

My Bernina Guide



Bernina Matic 910 electronic

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Important!

Safety Regulations

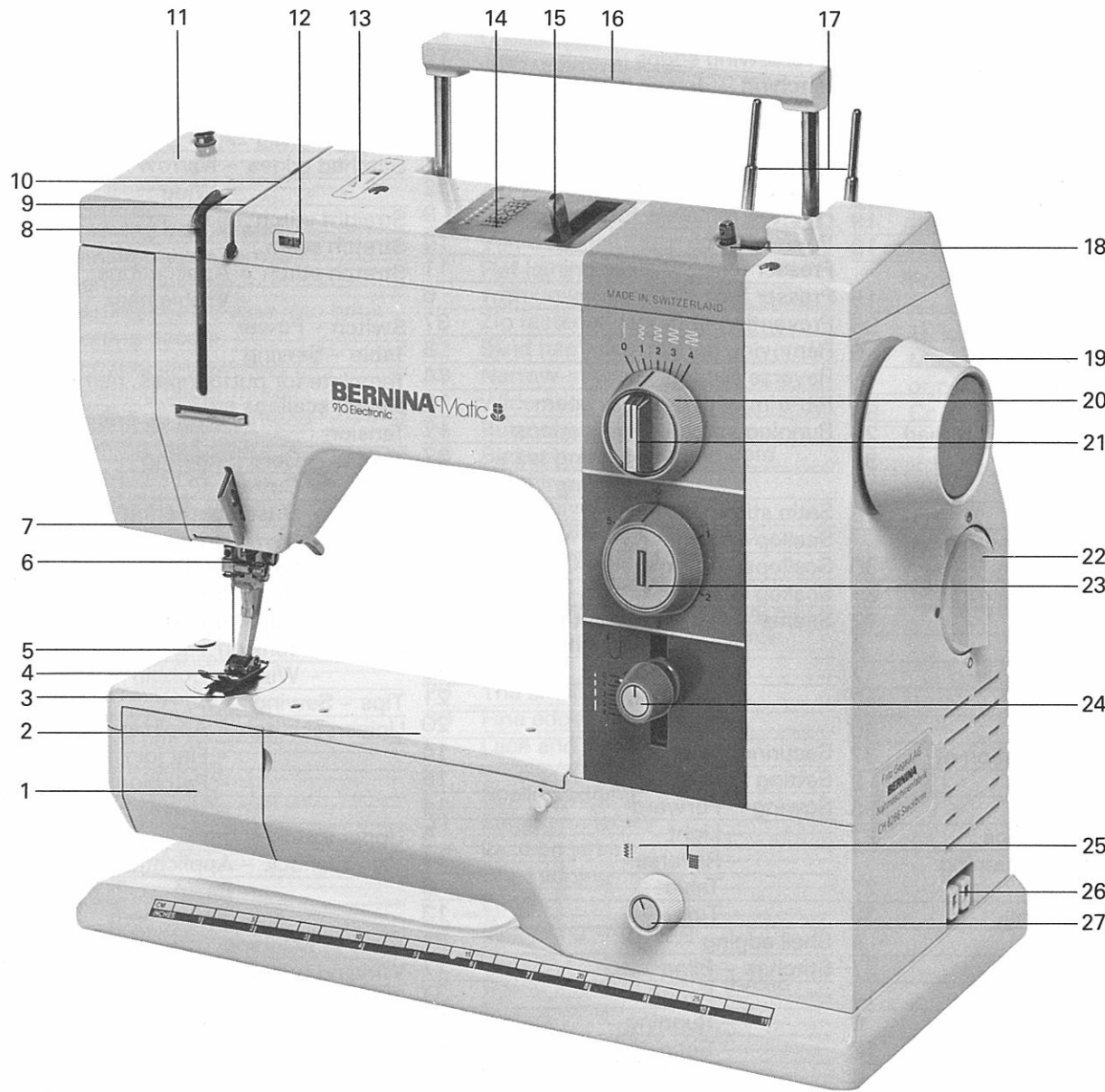
Subject to BEAB and OSHA safety regulations (official testing centres in Great Britain and the U.S.A.). The following safety regulations must be observed without fail:

- The moving needle is a source of danger (risk of injury to fingers). The sewing position must therefore be kept under constant observation.
- Manipulations within the area of movement of the needle, such as changing the needle, the presser foot or stitch plate, must only be performed with the machine switched off (main switch set to ○ position). The same applies when removing and replacing the lower thread bobbin or hook.
- During maintenance work (cleaning or lubricating) or changing the light bulb and interruptions in sewing or after completion of work, the machine must be disconnected from the power supply by pulling out the mains plug.
- Repairs to the electronic section, especially the changing of the lead wire to the foot control unit, may only be carried out by one of our service agencies.

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View of Machine



- 1 Hinged cover on free-arm
- 2 Free-arm cover
- 3 Needle plate
- 4 Presser foot
- 5 Thread cutter
- 6 Needle holder clamp
- 7 Thread regulator
- 8 Thread take-up lever
- 9 Thread tension slot
- 10 Thread tension disc
- 11 Top frame cover
- 12 Thread tension indicator
- 13 Adjusting wheel for thread tension
- 14 Practical stitches
- 15 Selector lever
- 16 Carrying handle
- 17 Reel holder pins
- 18 Bobbin spindle
- 19 Hand-wheel
- 20 Stitch width knob
- 21 Needle position knob
- 22 Power switch
- 23 Buttonhole knob
- 24 Stitch length knob
- 25 Symbol for sewing/darning
- 26 Connection for foot control unit
- 27 Sewing/darning knob

Dear Bernina Customer,

We would like to congratulate you on the purchase of your new Bernina sewing machine and thank you for the confidence shown in our products.

You have acquired a top-quality Swiss product, manufactured with the utmost skill and care at our Bernina factory in Steckborn / Switzerland.

"My Bernina Guide" provides you with all the necessary information about your Bernina and its countless applications for sewing work.

If you should require further details or advice about your sewing machine or sewing problems, please contact your Bernina stockist.

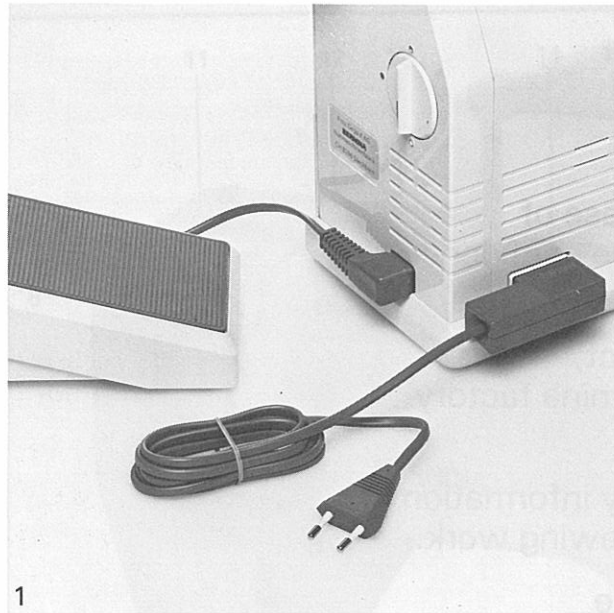
We hope you are successful and happy with your sewing and dressmaking work.

With kind regards

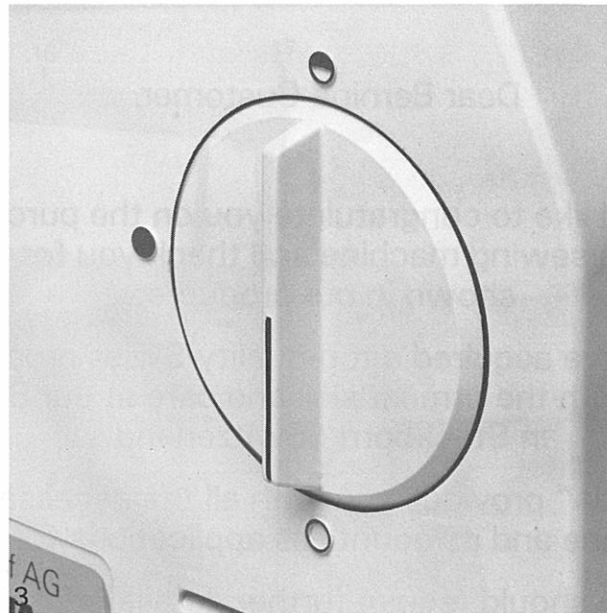


Odette Ueltschi-Gegauf, Chairman of the Board
FRITZ GEGAUF LTD.
Bernina Sewing Machine Manufacturers, CH-8266 Steckborn, Switzerland

Electrical Section

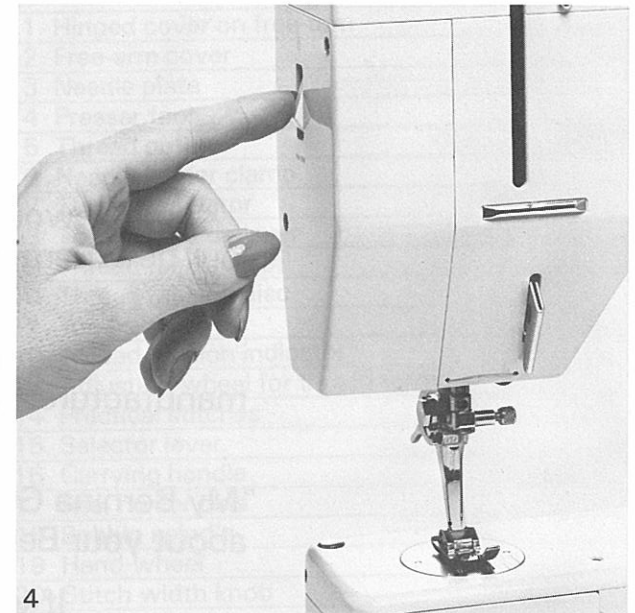


Connecting power cable and foot control unit
The terminals on the machine for power cable and foot control unit can be seen in Fig. 1.



Power switch
The power switch on the right below the hand-wheel (Fig. 3) has 3 positions:

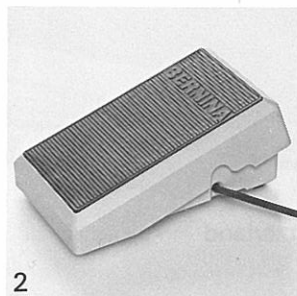
- **Off** – the machine is switched off
- **On** – the machine is switched on for maximum sewing speed. The sewing speed can be regulated up to maximum speed by pressing the foot plate of the foot control unit.
- ◌ **On** – the machine is switched on for reduced sewing speed. At this switch position the maximum speed is reduced to approximately half. When switched to «reduced sewing speed» sewing is made much easier for more difficult work as well as for those less used to electric sewing machines.



Sewing light
The sewing light is switched on and off with the switch fitted in the front cover (Fig. 4). The sewing light is also switched off when the main switch is at ○ = off.

Motor
The d.c. motor and electronic speed control ensure exceptional penetrating power even when sewing slowly. The high penetrating power considerably simplifies the sewing of very heavy materials, very dense fabrics and thick seams.

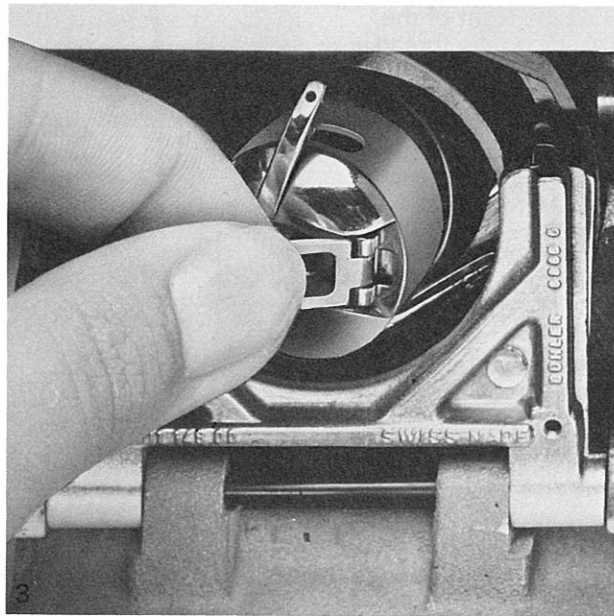
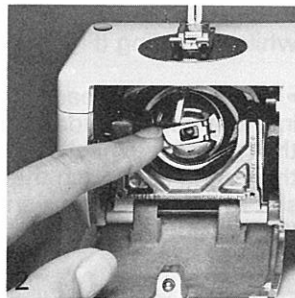
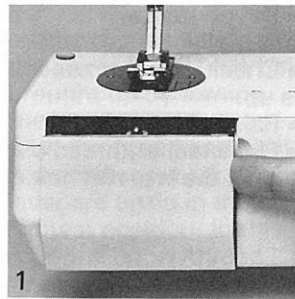
Electronic needle stop
Every time you stop sewing an electronic system takes the needle to its highest position. A light tap with the heel on the back of the foot control will take the needle electronically down into the work. A second tap will bring it up again and so on.



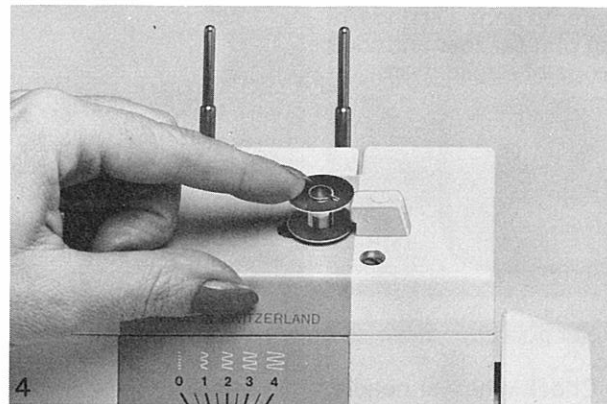
Foot control unit (Fig. 2).
For controlling the sewing speed.

Removing Bobbin Case

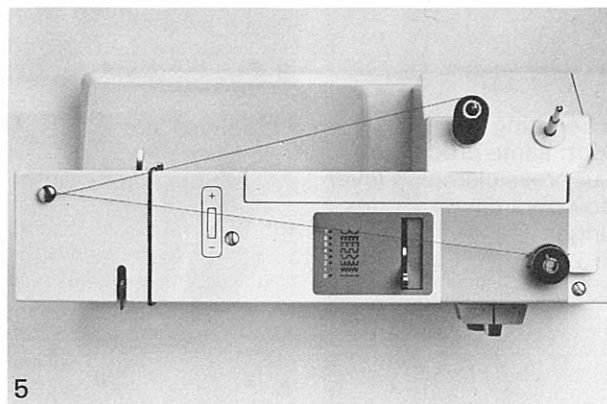
- Set power switch to ○.
- Check whether needle is up. If not, raise needle with handwheel.
- Open hinged cover on free-arm (Fig. 1).
- Lift the latch of the bobbin case with the index finger of the left hand (Fig. 2) and remove bobbin case (Fig. 3).



Winding Lower Thread

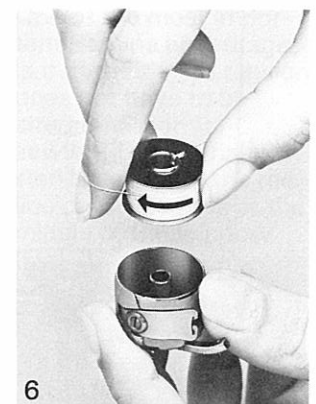


- Place bobbin on winder spindle and press to the right. The winder is then switched on and the machine is disengaged (Fig. 4).
- Take thread from the reel clockwise around the pre-tension stud and from there – as shown in Fig. 5 – to the bobbin, winding thread round empty bobbin several times in a clockwise direction.
- Set power switch to ●.
- Start winder with the foot control unit. When the bobbin is full, the winder stops automatically.
- Remove bobbin and push winder spindle back to left.

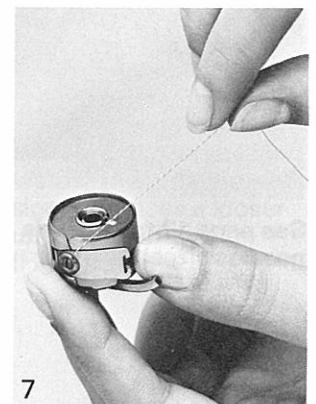


Inserting Bobbin

- Hold bobbin case in one hand, insert bobbin so that the thread is wound in the clockwise direction, see arrow (Fig. 6).

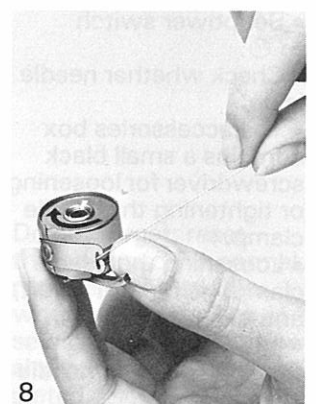


- Pull thread through the slot and below the spring until it lies in the T-shaped slot at the end of the spring. Do not hold bobbin for this purpose (Fig. 7 + 8).
- The bobbin must turn in the clockwise direction of the arrow when pulling the thread.

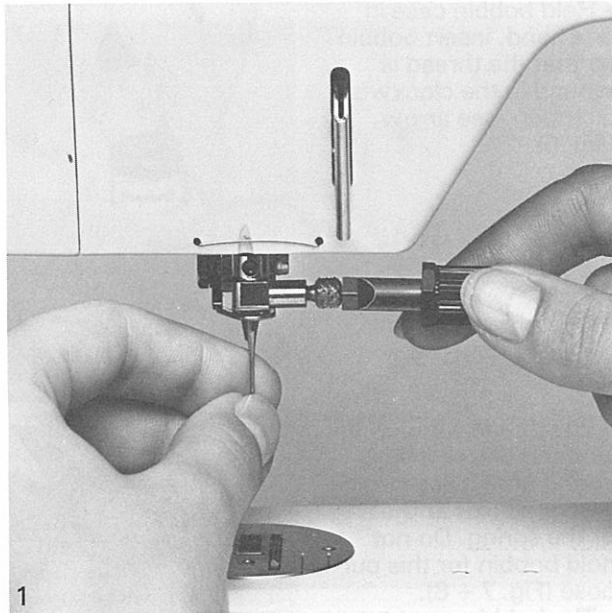


Inserting bobbin case into hook

- Hold bobbin case by the latch with the index finger and thumb of the left hand. Insert so that the finger of the bobbin case points upwards and fits in the notch of the hook race cover.
- Check: pull end of thread
- Close hinged cover



Inserting Needle



See page 12 for suitable needles sizes.

