Feed-dog: machine thread sewing

Presser foot:

Reverse pattern foot no. 1

Visible stretch hem

for all types of cotton, wool, synthetic and mixed fiber

jersey



### TIP

#### Knits and jersey

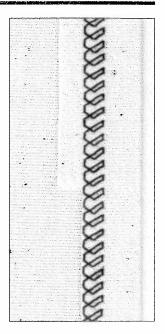
· use a new ball point needle to prevent damaging the loops

#### Sewing stretch fabrics

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

#### Machines without Jersey stitch

· use Vari-overlock stitch, guide straight stitches along raw edge of hem



### Visible hem with Triple zig-zag stitch



Stitch:

Triple zig-zag

Stitch width:

2.5-5 depending on fabric basic setting

Stitch length: Needle:

80

Thread:

machine thread

Feed-dog:

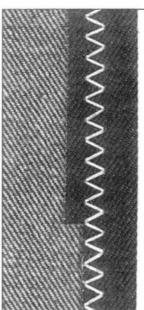
sewina

Presser foot:

Reverse pattern foot no. 1

#### Strong visible seam

for firm, densely woven fabrics, particularly good for denim and canvas





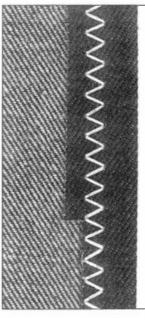
#### TIP

#### Hems on items which are to be washed frequently

· first neaten raw edges and do not trim after sewing

#### Sewing firm, hard fabrics

· use a Jeans needle



# Important information

#### Perfect needle

· blunt needles can damage knits

# Use a stretch needle (130/705 H-S) if necessary

· the needle point slides between the fibers

# Fine sewing thread

coarse threads can damage knits and cause holes when the garment is washed

# Darning thread for basting

· it's easier to remove when oversewn

# Sewing test, when necessary

- · the elasticity of modern fabrics varies greatly
- adjust basic settings to suit the fabric; the seam should be as stretchy as the fabric
- for greater elasticity: use a shorter stitch length and a wider stitch width (only one of these adjustments may be necessary)

### Presser foot pressure

· soft, loose knits can wave when sewn: reduce the pressure until the seam lies flat; the machine must still feed the fabric properly

# Ribbing with Honeycomb stitch



Stitch: Honeycomb (only activa 140)

Needle:

machine thread Thread:

Feed-dog: sewing

Presser foot: Reverse pattern foot no. 1

#### Ribbing with visible seam

for all cotton, wool, synthetic and mixed fiber jersey

# Preparation

· press 1 cm (3/8") to wrong side

- · sew from the right at a foot's width from the edge
- · trim surplus fabric (wrong side)



Balance/corrections

· Honeycomb stitch is not closed bring stitch together

= adjust balance - (subtract space between stitches)



open out stitch

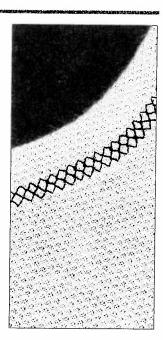
= adjust balance + (add space to stitches)



TIP

#### Needle stop down

· needle stays in fabric when you stop to adjust the ribbing

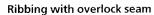


# Ribbing with overlock seam

Stitch: Vari-overlock
Needle: 80
Thread: machine thread

Feed-dog: **sewing** 

Presser foot: Overlock foot no. 2 (optional)



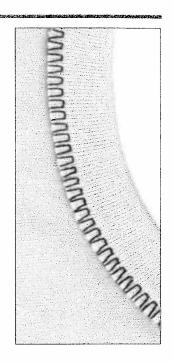
for all fine cotton, synthetic and mixed fiber jersey

#### Preparation

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

### Sewing

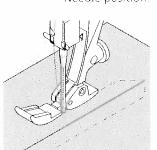
- · sew Vari-overlock over the raw edge
- guide the edge along the pin on the foot





# **Zippers**

Stitch Needle: Thread: Feed-dog: Presser foot: Needle position: Straight stitch 80-100 machine thread sewing Zipper foot no. 4 change needle position to right or left

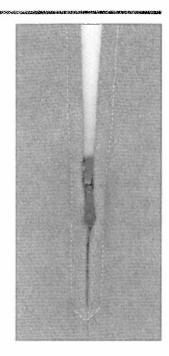


# Preparation:

- · 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 right and once with needle position left







# TIP

# To sew round 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

- use a 90-100 needle for even stitch formation

# **Blind hem**

Stitch: Needle:

Blind hem

Thread:

machine/fine thread or lightweight thread

Feed-dog: sewing Presser foot:

Blind stitch foot no. 5

#### **Blind hem**

for invisible hems in medium to heavy cotton, wool and blended fabrics

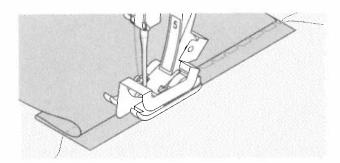
# Preparation

- · 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







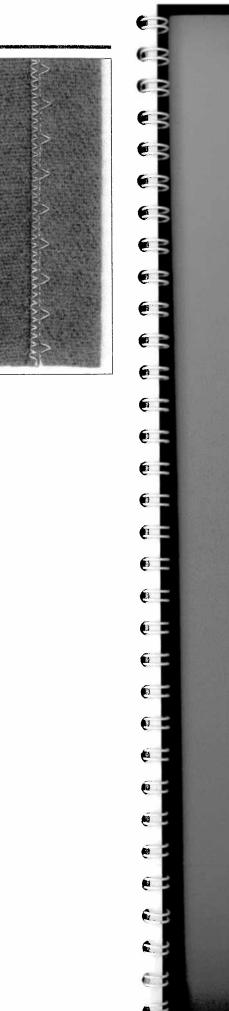
# TIP

## **Even stitching**

· hold fabric back lightly while sewing

# Fine stitch width adjustment

· guide the folded edge evenly along the metal guide on the foot = even depth



# Sewing on elastic/cord

Stitch: **Universal stitch** (only activa 140) Stitch width: depending on width of elastic Needle:

Thread: machine thread

Feed-dog: sewing

Presser foot: Reverse pattern foot no. 1 or Embroidery foot no. 6

(optional

Sewing on elastic

for gathering long lengths of fabric, frills and flounces in

fine fabrics

Preparation

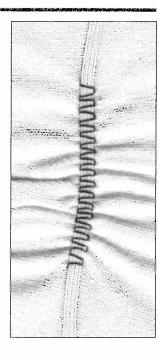
· cut elastic to length required

Sewing

sew over elastic

needle must not pierce elastic

· after sewing even out the gathers





# TIP

Secure the beginning and end of elastic

· sew a few straight stitches backward and forward to secure the elastic

Quick hem finish

· for children's or doll's clothing

sew hem with elastic before sewing side seams

# Sewing on shirring elastic/cord with Gathering stitch

Stitch: Gathering stitch (only activa 140) Needle: 80

Thread: machine thread Feed-dog: sewing

Buttonhole foot no. 3 Presser foot:

Shirring elastic/cord

for gathering long lengths of fabric

Preparation

cut elastic/cord double the length of the fabric

· fold in half

· hook over the center prong on the buttonhole foot

· take both ends under the foot to the back

Sewing

· sew a few stitches

· lift elastic/cord at the front and pull towards you

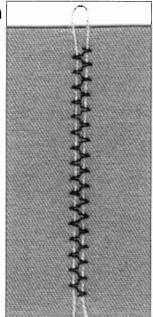
· leave ends behind the presser foot

oversew cord

· after sewing pull the cord to gather the fabric

· stretch elastic while sewing

· the tighter it is stretched, the tighter the gathers





TIP

Securing beginning and end

· sew a few stitches with the feed-dog lowered



# Sewing on wide elastic with Running stitch

5

Stitch: Stitch length: Running stitch adjust to suit elastic

Needle: 8

Thread: machine thread

Feed-dog: Presser foot: sewing Reverse pattern foot no. 1

#### Wide elastic

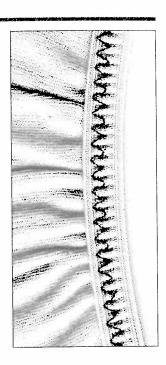
for finishing openings on sports wear and lingerie

### Preparation

- · cut elastic to length required
- divide opening and elastic into 4 equal sections and mark
- · pin elastic to opening, matching up markings

#### Sewing

- · as you sew, stretch the elastic to fit the opening
- · trim surplus fabric











# TIP

# Gather the fabric edge first

· makes it easier to sew on elastic = elastic remains flat when sewing

# Elastic is stretched

· reduce the presser foot pressure to suit fabric and elastic

# Standard and \*keyhole buttonholes (\*only activa 140)

Stitch:

**Buttonhole** 

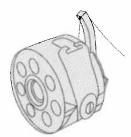
Needle:

Thread: Feed-dog:

machine/darning thread

sewing

Presser foot: Buttonhole foot no. 3



#### Preparation

· thread bobbin thread in finger on bobbin case

# Sewing test

- prepare test sample of the same fabric and stabilizer to be used in finished garment
- · select buttonhole

### Sew test buttonhole

see instruction manual

# Corrections

#### Delete auto

with clr button

## Alter bead width

· adjust stitch width

#### Alter stitch length

- stitch length adjustments affect both beads (denser or finer)
- after adjusting the stitch length, program buttonhole again!