- Set power switch to ○.
- Check whether needle is up.
- The accessories box contains a small black screwdriver for loosening or tightening the needle clamp.
- Loosening the needle clamp: half a turn to left, anti-clockwise (Fig. 1).
- Inserting needle: **flat shank side** of needle always at rear.

6

- Insert needle **fully** until it **reaches the top**. If the needle does not contact at the top, i.e. is set too low, faulty stitches are produced.
- Tighten needle clamp firmly.

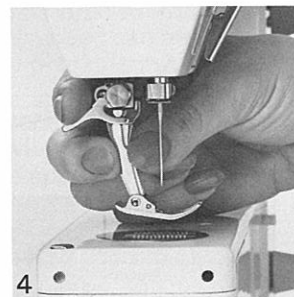
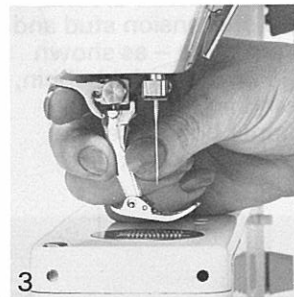
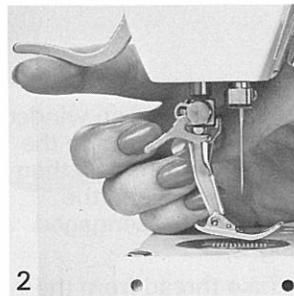
Changing Presser Foot

Refer to page 11 concerning presser feet and their range of application.

- Set power switch to ○.
- Check whether needle is up.
- Raise presser foot (Fig. 2).

- Raise clamping lever with the index finger of the right hand and remove the presser foot using the middle finger and thumb (Fig. 3).

- Securing the presser foot: same procedure, but press clamping lever downwards with index finger (Fig. 4).



Threading Upper Thread

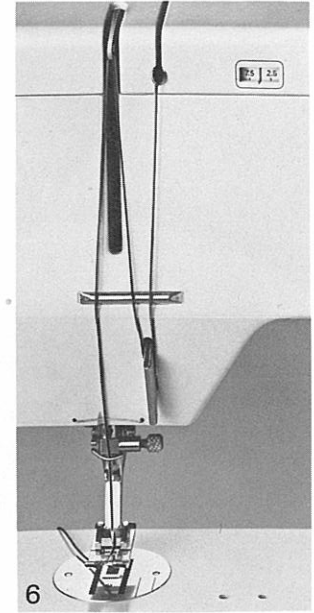
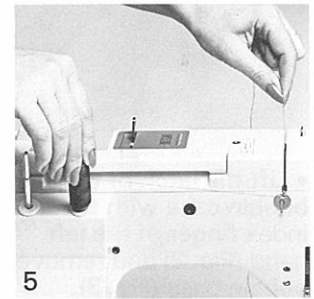
- Set power switch to ○.
- Check whether needle is up.
- Raise presser foot.
- Place reel of thread on one of the two reel holder pins.

Hold reel of thread firmly while threading (Fig. 5).

- First clip the thread into the thread guide at the rear of the machine, then bring it through the slot in the thread tension (Fig. 5).

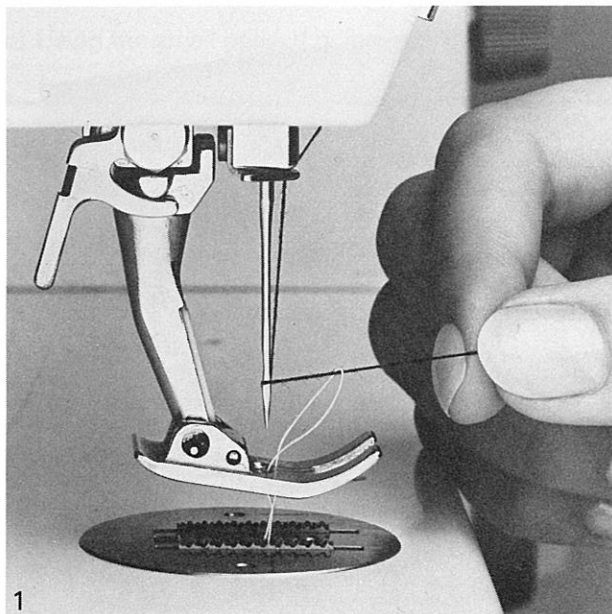
- At the front of the machine take thread downwards under the thread regulator, up again to the take-up lever and then downwards to the needle holder thread guide (Fig. 6).

- Always thread needle from front. The small white plate on the front of the presser foot shaft makes it easier to thread the eye of the needle.
- Pull thread approx. 10 cm through eye of needle.



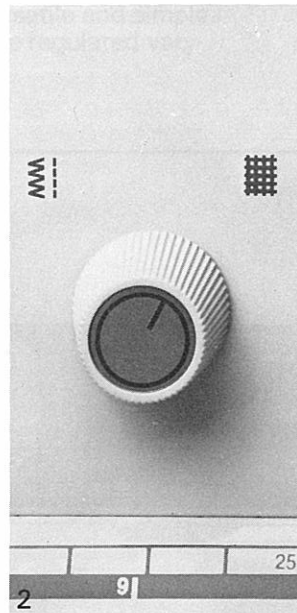
Bringing up Lower Thread

- Hold end of upper thread with the right hand.
- Sew 1 stitch by tapping the foot control unit. The electronic needle stop ensures that the needle will be in the raised position.
- Pull upper thread so that the lower thread is brought up through the hole in the needle plate (Fig. 1).
- Take both threads through the slot of the presser foot and clip into thread cutter.




Instead of using the electronic needle stop, the lower thread can be brought up by turning the handwheel forward with the right hand until the needle and take-up lever are again in their highest position. In this case the upper thread must be held in the left hand.

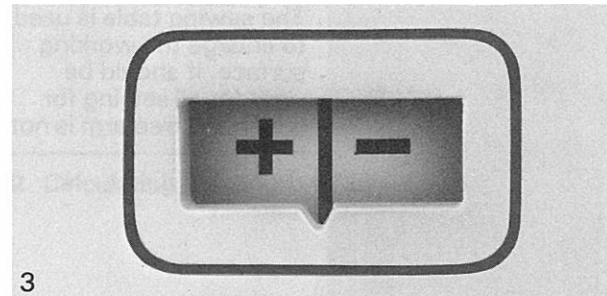
Lowering Feed-dog



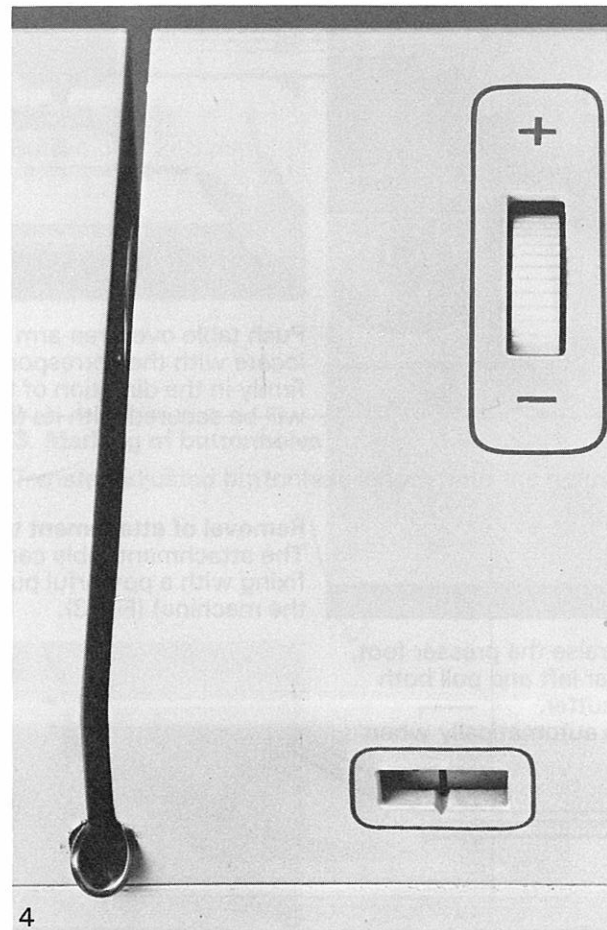
For certain types of sewing, e.g. darning, the material should not be moved by the feed. For this purpose, the feed-dog must be lowered by turning the sewing darning knob to the right, until the mark is below the # symbol (Fig. 2).

For all normal sewing work the mark must be on the left below the  symbol.

Thread Tension



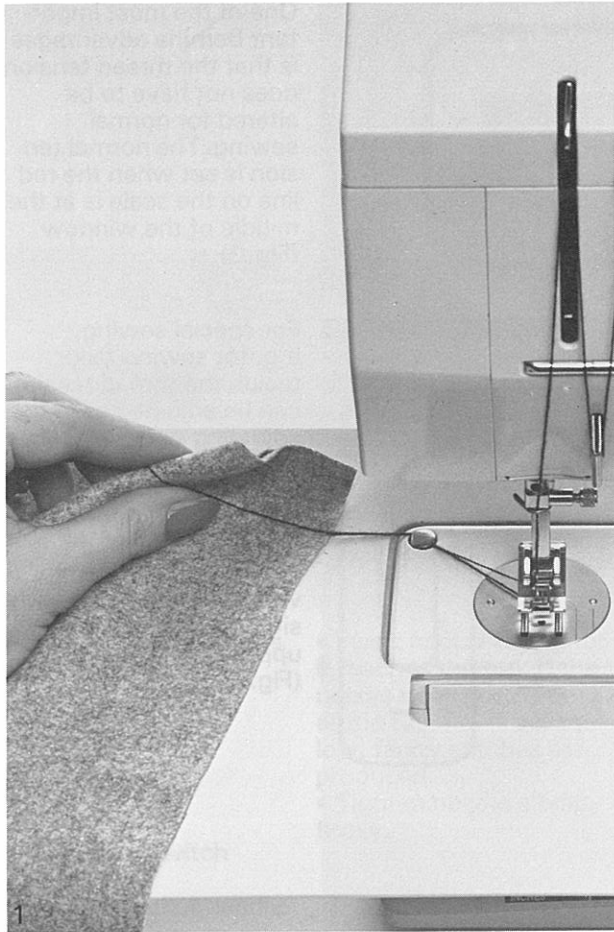
One of the most important Bernina advantages is that the thread tension does not have to be altered for normal sewing. The normal tension is set when the red line on the scale is at the middle of the window (Fig. 3).



For special sewing, e.g. for sewing tailor tacks, the thread tension can be adjusted with the adjusting wheel. Turning this wheel backwards, towards the «+» sign, produces a tighter upper thread tension. Turning the adjusting wheel forwards, towards the «-» sign, produces a looser upper thread tension (Fig. 4).

Do not forget: reset thread tension to normal, red line in the middle, when a special piece of sewing requiring tension alteration has been completed.

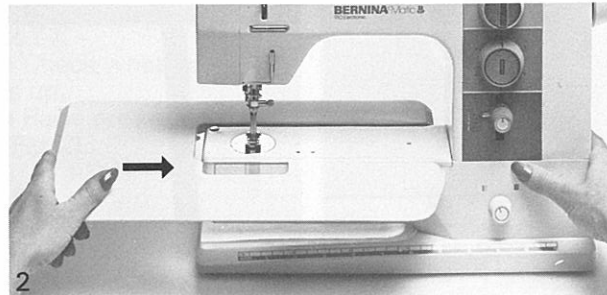
Thread cutter



When removing the sewing raise the presser foot, remove the sewing to the rear left and pull both threads through the thread cutter. The threads free themselves automatically when sewing starts again.

Sewing Table

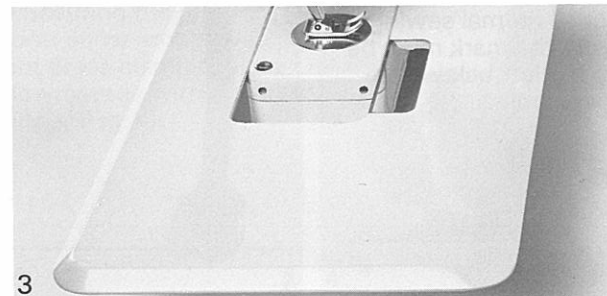
The sewing table is used to enlarge the working surface. It should be used for all sewing for which the free-arm is not required.



Push table over free-arm until the centering pins locate with the corresponding holes. By pushing firmly in the direction of the arrow, the sewing table will be secured with its fixing on pins (Fig. 2).

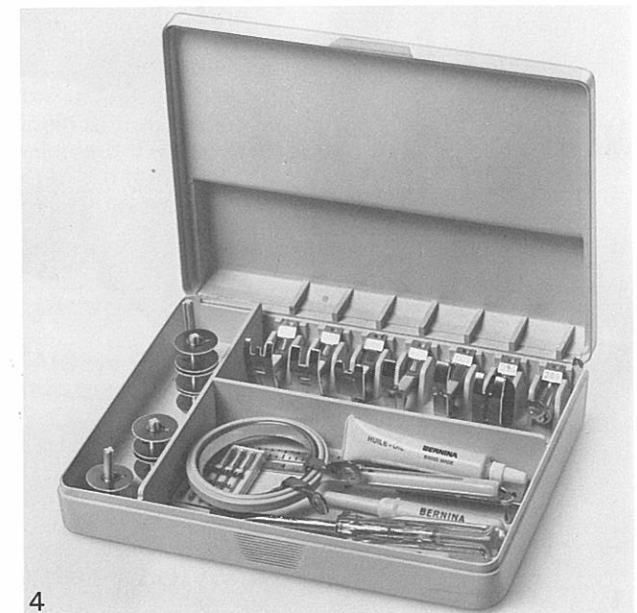
Removal of attachment table:

The attachment table can be released from its fixing with a powerful push to the left (away from the machine) (Fig. 3).



Accessories Box

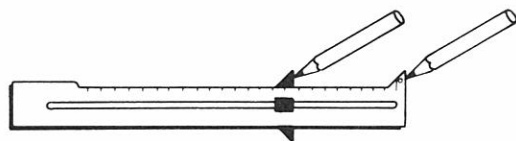
The accessories are clearly accommodated in the flat accessories box. A summary of the most important basic settings of your sewing machine can be found inside the cover.



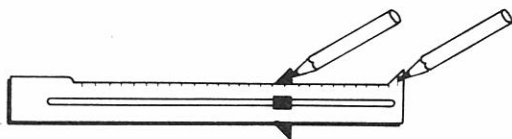
Template for buttonholes, hems, pleats, scallops, etc.

This marking and measuring template is extremely versatile and simple. By means of the red slide, the required measure can be regulated very accurately.

There are two ways of using the template:



a) Using the edges if lines are required.

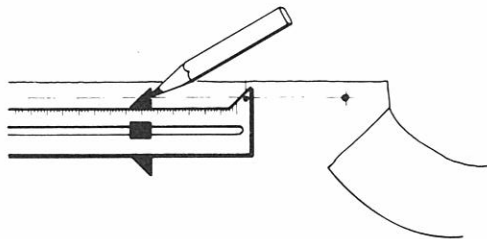


b) Using the small holes if points are required.

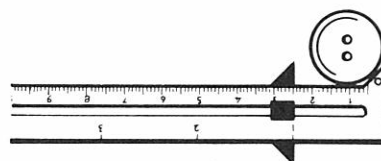
Examples:

1. Marking of spaces for buttonholes, buttons, eyelets, pleats, etc.

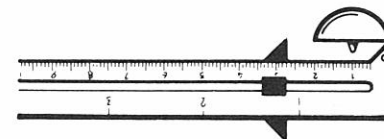
With the red slide, adjust the required space. Transfer with points or lines onto the material.



2. Calculating the length of buttonholes



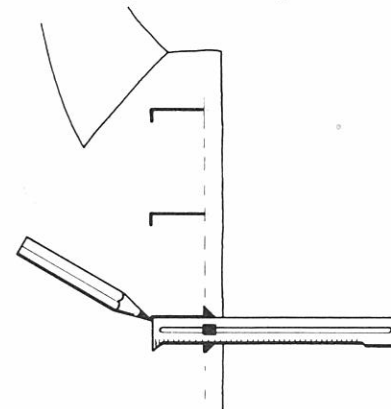
Flat buttons
Button plus 2–3 mm



Ball shaped buttons (or thick fancy buttons)
Button plus 5–8 mm

3. Marking of buttonholes

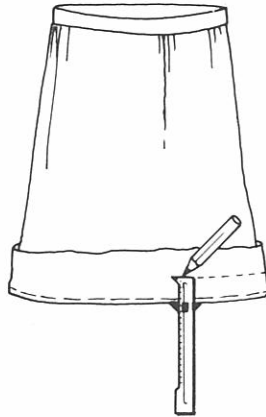
Transfer adjusted buttonhole length onto the garment.



Template for buttonholes, hems, pleats, scallops, etc.

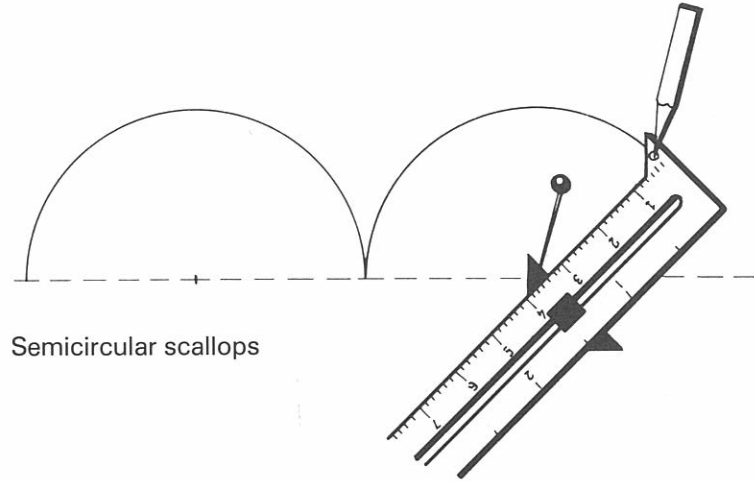
4. Marking of hem depth

With the red slide adjust the required hem depth.
Put the red slide against the hem edge, mark the hem depth.



6. Drawing scallops

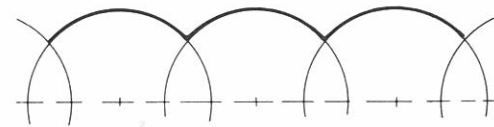
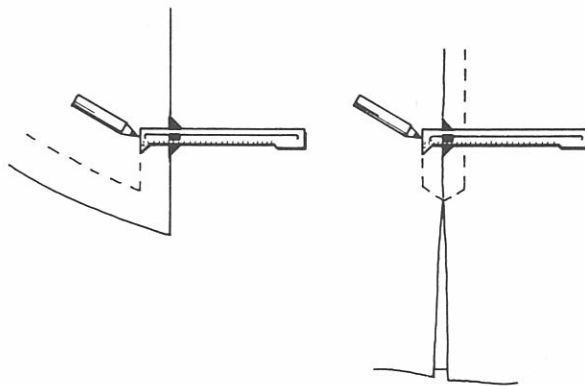
Drawing the curves:
Determine width and height of the curves.
Draw the necessary base lines and mark central points.
Set the slide, hold firmly with a pin, draw the scallops
(use cardboard underlay).



Semicircular scallops

5. Marking of top-stitch lines

Set the red slide to the required distance.
Put the red slide against the edge or seam. Mark the top-stitch line.



Flat scallops

Sequence of operations:
Preliminary drawing on paper.
Definite drawing on soft cardboard (3 to 5 scallops).
Cut out the scallops (= cardboard template).
Transfer by means of the cardboard template onto the fabric
(using a light coloured crayon or a chalk pencil).

Presser Feet

Presser feet are an important aid to sewing. They are provided with grooves and guides. The success or failure of a piece of sewing therefore depends on the correct choice of presser foot.

The presser feet are not only suitable for a specific operation. They are also used for simplifying any other work.

For example the buttonhole foot:

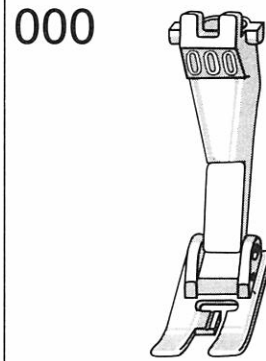
Buttonhole = main application

Gathering = further application.

Several presser feet look very similar at first glance. They are provided with numbers to avoid confusion. The presser feet illustrated on this page are the standard accessories supplied to most countries. In other countries with varying sewing practices the range of presser feet may be different.

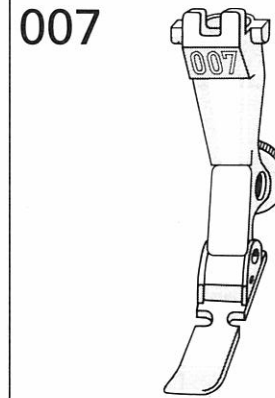
Additional presser feet can be obtained for more specialised sewing.

Ask your Bernina dealer for advice.



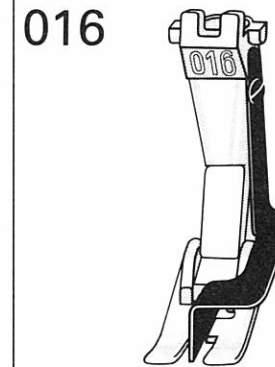
000
Presser foot for green stitches

Straight stitch
zig-zag
practical
stitches



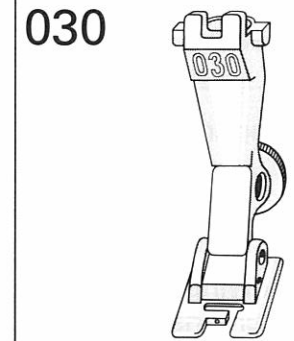
007
Zipper foot

Sewing in zips
Sewing piping close
along stitching line
raised seam



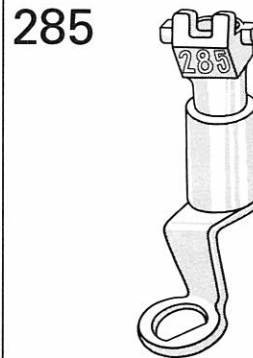
016
Blind stitch foot

Blind hemming
Edge stitching



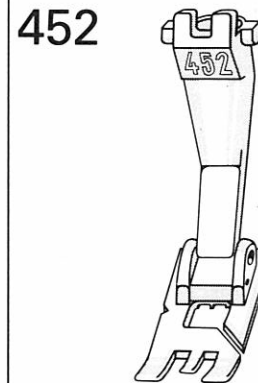
030
Embroidery foot

Decorative stitches
satin stitches
Appliqué, oversewing
beading cord, couching
on woollen thread



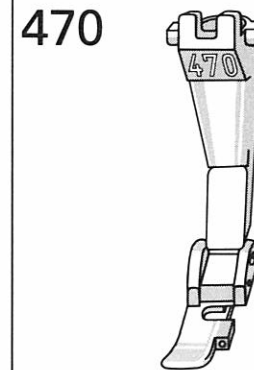
285
Darning foot

Darning
Monograms by free
hand
Free hand embroidery



452
Buttonhole foot

Buttonholes
Gathering



470
Overlock foot

Vari-overlock seam
Vari-overlock hem
Overcasting seams

Needle and Thread

Needle	70	80	90	100	110-120
Darning thread	✿	✿			
Embroidery thread No. 30		✿			
Sewing thread Mercerised cotton		✿	✿		
Sewing thread synthetic		✿	✿		
Sewing thread coarse Mercerised cotton, synthetic			✿	✿	
Buttonhole thread for decorative seams (cordonnet)				✿	✿

Please note:

Your Bernina is provided with Needle System 130/705H

Make sure when purchasing new needles that you receive needles of the 130/705H system.

The needle size to be used depends on the thread selected, the needle must match the thread.

The adjoining table indicates which needle is suitable for which thread.

12

Needles size no. 70 to no. 120 are usual in the trade. The finer the needle, the lower the number. It is the opposite for the thread. The finer the thread, the higher the number.

The thread lies in the long groove of the needle during sewing. If the needle is too fine, there is no room for the thread in the groove. The result is faulty stitches.

Special Needles

Special needles make it easier to sew difficult materials.

Ball-point needles help to prevent damage to knitted fabric.

System 130/705 H-SES = fine round tip for fine knitted fabrics, particularly synthetics.

System 130/705 H-SUK = medium round tip for medium to coarse knitted fabrics, particularly synthetics.

System 130/705 H-S = stretch (only Nm 90!) specially for elastic synth. knitted fabrics.

Jeans needles penetrate easier through hard fabrics.

System 130/705 H-J = slender tipped form for jeans fabrics and other compact, hard fabrics.

Leather needles penetrate leather more easily.

System 130/705 H-LR = cutting tip for hard leather particularly.

Plastic Leather

Plastic

Like synthetic fibres, plastic must be treated differently according to surface and graining when securing the edges. If the work does not slide properly it is often sufficient to lubricate the sewing area slightly with sewing machine oil (using a small cotton wad wrapped in absorbent material). Alternatively use presser foot with sliding rollers or Teflon base.

Always sew plastic with long stitch length to prevent cutting.

Leather and imitation leather

It is, of course, also possible to sew leather. It may be necessary to use leather needles for hard leather.

Sew a test piece first. Stitch length not too short. Try using the presser foot with sliding rollers or Teflon base.

Some Sewing Tips

Sewing is made much easier if the correct sitting position is adopted and the work is guided properly.

Some advice

Place your Bernina approx. 6–10 cm from the edge of the table. Sit right in front of the needle, i.e. in front of the work area, and not at the centre of the machine. This will enable you to watch the working area more closely without strain. Ensure that the height of your seat permits com-

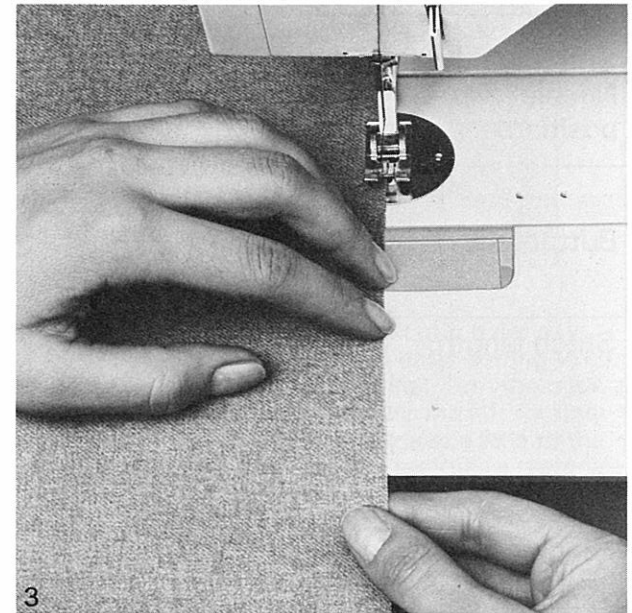
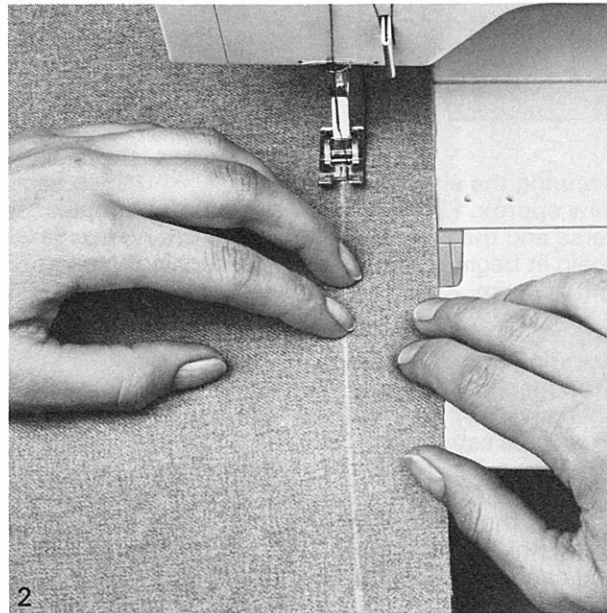
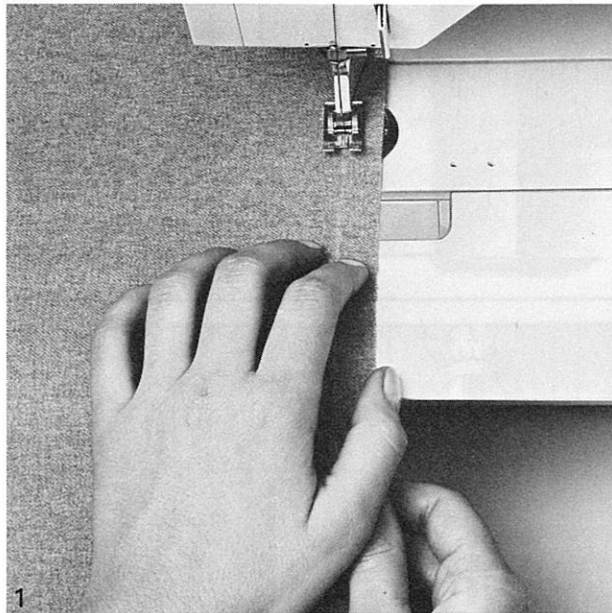
fortable working. Sitting too low or too high makes the work more tiring.

Guiding from the front is not satisfactory, since the material can be involuntarily held back (Fig. 1). Nor should the material be pulled from behind the presser foot.

It is best to guide the material from the side with the fingers of the left hand close to the presser foot (Fig. 2).

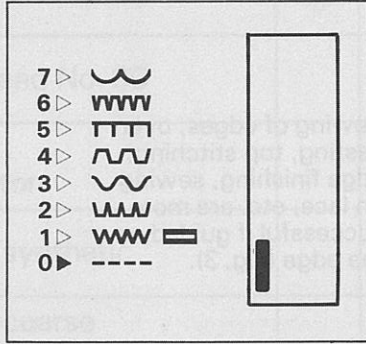
For difficult work, particularly with thin materials, it is preferable to stop and guide it a little at a time rather than let work slide beneath the hand.

Sewing of edges, overcasting, top stitching, edge finishing, sewing on lace, etc. are more successful if guided on the edge (Fig. 3).



Straight Stitch

Presser foot: 000
 Thread: to suit material
 Needle: to suit the thread
 see Needle and thread table page 12

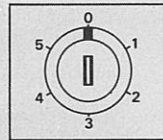


Stitch selection: selector lever 0

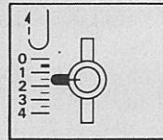
Stitch width: 0
 Needle position: centre



Buttonhole: 0



Stitch length: 1-4 as required
 normal stitch length is 1½-2½

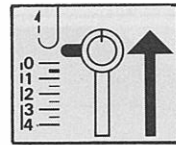


Feed-dog: sewing



Forward sewing
 With the settings specified, the machine sews forward with the stitch length selected. The stitch length is selected according to the sewing and material to be sewn.

Reverse sewing
 Push stitch length knob upwards and hold above 0 until reverse sewing is completed. When the knob is released, the machine sews forward again with the previously selected stitch length.



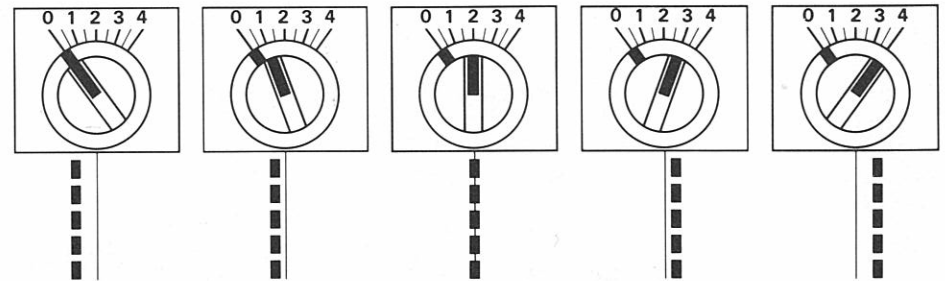
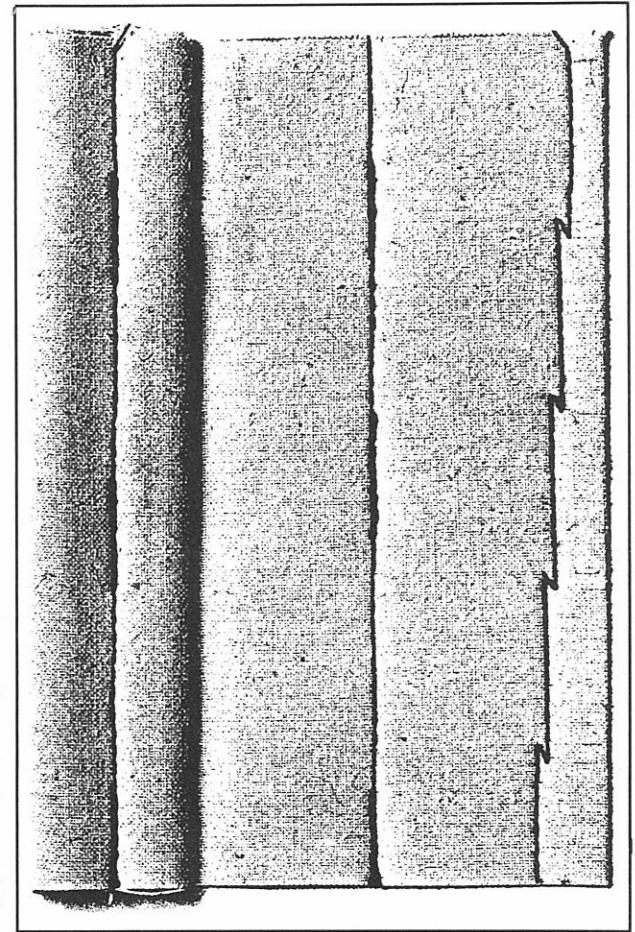
Securing the ends
 Sew approx. 1 cm reverse and then forward again at beginning and end of seam.

Securing thick seams
 Stop machine when changing from forward to reverse sewing and vice-versa. The electronic needle stop ensures that the needle is in its highest position and cannot be bent by thick materials.

Five needle positions
 The position of the stitch can be set to five different places with the knob for setting the needle position.

The needle is at the centre for normal sewing.

Application examples:
 Blind hem page 22
 Edge stitching page 23
 Sewing in zips page 21



Zig-zag

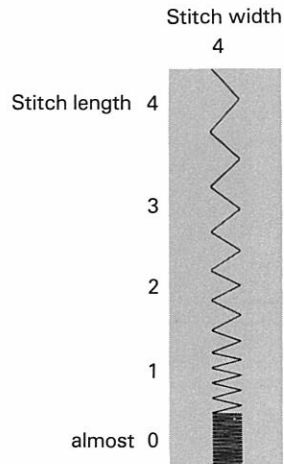
Setting zig-zag

Presser foot:	000
Thread:	to suit material
Needle:	to suit thread
Stitch selection:	No. 1 zig-zag stitch
Stitch width:	1-4
Stitch length:	1-4
Needle position:	centre
Feed-dog:	sewing

Zig-zag setting the width:

The **width** of the zig-zag stitch is set with the stitch width knob. It can be fully variable up to 4 mm. The stitch width can be altered while sewing or with the machine stationary.

But the needle must not be in the material when the machine is stationary!