#### Balance

- affects both beads
- 1. denser bead
- 2. finer bead



- 1. finer bead
- 2. denser bead
- after adjusting the balance, program buttonhole again!

#### **Balance**

When buttonholes are complete, return balance to normal setting!

#### Marking buttonholes

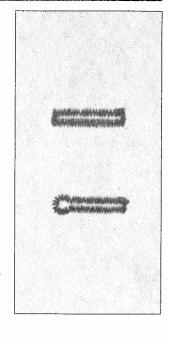
· mark beginning of buttonhole

### Sewing buttonholes

- buttonhole is programmed after test sewing
- · bring needle into center of presser foot
- · insert needle at beginning mark of buttonhole
- · lower the presser foot
- · sew buttonhole
- · machine stops automatically when buttonhole is
- · machine is ready to sew the next buttonhole
- · sew remaining buttonholes

#### Cutting buttonholes open

- · using the seam ripper or the buttonhole cutter and block (optional accessory)
- · cut from the ends towards to the middle





# Gimp

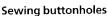
- gimp reinforces buttonholes and gives them a nicer appearance
- the loop lies at the end of the buttonhole most subject to wear
- Button position = gimp loop Place work under the presser foot accordingly

#### Gimp

- · perle yarn no. 8
- · strong hand sewing thread
- · fine crochet hook

## Hooking on the gimp

- · insert needle at beginning of buttonhole
- presser foot raised
- · hook gimp over the center prong on the buttonhole foot (front)
- take both ends through the grooves in the presser foot sole to the back
- · lower the presser foot



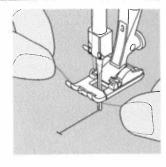
- · sew buttonhole
- · do not pull on the gimp

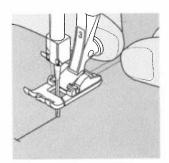
Securing gimp

- · pull loop through
- take ends through to wrong side (darning needle)
- · knot or secure by sewing

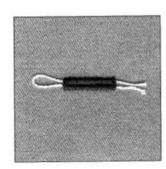
Cutting buttonholes open

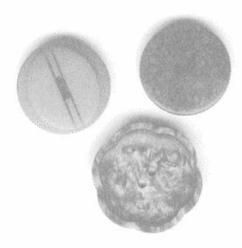
- use the seam ripper or the buttonhole cutter and block (optional accessory)
- · cut from both ends towards the middle











# Edging knits with shirring elastic

Stitch: Zig-zag Stitch width: approx. 5 Stitch length: 1-1.5 80/70 Needle:

Thread: darning thread

Feed-dog: sewing

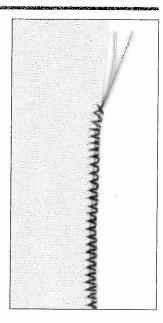
Presser foot: Reverse pattern foot no. 1

# Edges in knits with shirring elastic

prevents openings from stretching and helps retain their

# Sewing

- · guide double length of shirring elastic along the edge of the fabric
- · stretch the elastic lightly
- oversew with zig-zag







# TIP

# Pulling in and reinforcing openings

- do not sew on the elastic, only over it
- · adjust elastic afterwards to regain the correct shape and size

# Stretch fabrics stretch while sewing

reduce the presser foot pressure to suit the fabric



# Patches on woven fabrics

5

Stitch: R

Running stitch/

\*Honeycomb (\*only activa 140)

Needle: **80/70** 

Thread: darning thread

Feed-dog: sewing

Presser foot: Reverse pattern foot no. 1



### Disguises worn or torn areas

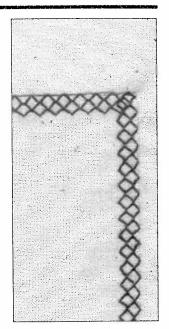
in medium to heavy weight fabrics, especially clothing

#### Preparation

- · do not cut damaged area
- · pin and baste patch to right side

#### Sewing

- sew over edges with Honeycomb or Running stitch Honeycomb stitches should be on the patch – needle pierces just inside the outer edge
- sew a row of straight stitches on the inside edge of the Honeycomb stitch – this makes it easier to cut away the damaged fabric
- · cut away damaged fabric



# Patches on knits and jersey



Stitch: **Jersey stitch** (only activa 140)