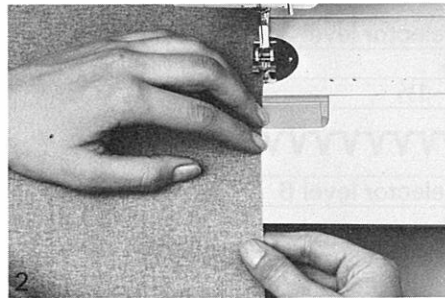
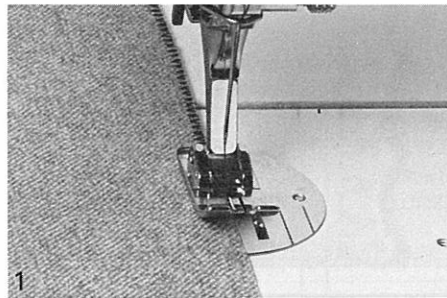
Oversewing edges

Presser foot:	000
Thread:	darning thread, possibly sewing thread
Needle:	80-70
Stitch width:	2½-4
Stitch length:	1-2

In general: zig-zag should not be too wide and stitch length not too long, cut edge neatly first. Use darning thread if possible, particularly for fine material.

Guide edge of material to **centre** of presser foot, so that the needle stitches alternately into the material and over the edge (Fig. 1).

If sewing on the edge, then guide on the edge (Fig. 2).

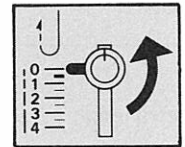


Satin-stitch = close zig-zag

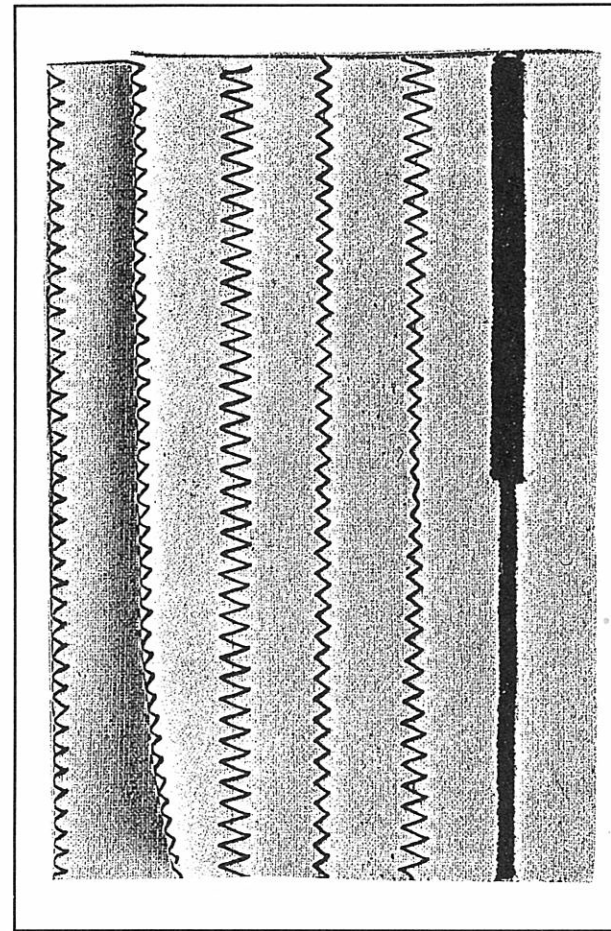
Presser foot:	030 embroidery foot
Thread:	embroidery thread 30
Needle:	80
Stitch width:	1½-4
Stitch length:	almost 0

Set stitch length for close zig-zag:

Turn stitch length knob to the right until it locks. Mark on knob is at the top. Stitch length is then 0. By turning half a revolution to the **left** – mark is underneath – the **basic setting** of stitch length is obtained.

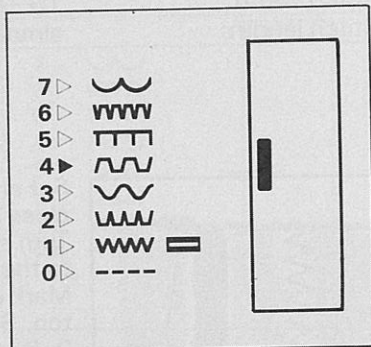


Adjust stitch density from basic setting to suit material. Turn the mark a little to the left for finer materials, a little to the right for thicker materials. Sew a test sample.



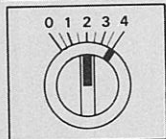
Selecting the practical Stitches Stitches 0...7

Presser foot: 000
 Thread: to suit the material
 Needle: to suit the thread

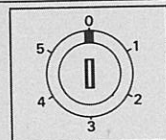


Stitch selection: selector level 0...7

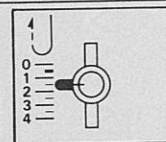
Stitch width: 0-4
 Needle position: centre



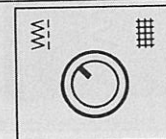
Buttonhole: 0



Stitch length: 1-4



Feed-dog: sewing



• Press selector lever to right to disengage and set to desired stitch 0 to 7.

See page 17 for application examples of stitches 0...7.

Universal stitch 4



Stitch selection: selector level 4
 Stitch width: 4
 Stitch length: 1-2

Scalloped stitch 7



Stitch selection: selector level 7
 Stitch width: 4
 Stitch length: 1/4

Running stitch 3

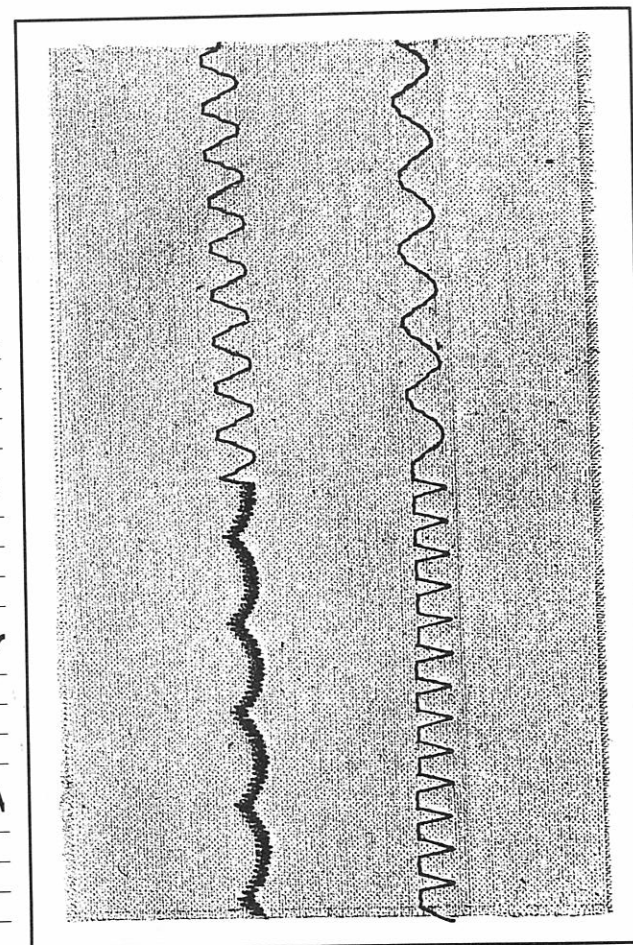


Stitch selection: selector level 3
 Stitch width: 4
 Stitch length: 1-1 1/2

Vari-overlock 6



Stitch selection: selector level 6
 Stitch width: 4
 Stitch length: 1-1 1/2
 Needle position: right



Applications of Practical Stitches

1 Zig-zag



For most types of material

Overcasting loosely woven fabrics
Reinforcing and repairing edges
Decorative seams

2 Blind stitch



For most types of material

Blind hemstitch, shell edging on soft jerseys and fine materials
Decorative seams

3 Running stitch



For most types of material

Darning with running stitch, mending material, reinforcing edges etc.

4 Universal stitch



For firmer knitted materials and fabrics, felt, leather, etc.

Flat joining seam, visible hems, patchwork, mending jersey, sewing on elastics
Decorative seams

5 Stretch stitch



For highly-elastic materials

Highly-elastic, open seam for ski, riding-, climbing, hiking- and activity wear

6 Vari-overlock



Particularly for fine synthetic and silk jerseys, helanca and cotton and woollen jerseys

Highly-elastic overlock seam and highly-elastic hem, particularly for sports underwear, pyjamas, T-shirts, sweaters, track-suits, etc.

7 Scallop stitch



Particularly for woven fabrics

Edgings for tablecloths, serviettes, collars, cuffs etc.

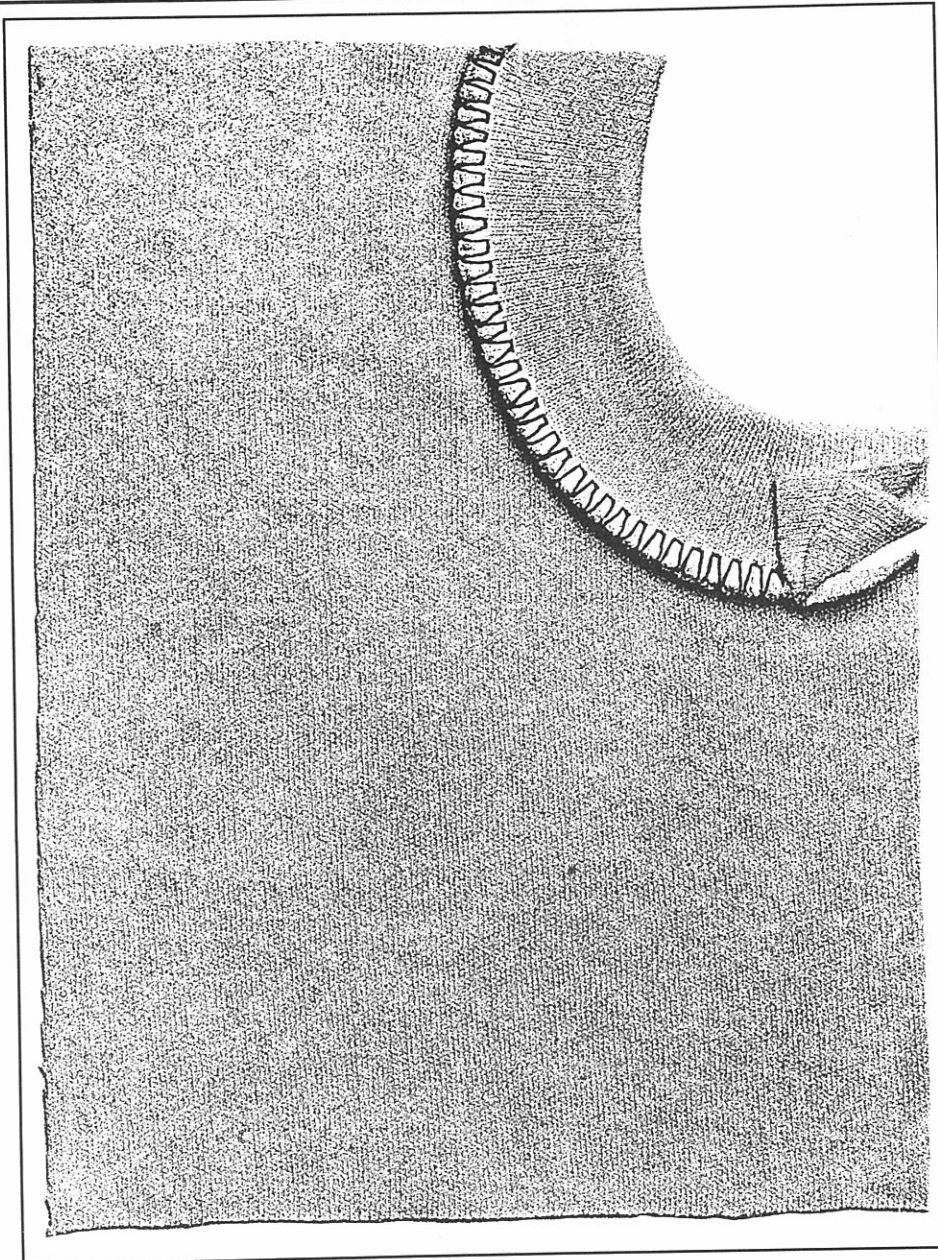
Sewing Knitted Fabrics

e.g. jersey

The following generally applies when sewing knitted material:

1. Use a perfect needle! Even a slightly blunt needle damages the knit and holes appear after a short time.
2. Use fine sewing thread, particularly for the fine jerseys. Coarse thread can also damage the knit.
3. Use darning thread for basting. Darning thread, when sewn over, can be more easily removed than the much thicker and shorter-fibre basting thread.
4. Press seams immediately after sewing. This considerably simplifies subsequent work.
5. Sew a sample to test the stretchiness of the stitch, the chosen stitch should be as elastic as the material. Since the elasticity of modern textiles vary considerably, the basic settings of the practical stitches may need to be adjusted.

For highly-elastic materials try making the stitch length slightly shorter and stitch width slightly wider. This provides the seam with more thread and therefore makes it more elastic.



Rib-trim with overlock seam

For all kinds of jersey.



Presser foot:	470
Thread:	sewing thread
Needle:	80-70
Stitch selection:	No. 6 vari-overlock
Stitch width:	4
Stitch length:	1 approx.
Needle position:	right
Feed-dog:	sewing

Press cut strip in half lengthwise. **Pin** to neckline on **right side**, cut edges of trim level with edge of neckline. Guide cut edges along pin of overlock foot when sewing.

Hems with Practical Stitches

In general:

baste hem – mark desired width – sew – trim off surplus material.

The “Hints for working with knitted materials” page 18 apply to all types of jersey.

Visible hem with universal stitch



Presser foot:	000
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 4 universal stitch
Stitch width:	4
Stitch length:	¾ approx.
Needle position:	centre
Feed-dog:	sewing

Visible hem with vari-overlock



Presser foot:	470
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 6 vari-overlock
Stitch width:	4
Stitch length:	1 approx.
Needle position:	right
Feed-dog:	sewing

Visible hem with stretch stitch



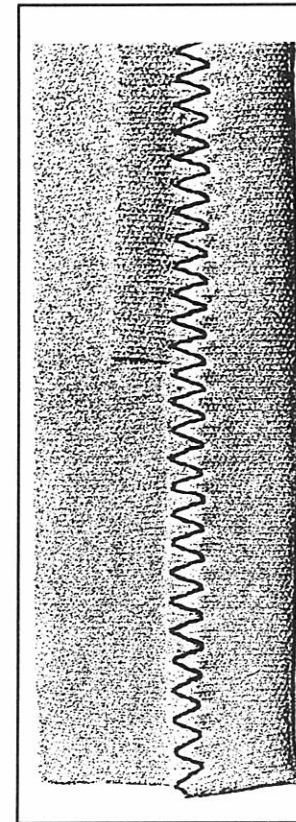
Presser foot:	000
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 5 stretch stitch
Stitch width:	4
Stitch length:	½ approx.
Needle position:	centre
Feed-dog:	sewing

Visible hem with universal stitch

Elastic visible hem for cotton jersey, fine wool, synthetics and blended fibres.

Pyjamas, T-shirts, lingerie, sports underwear.

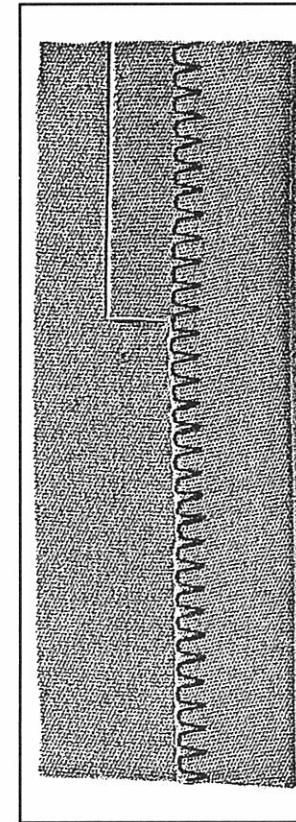
Pin or baste hem into position. Sew hem approx. 1 cm from raw edge. Cut off surplus material. Alternately, sew directly over the cut edge.



Visible hem with vari-overlock

Very elastic visible hem for all highly-elastic jerseys: terry cloth stretch / helanca / very soft cotton and woollen jerseys.

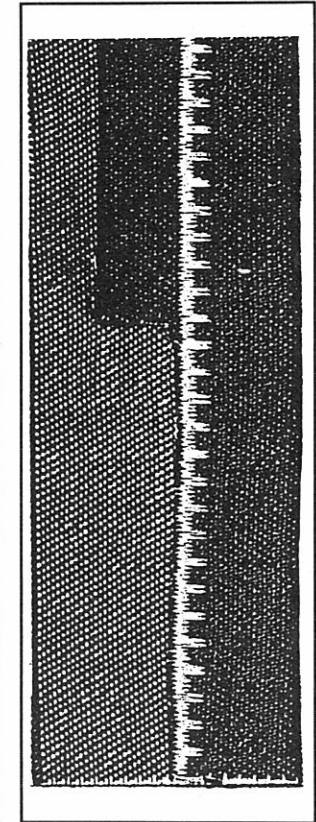
Pin or baste hem into position. Sew hem approx. 1 cm from raw edge. Cut off surplus material.



Visible hem with stretch stitch

Hard wearing visible hem for firm fabrics, jeans, etc.

Pin or baste hem into position. Sew hem approx. 1 cm from raw edge. Cut off surplus material.



Seams with Practical Stitches

The choice of type of seam depends entirely on the article. The choice of practical stitch on the material used.

We distinguish between three types of seam:

Open seams:

are seams which are pressed open

- they lie flat and do not roll
- they allow the garment to be let out

Range of application: dresses, pants, skirts, jackets, coats, etc.

Overlock seams:

are seams which are sewn and overcast in one operation

- they are quickly made
- they are narrow, but do not allow the garment to be let out

Range of application: particularly knitted fabrics for sweaters, jackets, jersey blouses, linen, hand and machine-knitted garments.

Flat joining seams:

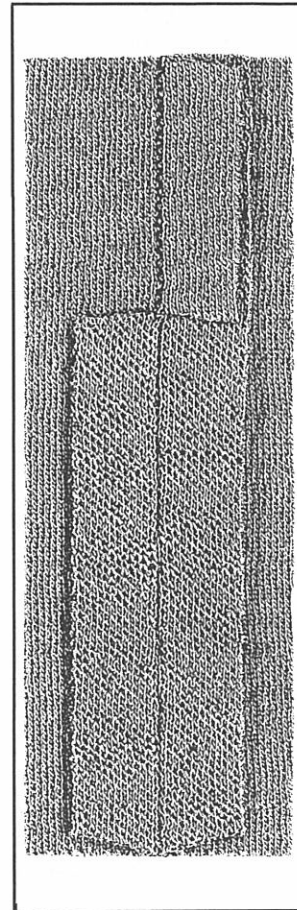
are seams where the cut edges are lapped and then sewn over.

- they lie flat
- they are narrow and cannot be let out
- they do not roll up, edges are neat.

Zig-zag seam open seam



Presser foot:	000
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 1 zig-zag stitch
Stitch width:	1
Stitch length:	1-1½
Needle position:	centre
Feed-dog:	sewing



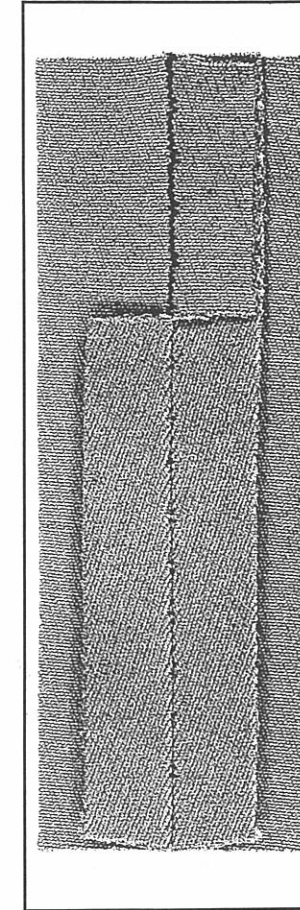
Open seam

Seam for normal elastic jersey in wool, synthetics or blended fibres, as well as for silk-, cotton- and woollen jersey.

Stretch seam open seam



Presser foot:	000
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 5 stretch stitch
Stitch width:	1-1½
Stitch length:	½-1
Needle position:	centre
Feed-dog:	sewing



Open seam

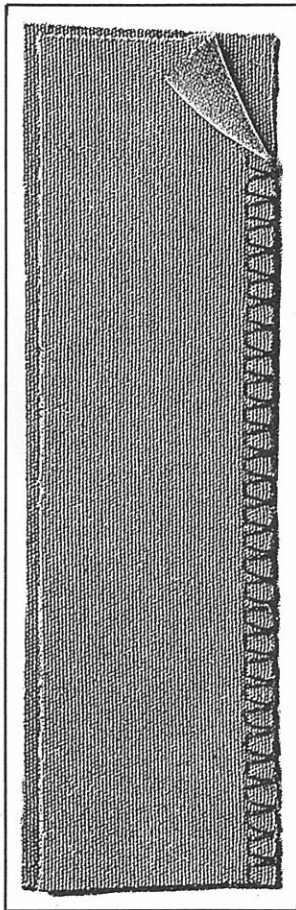
Highly-elastic seam for stretch materials, particularly for all kinds of sports-wear.

Seams with Practical Stitches

Vari-overlock seam



Presser foot:	470
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 6 vari-overlock stitch
Stitch width:	4
Stitch length:	approx. 1
Needle position:	right
Feed-dog:	sewing

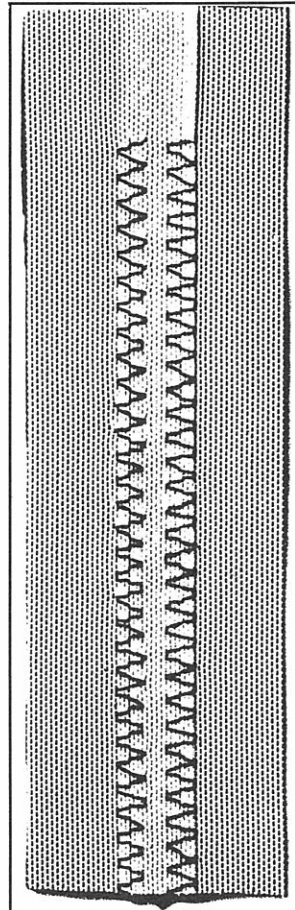


Highly-elastic overlock seam for all **fine** jersey dresses, blouses, linen, sports underwear.

Flat joining seam



Presser foot:	000
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 4 universal stitch
Stitch width:	4
Stitch length:	$\frac{3}{4}$ approx.
Needle position:	centre
Feed-dog:	sewing



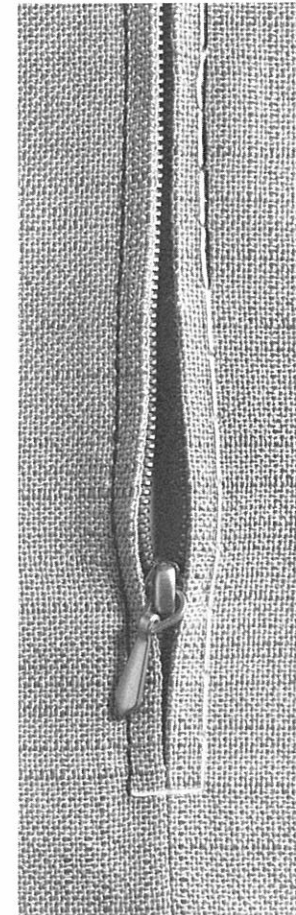
Elastic seam for lycra material.

Zip Fastener

Zip fastener inserted flat



Presser foot:	007
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 0 straight stitch
Stitch width:	0
Stitch length:	2 approx.
Needle position:	left/right
Feed-dog:	sewing



Preparation:

Baste entire length of seam. Mark length of zip and sew seam as far as zip opening. Remove basting thread – **except along zip section**. Press entire seam, trim evenly and oversew. Remove remaining basting thread. Baste-in zip so that the teeth are covered by the material. Sew-in zip, both sides from bottom to top, once with the needle position right and once with the needle position left.

Blind Hemming



Presser foot:	016
Thread:	sewing thread/ darning thread
Needle:	80-70
Stitch selection:	No. 2 blind stitch
Stitch width:	2½ approx.
Stitch length:	2-2½
Needle position:	right
Feed-dog:	sewing

Important

As for sewing by hand, a fine material requires a fine needle and fine thread.

This work is best sewn at a slow speed.

Preparation

The hem should be prepared as for sewing by hand: overcast raw edge, baste and press.

Placing the hem

How the work is placed beneath the foot (see Fig. 1).

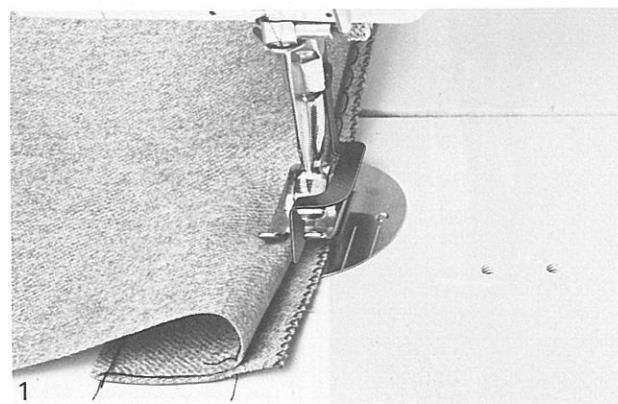
Trial sewing

It is recommended to sew a trial piece as materials can vary in thickness; the needle should prick only the edge of the material as when sewing by hand.

Basic setting is always stitch width 2½. The different thicknesses of material may require a small adjustment.

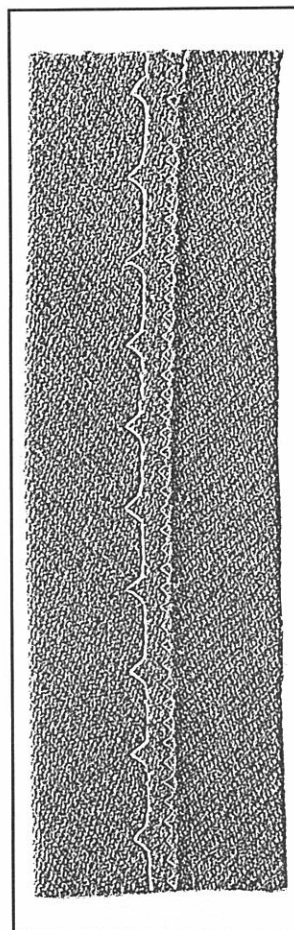
Trial:

Sew slowly, until the needle swings to the left side. Using the hand-wheel guide the needle until it just touches the fold and check that it just catches it. If necessary adjust stitch width slightly: making it narrower if needle is too far over fold and wider if it is missing the fold. Check the next left swinging stitch in the same way. Then sew approx. 10 cm and check again.



1

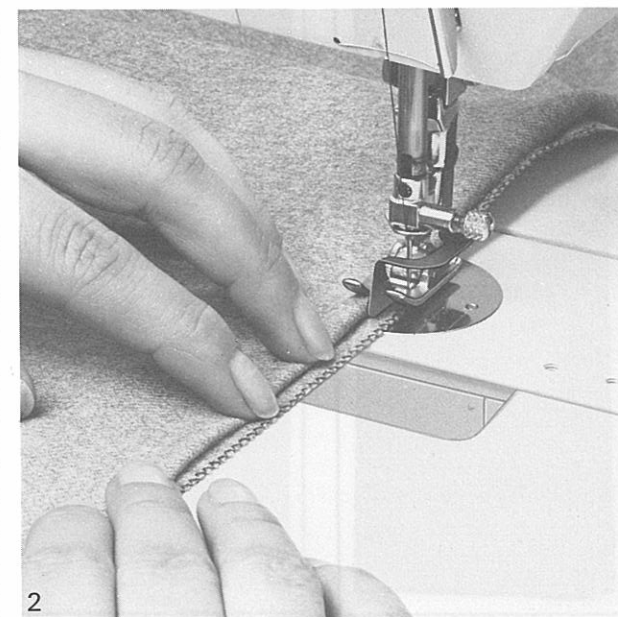
22



Guiding the work

Guide the hem into the foot as shown in Fig. 2.

Tip: Hold the work lightly ensuring the fold is always kept against the guide.



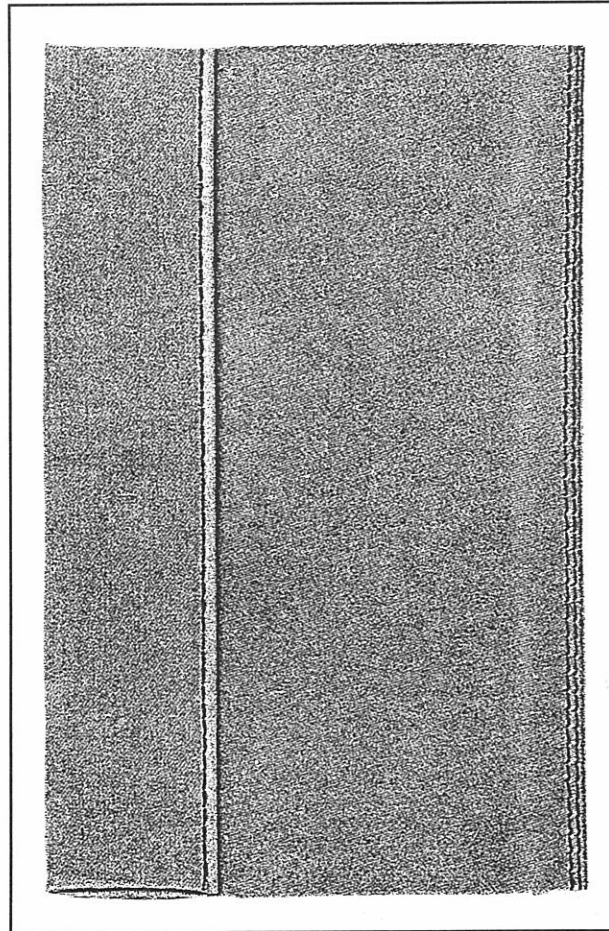
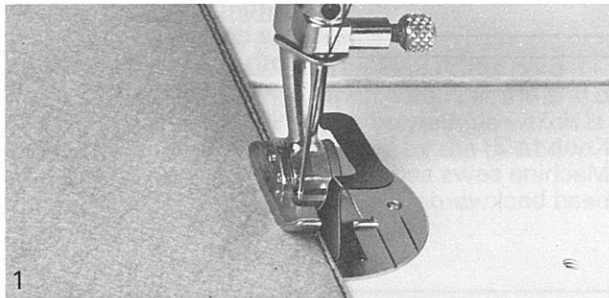
2

Stitching Edges using the Needle Positions

Narrow-stitched edges
on collars, cuffs, lapels, hems, etc.

Presser foot:	016
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 0 straight stitch
Stitch width:	0
Stitch length:	1½ - 4
Needle position:	left / half-left
Feed-dog:	sewing

Place fabric edge to left side of guide on blindstitch foot (Fig. 1). Set needle position left or half-left.



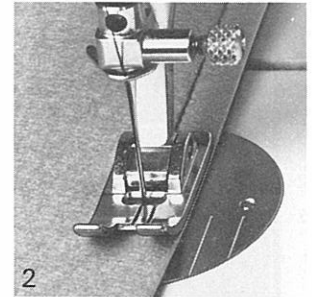
Wide-stitched edges

Presser foot:	000
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 0 straight stitch
Stitch width:	0
Stitch length:	1½ - 4
Needle position:	all positions
Feed-dog:	sewing

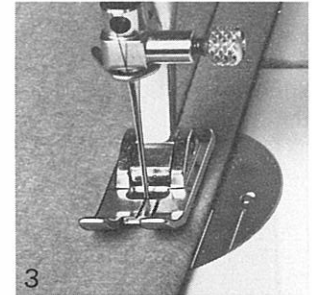
Guide material edge along the presser foot or along the markings in the stitch plate.

Stitching widths:

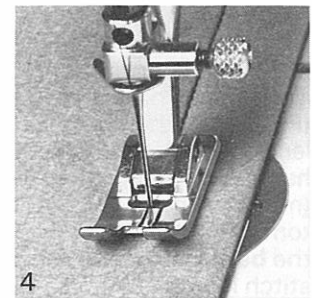
a) Presser foot deep = 7 mm (Fig. 2)



b) Marking line 1 = 10 mm (1 cm) (Fig. 3)



c) Marking line 2 = 15 mm (1,5 cm) (Fig. 4)



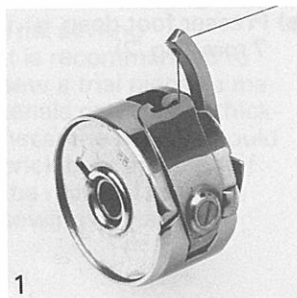
Other widths can be sewn using the needle positions left, half-left, right and half-right.

Buttonholes

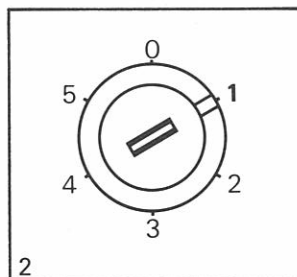


Presser foot:	452
Thread:	sewing/darning thread
Needle:	80-70
Stitch selection:	No. 1 zig-zag stitch
Stitch width:	connected automatically
Stitch length:	almost 0
Needle position:	connected automatically
Feed-dog:	sewing

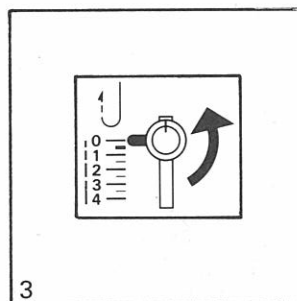
To sew buttonholes, thread lower thread in the finger of the bobbin case (Fig. 1).



Buttonhole setting
1. Switch buttonhole knob to position 1 (Fig. 2).

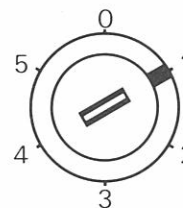
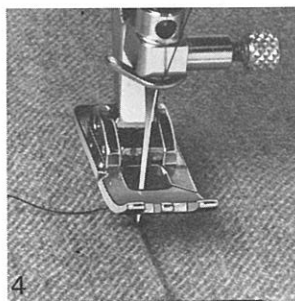


2. Set stitch length as follows. Turn knob to right until it locks. The Mark is now on top (Fig. 3) and the stitch length is 0. Now make **half** a turn to the **left** (marking line to the bottom) and this will give the **basic setting** for the stitch length.

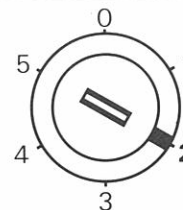


Adjust stitch density to suit material: turn a little to right for thick fabrics – to left for fine fabrics. Always sew a trial buttonhole. The stitch length varies slightly depending on the type of material.

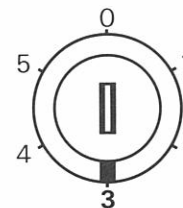
Sewing the buttonhole
Place the material under the foot so that the edge of the material lies **in front of the presser foot** (Fig. 4). Move needle down with the handwheel and check whether it is at the **centre** of the presser foot. If not, operate needle stop once. Position work beneath foot and place needle exactly at start of the buttonhole. Lower presser foot and sew buttonhole.



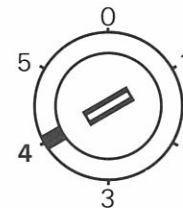
Knob to 1
Machine sews first bead forwards



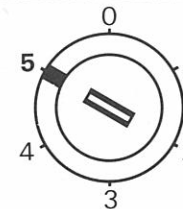
Knob to 2
Machine sews bar tack



Knob to 3
Machine sews second bead backwards



Knob to 4
Machine sews bar tack



Knob to 5
Machine does securing stitches

Reset knob to 1 for next buttonhole and continue sewing through to step 5 as described above. When all buttonholes are completed set knob to 0 for general sewing.