Needle: **80/70**Thread: **darning thread** 

Feed-dog: sewing

Presser foot: Reverse pattern foot no. 1

### Disguises worn or damaged areas

particularly for stretchy fabrics, especially underwear

## Preparation

- · do not cut damaged area
- · round off patch to retain elasticity
- · pin and baste to right side

# Sewing

- · sew over edge
- · sew a second row inside the first if necessary
- · cut away damaged area



# TIP

#### Knits

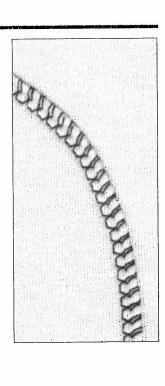
· use a new needle to prevent damaging the loops

# Sewing stretch fabrics

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

#### Fabric stretches and waves

· reduce presser foot pressure to suit the fabric



# Darning and mending tears with Running stitch

Stitch:

Running stitch Needle: 80/70

darning thread Thread:

Feed-dog: sewing

Presser foot: Reverse pattern foot no. 1 Function: permanent reverse sewing

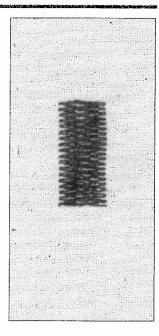
## Quick mends

for tears and worn areas on all types of fabric

## Preparation

· for tears use a fine backing fabric

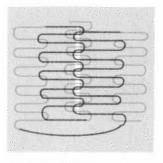
- · tears: sew 3–5 rows of Running stitch
- worn areas: sew as many rows as necessary next to one
- overlap each row slightly over the previous one



## Method

#### flat areas

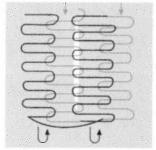
- · sew forwards
- · insert needle
- · turn work
- · sew forwards again





# tubular areas (trousers, sleeves)

- sew first row forwards
- select permanent reverse sewing function
- · sew second row in reverse
- delete function
- sew next row forwards again
- repeat as necessary





# TIP

# **Backing for tears**

· instead of fine fabric, use a piece of gauze or soft interlining

# **Darning program**

Stitch:

**Darning program** 

Needle:

80/70 darning thread

Thread: Feed-dog:

sewing

Presser foot:

Reverse pattern foot no. 1

Quick darning for worn or torn areas; replaces lengthways threads in all fabrics

#### Preparation

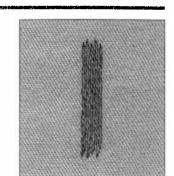
- stretch fabric into darning ring\*
- prevents puckering

## Sewing

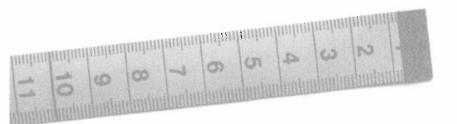
- · sew first row
- press quick reverse button (first length programmed)
- sew second row
- · press quick reverse button (second length programmed)
- complete darning program, machine stops automatically
- large areas:
- alter needle position
- start darning program again (length is programmed)

## Corrections

- darning pulls to the side correct with balance
- \*The darning ring is available as special accessory.









TIP

# Reinforcement

· use fine fabric or interlining as a backing

# **Darning**

Stitch: Straight stitch Needle: 80/70

darning thread Thread: Feed-dog: darning (lowered)

Presser foot: Darning foot no. 9 (optional)

#### Darning holes or worn areas

replaces both lengthways and horizontal threads in all fabrics

### Preparation

- · stretch fabric into darning ring\*
- · prevents puckering
- · if possible, use the sewing table

#### Sewing

- · move darning ring smoothly
- · work from left to right
- · move without using pressure

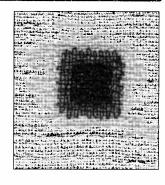
#### Method

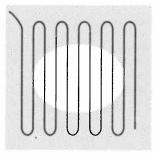
- · sew first row
- · turn work by 90°
- · sew over the first row not too close for a soft finish
- · turn work by 90° again
- · complete darning loosely and in same direction as first row
- · in tubular items first step in a horizontal direction second and third steps in lengthways direction
- · when you have mastered the technique work the rows in irregular lengths so that the ends are lost in the fabric

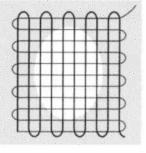
### Important

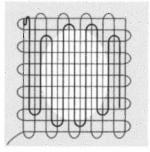
- · change direction in curves (no points)
- = prevents holes
- = prevents thread breakage
- · move as if writing L or M
- do not sew in circles = these do not mimic fabric construction















# TIP

### Thread breaks

· uneven movement of darning ring

## Stitch formation is not good, thread lies on top

· ring moved too quickly

# Knots on the underside

· ring moved too slowly



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