Cutting open buttonhole
It is best to cut from both ends of the buttonhole to the centre (Fig. 5). This avoids cutting through a bar tack.



Corded buttonholes

The gimp cord strengthens the buttonhole.

The gimp cord is particularly important in all knitted materials – both hand and machine-knitted – to ensure that the buttonhole does not pull out of shape.

The thickness of the cord depends on the material to be sewn. The following are suitable: beading thread No. 8, buttonhole thread, thick hand sewing thread, on fine crochet cord. Sew a trial buttonhole.

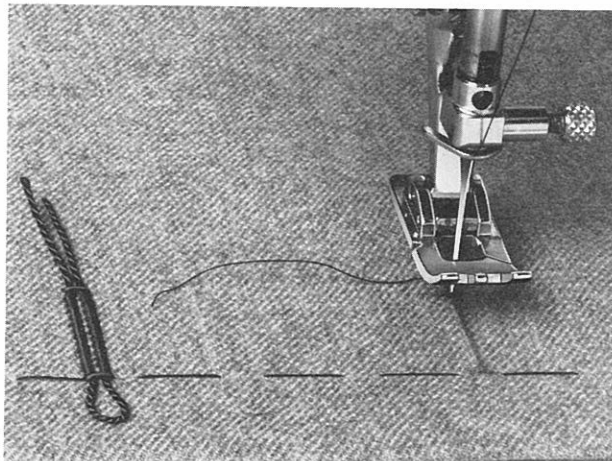
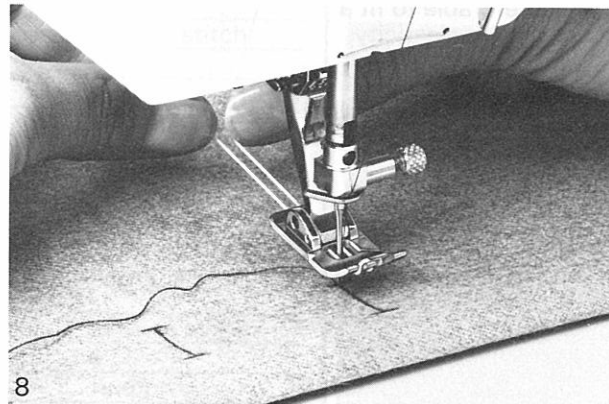
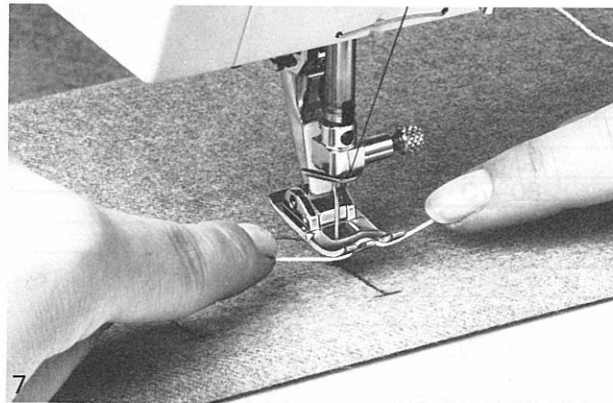
Place material under the foot so that the edge of the material lies **in front** of the presser foot.

The loop of the cord then comes at the end of the buttonhole which is pulled by the button (Fig. 6).

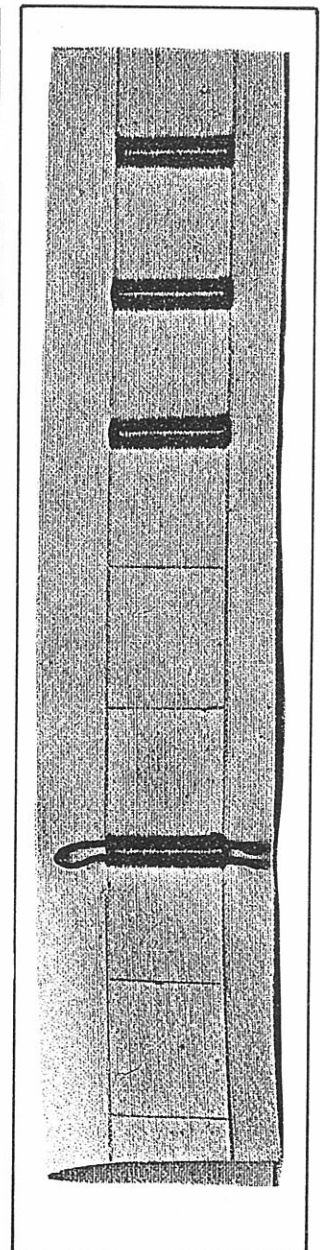
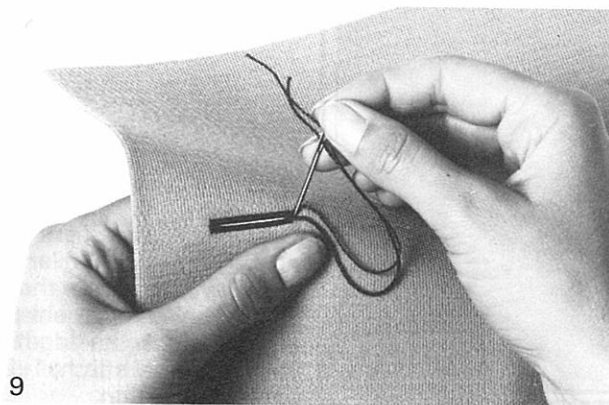
Sewing with gimp cord

It is much easier to position the cord if the needle is already in the material:

1. Move needle down using hand-wheel and check whether it is at the centre of the presser foot. If not, operate needle stop once. Position material beneath foot and place needle exactly at start of buttonhole. Do not lower foot yet.
2. Place cord over the centre stem of the buttonhole foot (Fig. 7) and take both ends under the foot to the rear (Fig. 8). Lower foot and **check whether cord can slide**, i.e. is not stuck.
3. Sew buttonhole, do not hold cord as it must be able to move.



Finally pull the loop of the cord into buttonhole. In knitted fabrics thread ends of cord to rear with large hand sewing needle (Fig. 9) and tie or sew in securely. The cord end can be cut off in woven material.



Mending Jersey

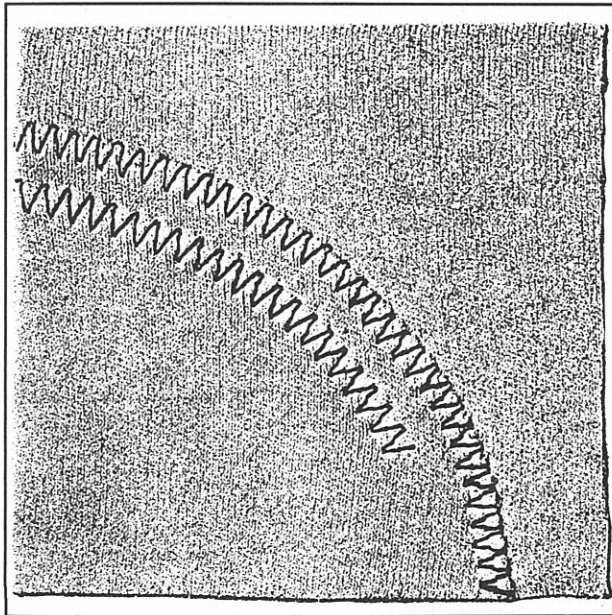
Patching with universal stitch

Mainly for mending jersey underwear



Presser foot:	000
Thread:	darning thread
Needle:	80-70
Stitch selection:	No. 4 universal stitch
Stitch width:	4
Stitch length:	1
Needle position:	centre
Feed-dog:	sewing

It is best to darn minor tears. See page 28. For larger thin or damaged areas, it is preferable to fit a replacement piece, since this retains the elasticity.



Cut out a replacement piece from the good part of a no longer worn, similar garment, rounding off the corners, to preserve the elasticity in all directions. Pin on the replacement piece and baste with small stitches along the edge if possible. Then sew on with universal stitch, 1-2 rows. Finally, cut out damaged portion.

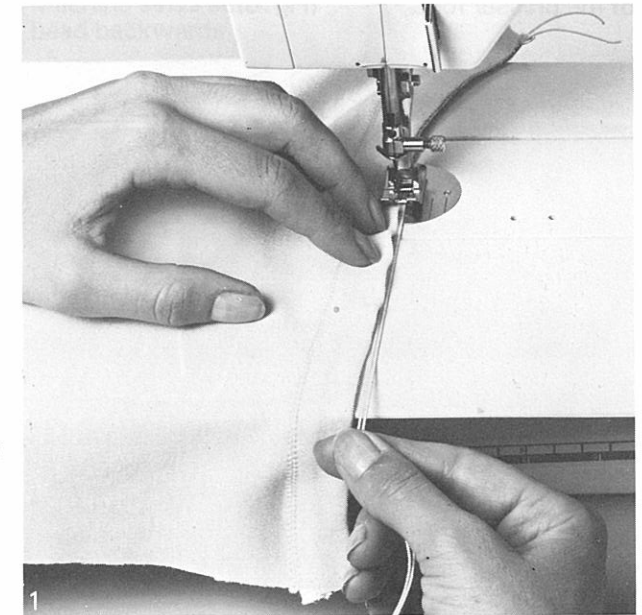
Edging with elastic thread



Presser foot:	000
Thread:	darning thread
Needle:	80
Stitch selection:	No. 1 zig-zag stitch
Stitch width:	3
Stitch length:	1-1½
Needle position:	centre
Feed-dog:	sewing

Elastic thread is used to restore distorted edges to their original shape.

Guide two elastic threads along the edge and sew on with zig-zag stitches, pulling threads slightly (Fig. 1).



Mending Woven Fabrics

Mending tears with running stitch

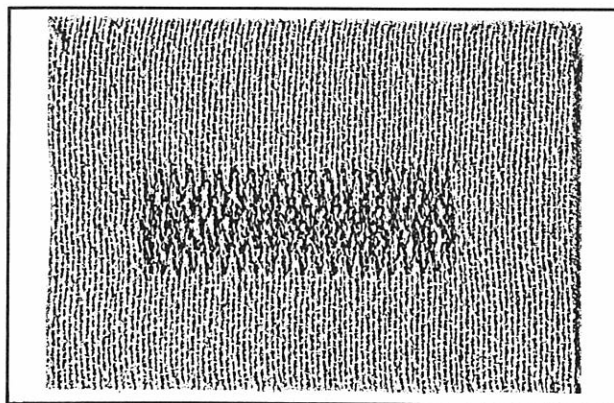
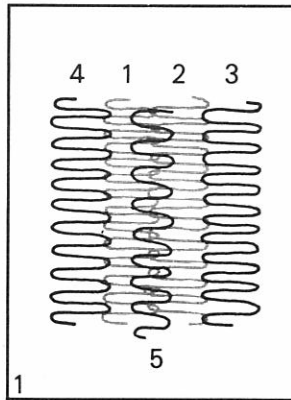


Presser foot:	000
Thread:	darning thread
Needle:	80-70
Stitch selection:	No. 3 running stitch
Stitch width:	4
Stitch length:	almost 0- 1/4
Needle position:	centre
Feed-dog:	sewing

(modern darning) For tears and thin places in practically all materials

Always place a fine backing fabric underneath. Sew 3-5 rows of running stitch for tears, depending on the type of fabric and damage (Fig. 1).

On thin areas sew a sufficient number of parallel rows to cover. Overlapping each row slightly.



Patching with running stitch

For outer-wear and children's jeans

Presser foot:	000
Thread:	darning thread
Needle:	80
Needle position:	centre
Feed-dog:	sewing

1st operation



Stitch selection:	No. 1 zig-zag stitch
Stitch width:	2
Stitch length:	1-1 1/2

Do not cut out damaged areas. Pin patch on right side and baste along edge with small stitches in darning thread.

2nd operation



Stitch selection:	No. 3 running stitch
Stitch width:	4
Stitch length:	1/4 approx.

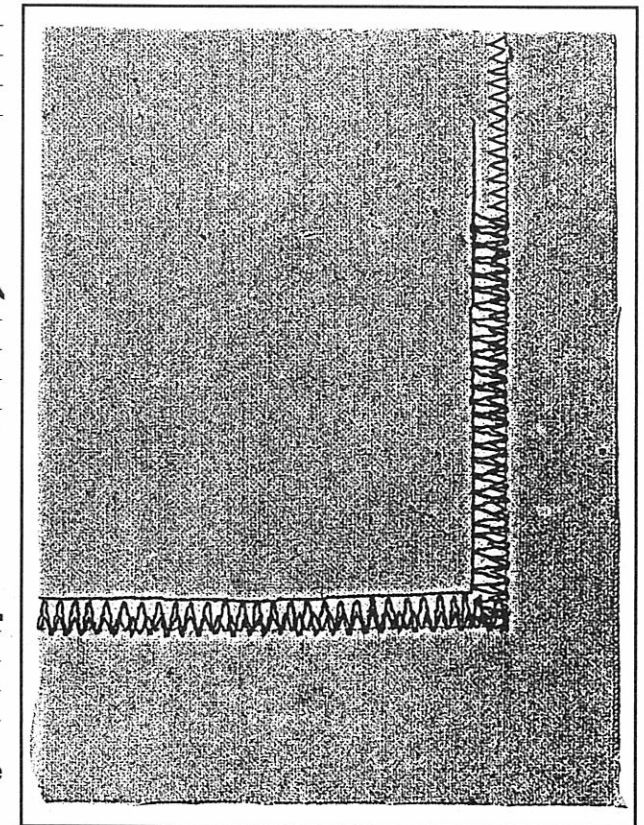
Oversew edges with running stitch. Guide the edge of patch to right of zig-zag slot in foot to ensure all running stitches are on the patch.

3rd operation



Stitch selection:	No. 0 straight stitch
Stitch width:	0
Stitch length:	1/2 approx.

Sew straight stitch on the inside edge - along the running stitch, then cut out the damaged piece. The straight stitch makes it easier to cut out.



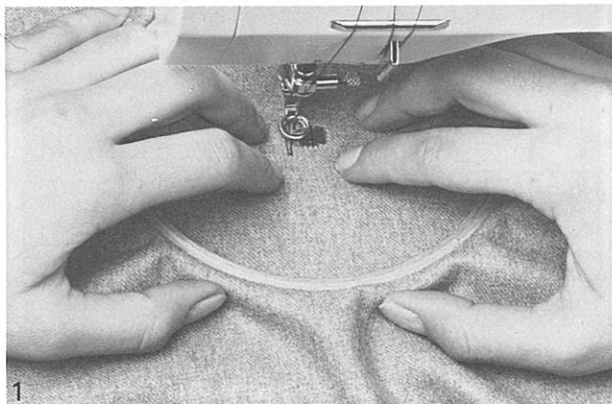
Darning

Principle of darning

The feed-dog must be lowered for darning to ensure that the material will not be moved by the feed-dog. The material is moved to-and-fro by hand. It is important to guide evenly when darning and this requires a little practice.

Recommendation

- Use a darning ring if possible, to keep the darning area taut.
- Move ring to-and-fro **without pressure**, otherwise jerky movements and torn threads occur.
- Starting from the left side of the hole work up and down gradually across the hole towards the right. Finish with needle in work on the right and pivot the work 90 degrees. Sew second run at right angle to the first rows. Still working up and down fill in any gaps.
- Suitable method of holding ring: the 4 outer fingers hold it fairly tightly to keep it securely in the hand (Fig. 1). This also helps to guide the work regularly.
- Use sewing table, support elbows if possible. Set up machine a sufficient distance from edge of table.



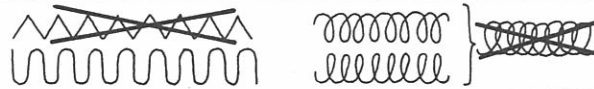
28

Darning technique

There are various methods of darning. The following is one which can be learnt easily:

Presser foot:	285
Thread:	darning thread
Needle:	80-70
Stitch selection:	No. 0 straight stitch
Stitch width:	0
Stitch length:	0
Needle position:	centre
Feed-dog:	lowered

Important: do not darn too sharply, but in curves, otherwise there is a danger of tearing. The l- or m-motion is particularly popular with beginners. Ensure that these do not result in a circular motion.

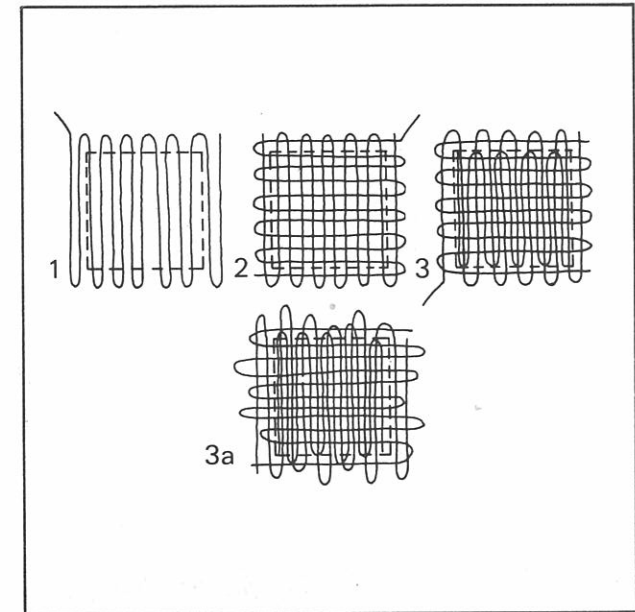
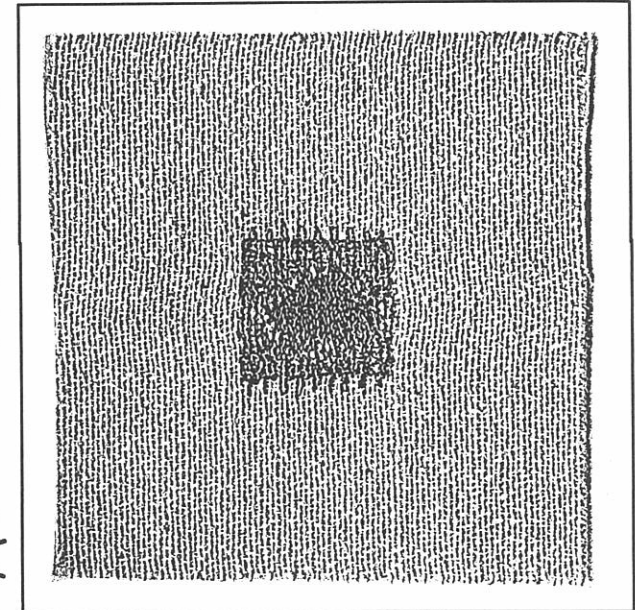


The Three Steps

1. Stretch work in darning ring. Bring up bottom thread at top left corner of hole. Moving ring up and down cover hole with first rows of stitches (not too many stitches or the darn will be "hard"). Finish at top right.
2. Turn work and repeat from left to right so that 2nd rows of stitches are at right angle to first rows.
3. Fill in any gaps, stitching in the same direction as 2nd rows so that the stitches sink in. Always follow the grain and if the material surrounding the hole is worn thin vary the length of the rows to avoid strain.

Main faults:

- Thread breaks frequently:
- work guided **irregularly** or too quickly.
- Small knots form on the underside:
- work moved **too slowly** or machine running to fast.



The small darning ring

The small darning ring is particularly useful for darning small holes in work that will not easily fit into a large ring, such as socks, sleeves, trouser legs, etc., or where you wish to use the free-arm.

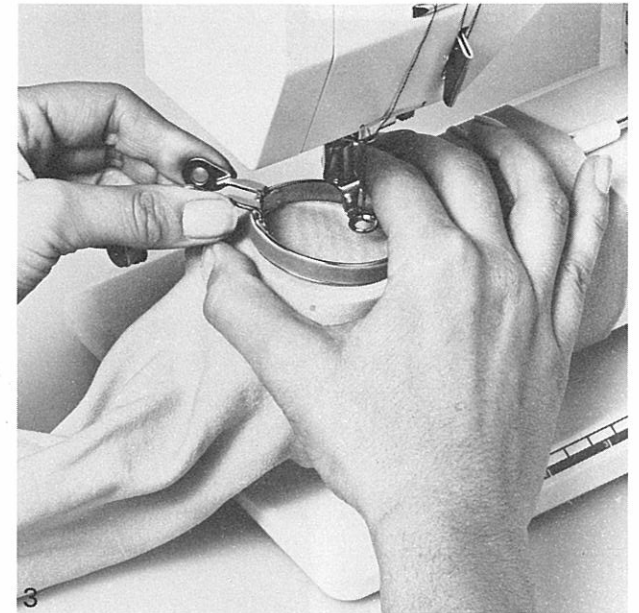
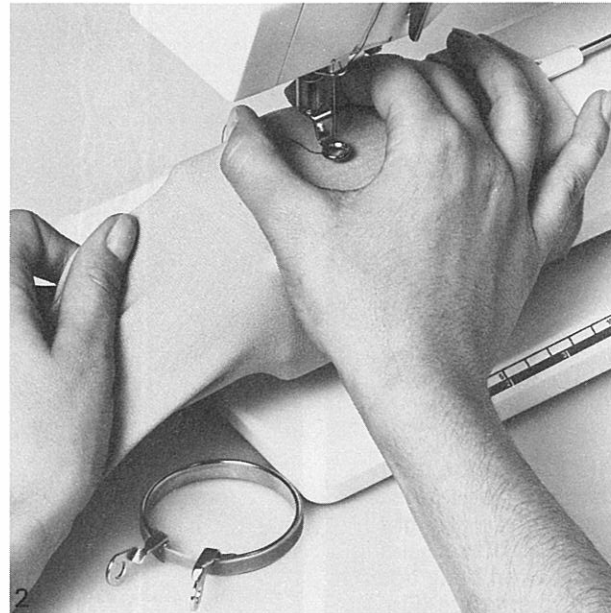
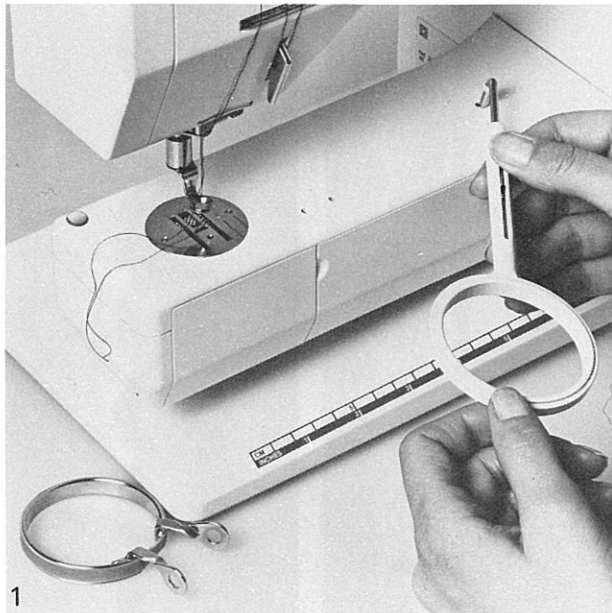
Stretching the work

- Place darning ring without spring clip on free-arm (Fig. 1).
 - Pull material evenly over free-arm and darning ring.
 - Stretch darning ring fully to left
 - Place index finger and thumb of right hand around the small darning ring.
- With the left hand stretch darning material to extreme point of free-arm. The tension produced in this way is held with the thumb of the right hand (Fig. 2)

Darning technique

When the work is stretched in the small darning ring over the free-arm sew the 1st run lengthwise and the 2nd run widthwise, since the work cannot be turned.

- Insert the spring clip as follows with the left hand: close spring clip, insert under the index finger of the right hand and **hold firmly** (Fig. 3). Only then press spring clip fully into darning ring.



Edgings on Woven Material

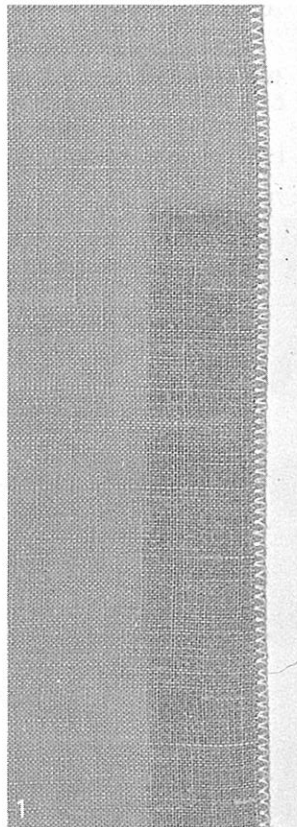
Fine edge finishing

For frills, scarves (neckerchiefs), serviettes, etc.



Presser foot:	000
Thread:	darning thread
Needle:	80-70
Stitch selection:	No. 1 zig-zag stitch
Stitch width:	1½ - 2
Stitch length:	½ approx.
Needle position:	centre
Feed-dog:	sewing

Press turnings of approx. 1 cm to wrong side. Sew zig-zag over this pressed edge. Guide pressed edge to centre of foot as for oversewing. Then cut off remaining material on back against zig-zag stitches (Fig. 1).



Lace and insertions on woven material

Presser foot:	000
Thread:	darning thread
Needle:	80-70
Needle position:	centre
Feed-dog:	sewing

1st operation

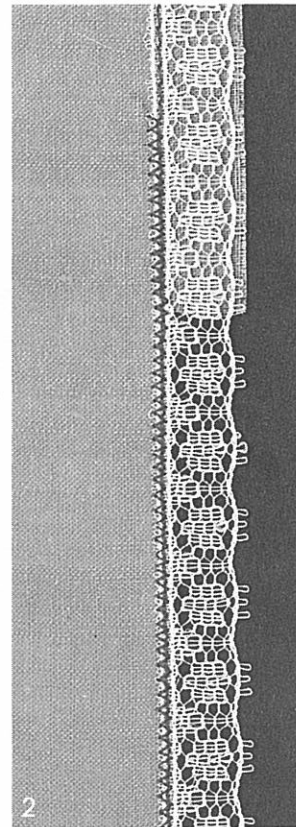
Stitch selection:	0
Stitch width:	0
Stitch length:	approx. 1

Pin on lace, baste and sew on with straight stitch.

2nd operation

Stitch selection:	1
Stitch width:	1½ - 2½ (depending on lace)
Stitch length:	¼ - ½ (depending on lace)

Press raw edge under. Oversew edge of lace with zig-zag on right side. Cut off remaining material on back against zig-zag stitches (Fig. 2).



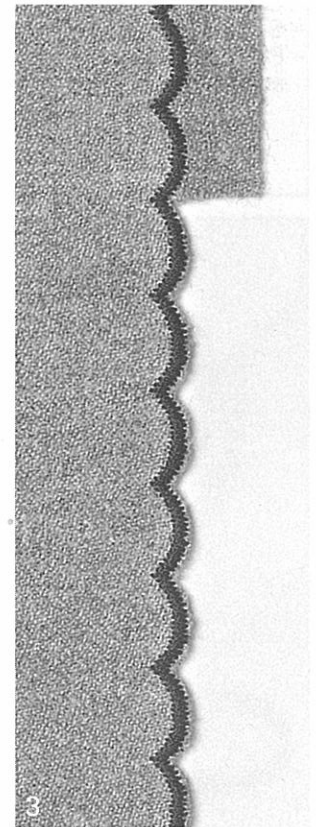
Scallop edging

For collars, cuffs, neckerchiefs, frills, tablecloths, serviettes, lining hems, etc.



Presser foot:	030
Thread:	embroidery thread
Needle:	80-70
Stitch selection:	No. 7 scallop stitch
Stitch width:	4
Stitch length:	almost 0
Needle position:	centre
Feed-dog:	sewing

Mark desired line and place paper underneath. Sew scallop, remove paper and cut round scallop (Fig. 3).



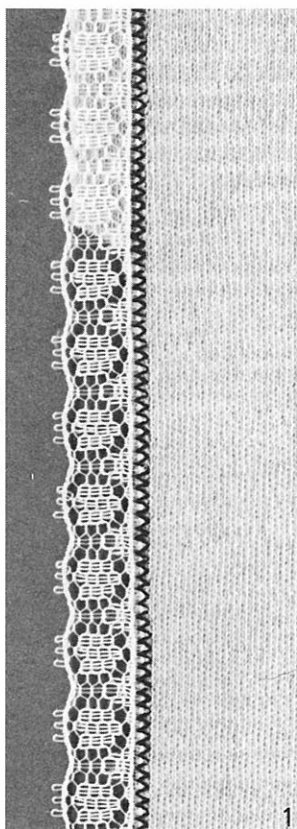
Edgings on Jersey

Lace on jersey



Presser foot:	000
Thread:	darning thread
Needle:	80-70
Stitch selection:	No. 1 zig-zag stitch
Stitch width:	1½ - 2
Stitch length:	½ approx.
Needle position:	centre
Feed-dog:	sewing

Pin on lace, baste with short basting device stitches, sew on with zig-zag over edge of lace. Cut off remaining jersey on back against zig-zag stitches (Fig. 1).



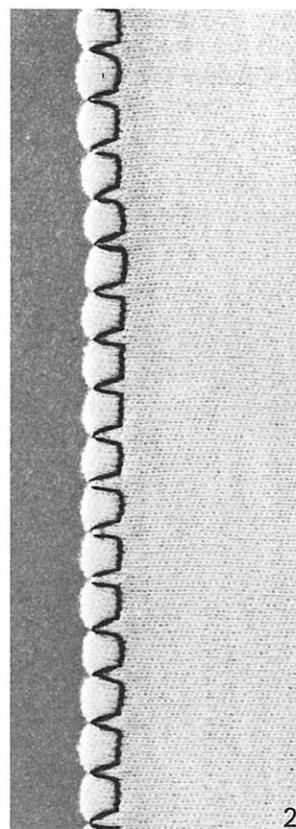
Shell edging

Specially for fine materials and jerseys



Presser foot:	000
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 2 blind stitch
Stitch width:	4
Stitch length:	1
Needle position:	centre
Feed-dog:	sewing

Place material under presser foot so that the edge for the shell edging is on the **left**. The needle on its left swing should just go over the edge (Fig. 2).



Elastic

Specially for sports- and other underwear



Presser foot:	000
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 4 universal stitch
Stitch width:	3
Stitch length:	1
Needle position:	centre
Feed-dog:	sewing

It is easier to gather jersey first: sew long straight stitches – then pull lower thread and gather jersey to the necessary width. Pin on elastic and sew in place. Cut off surplus on back (Fig. 3). Remove gathering thread. Elastic must **not** be stretched during sewing.



Gathering

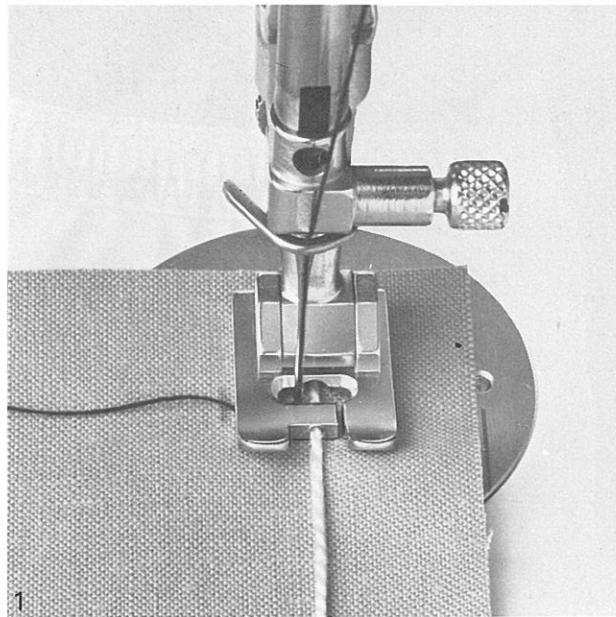
Gathering with cord

Long pieces of material



Presser foot:	030
Thread:	sewing thread
Needle:	80
Stitch selection	No. 1 zig-zag stitch
Stitch width:	2
Stitch length:	2-4
Needle position:	centre
Feed-dog:	sewing

Thread the pearl cord through the hole in the embroidery foot and oversew with zig-zag (Fig. 1). Always sew 2 rows at a distance of about 2 mm. Hold both cords and gather material (Fig. 2).



1

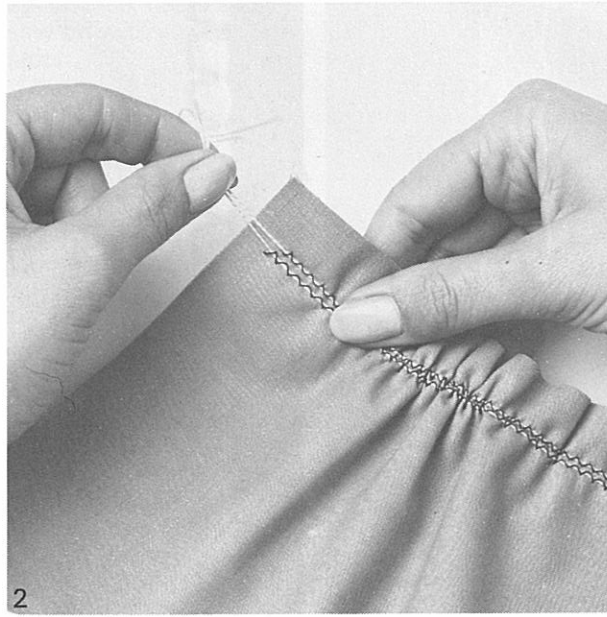
Normal gathering

Use presser foot 000. Small pieces or very thin fabrics can be gathered as follows:



Stitch selection:	No. 0 straight stitch
Stitch width:	0
Stitch length:	4

Sew two parallel lines of straight stitches. Then hold the two lower threads and gather the material to the desired width.



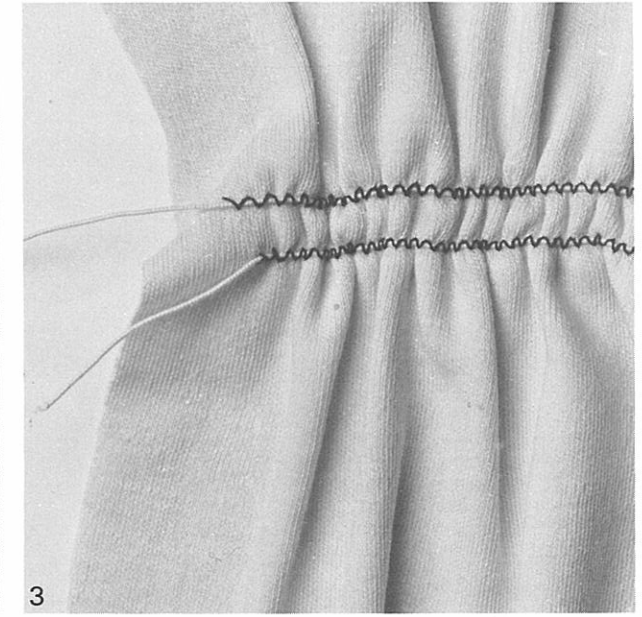
2

Gathering with elastic thread



Presser foot:	030
Thread:	sewing thread
Needle:	80
Stitch selection:	No. 1 zig-zag stitch
Stitch width:	2
Stitch length:	2
Needle position:	centre
Feed-dog:	sewing

Thread the elastic thread through the hole in the embroidery foot and oversew with zig-zag. Pull the elastic thread slightly whilst sewing. The more you pull the more it gathers. For each subsequent row – distance the width of the foot – pull the elastic thread and the material already sewn with equal tension (Fig. 3).



3

Monograms

The following data apply to "freehand" monograms



Presser foot:	- (possibly 285)
Thread:	darning thread/ embroidery thread
Needle:	80
Stitch selection:	No.1 zig-zag stitch
Stitch width:	4-2
Stitch length:	0
Needle position:	centre
Feed-dog:	lowered

Monograms can be embroidered in various ways.

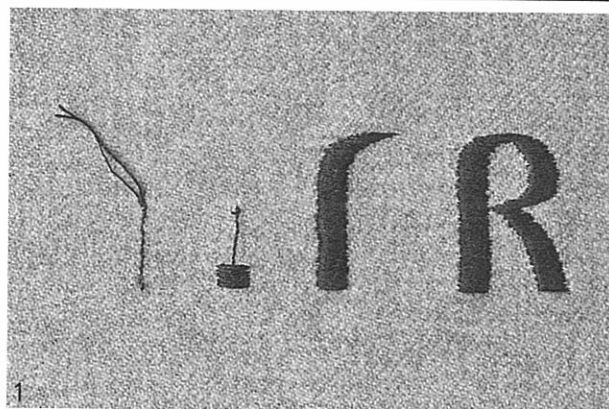
Work without presser foot.

But: **still lower lever for lowering presser foot**, otherwise loose stitches will be produced. Always stretch material in the loop. Lay paper under thin materials.

Those who are afraid at first to embroider without a presser foot can use the darning foot 285. In most cases darning thread 30 is used. Embroidery thread is also suitable for large monograms, e.g. on towels.

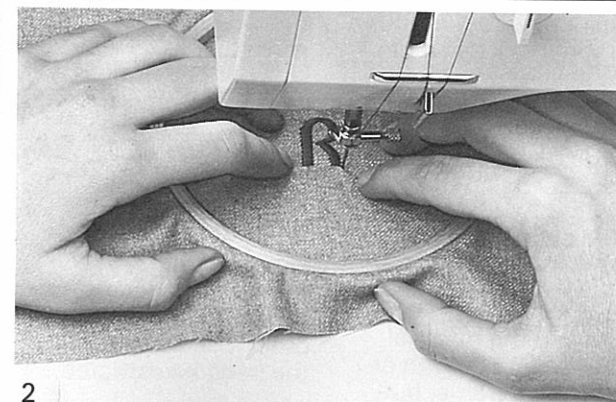
Practice makes perfect

- Monograms are easier worked "freely" rather than trying to follow a marked line.
- Select stitch width 4 and do not sew letters larger than 2-3 cm. Large monograms are more difficult as you must hold the hoop steady for longer.
- The letters R and B are particularly suitable for practising.
- Practice some pre-traced monograms later. The line traced should lie in the middle of the zig-zag stitch.
- Run machine at about three-quarters speed, but guide the frame **slowly**, regularly and smoothly!



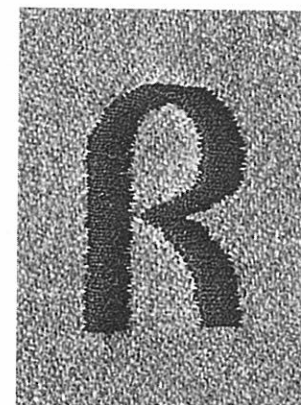
Procedure: (Fig. 1)

- Bring up the lower thread through the material. Secure with a few straight stitches. Cut both thread ends.
- Set zig-zag, sew 1-2 test stitches with the aid of the hand-wheel, ensuring that straight stitches are covered by the zig-zag stitches.
- Move frame outwards as though writing with it. **But do not twist it under any circumstances**, the narrow and wide sections are produced automatically. When the curved sections begins, guide the frame along the curve without twisting it.
- Finally secure with a few straight stitches.



Guiding the embroidery frame

The stitching of an even monogram largely depends on the correct holding of the frame. Hold frame as when darning (Fig. 2). Too much pressure by the fingers on the material produces irregular, jerky movements and therefore uneven monograms.



Important: Work as closely to the centre of the frame as possible, otherwise regular guiding is very difficult.

Note: Small, thin letters are more difficult to embroider. Practice with large letters at first until you have become proficient.

Appliqué

Appliqué is a method of embroidery for sewing on shapes and figures. It allows free reign to the imagination. There is a wide range of methods for sewing on the shapes.

The basic technique is explained below.

Guiding the material

You can work with or without a frame, but stretched material can be guided more easily.

The most important basic principles:

- Guide the work by watching the needle in the slot of the presser foot.
 - Stop machine when altering position of hands.
 - To obtain a smooth curve guide material whilst sewing, stopping and turning will give a "ragged" effect.
- Exception: very small curves and corners.

Guiding with frame

The frame is mainly guided by the left hand. It must be held firmly and be able to turn easily. The right hand must be able to operate the hand-wheel at all times.

Hand position initially as when darning. Then draw index finger straight back (Fig. 1) to the inner edge of the frame. Middle and ring-fingers remain stretched.

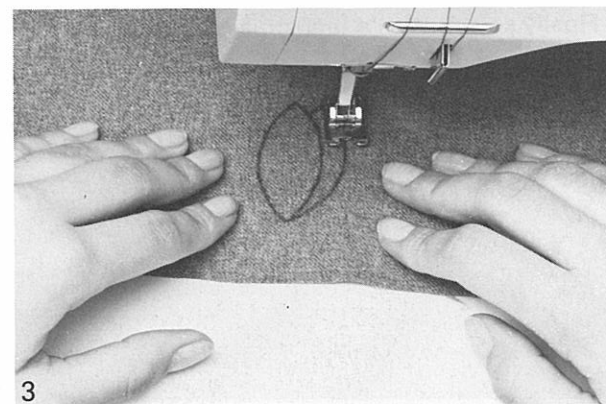
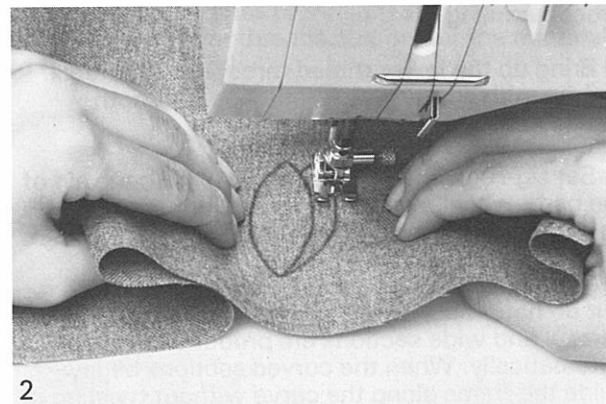
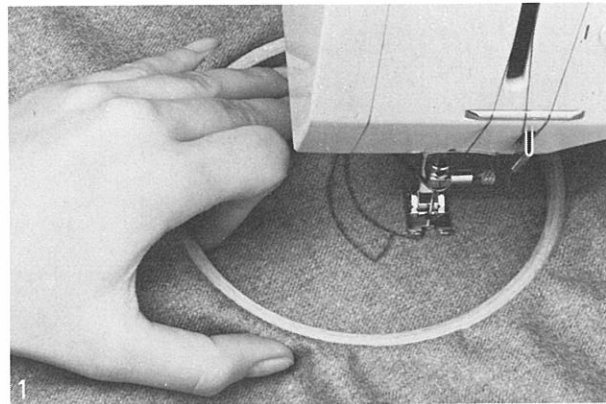
Important note:

Do not place index finger parallel to the thumb, otherwise movement of the hand is restricted.


Guiding without frame

Some textiles, e.g. velvet, cannot be stretched in the frame. Nevertheless, they should be guided in as stretched a condition as possible. Place thumbs under the material. Make a fold if the workpiece is large. Guide near presser foot. In this way, the material can be stretched a little and turned easily (Fig. 2).

This method of guiding is unsatisfactory, slight pressure is exerted on the material and guiding is difficult (Fig. 3).



Single-colour appliqué

	
Presser foot:	030
Thread:	darning-/embroidery 30
Needle:	80
Stitch selection:	No. 1 zig-zag stitch
Needle position:	centre
Feed-dog:	sewing

Procedure

Trace the design onto the wrong side of the background material with tracing paper. N.B. This will be reversed on the right side.

The design can also be traced on thin Vilene* and ironed onto the back of the material. This is recommended for coarse and irregular fabrics on which it is difficult to trace.

Stiffen appliqué material with Vilene* and baste onto the right side of background material. If Vilene* is not used, paper must be used underneath all satin stitches. This is torn away afterwards.

1st operation

Stitch width:	1/2 - 1
Stitch length:	1/4 approx.

- a) Sew along the traced lines on the wrong side of background.
- b) Trim away the surplus material of the applied piece against the zig-zag stitches. Take work out of the frame for this purpose.

2nd operation

Stitch width:	1 1/2
Stitch length:	almost 0

Cover the cut edge and the zig-zag stitches working on the right side with a satin stitch. Sew corners and small curves stitch-by-stitch. Finish by tracing the lines through that were not appliqued and sew over from tight side.

* Vilene = fine iron-on, non woven interfacing

Corners and small curves (Fig. 4).

a) Rectangular corners:

Stop with the needle at outer edge, turn the work and continue sewing. The corner will then be oversewn.

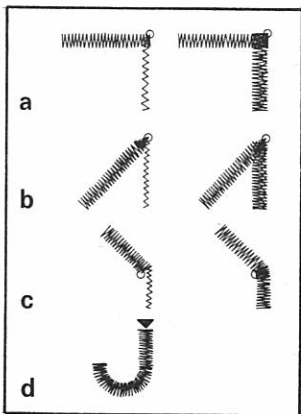
b) Pointed corners: sew to ½ cm before corner.

Then turn zig-zag back to 0 while sewing. Raise presser foot, turn work, set zig-zag again to 1½ and continue sewing carefully.

c) Blunt corners: sew until the needle is exactly at the middle of the angle.

Then sew out from centre, replacing the needle in the middle after every stitch. Raise presser foot and turn material slightly.

d) Sew small curves in the same way.

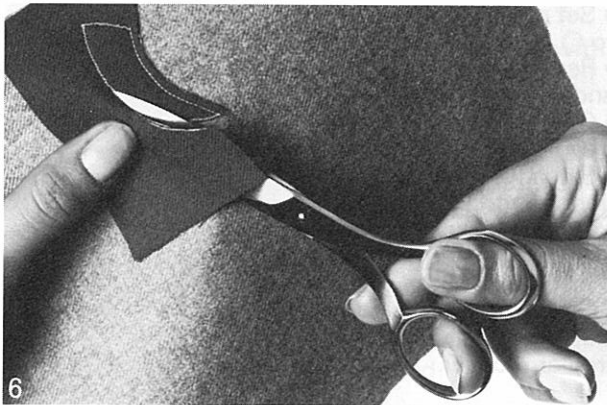
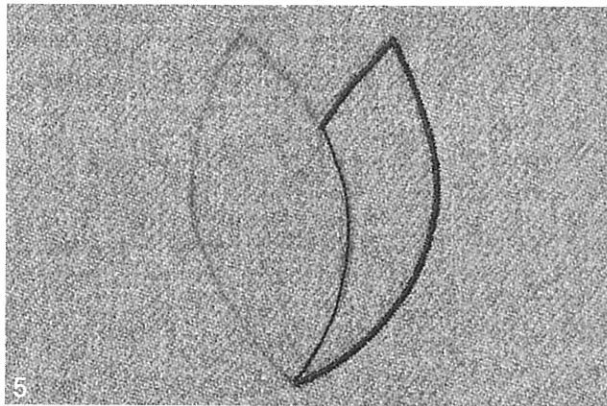


Multi-colour appliqué

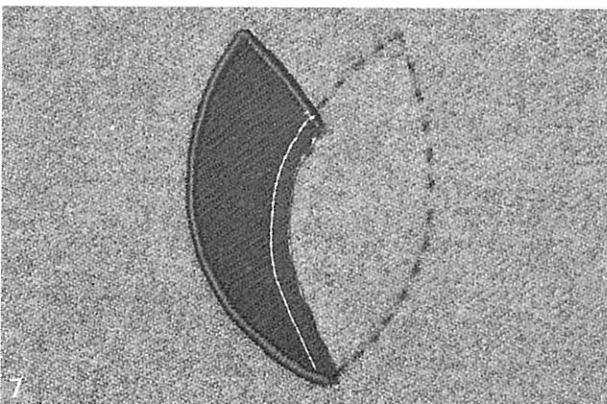
The appliqué pieces must overlap.

Lower appliqué piece:

1. Baste on appliqué material. Sew first row: where colours intersect sew only with straight stitch, the remaining lines with zig-zag (Fig. 5).

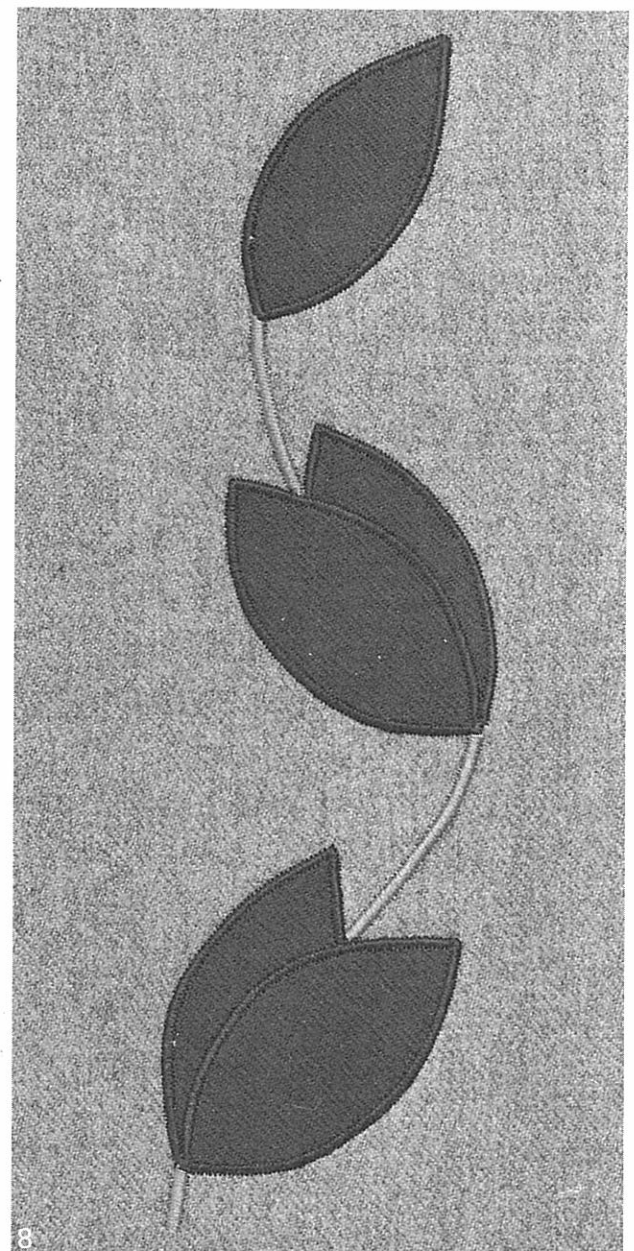


2. Cut off surplus material. **Warning:** leave 2 mm when straight stitch is sewn; cut off all material where zig-zag is sewn (Fig. 6).



3. Omit the straight stitch lines when covering the edges. These are covered by the next appliqué (Fig. 7).

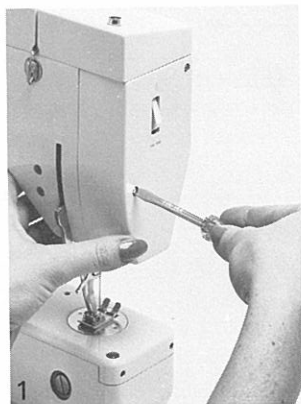
Upper appliqué piece: work as for normal appliqué.



Changing the Bulb

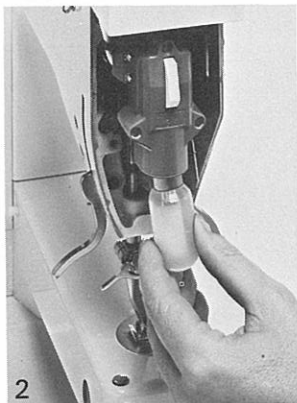
Use 15W bulb with bayonet socket.

- Disconnect the sewing machine from the power supply by pulling out the plug from the socket.

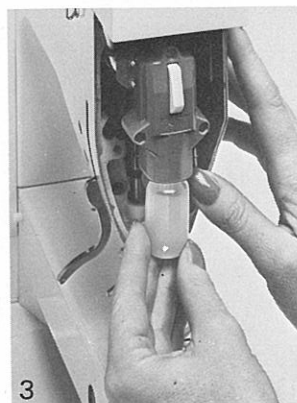


- Remove front cover (Fig. 1):
 - Pull cover forwards steadily.

- Removing old bulb: (Fig. 2):
 - Press bulb upwards, twist to left and withdraw.



- Inserting new bulb: (Fig. 3):
 - Press safety strap to right with the right hand, insert new bulb with the left hand: press upwards and twist to right to the stop.



- Replace front cover.
- 36

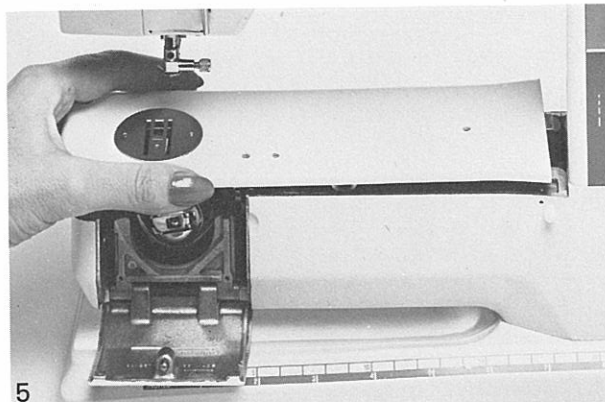
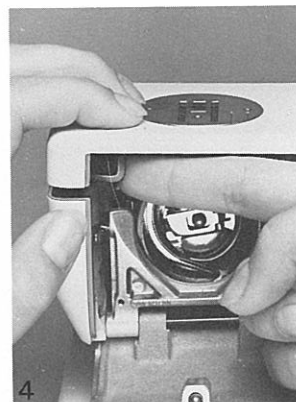
Maintenance: Cleaning and Lubricating

If the machine is kept in a cold room, it should be taken to a warm room about 1 hour before use to allow the oil in the bearings to become more fluid.

Cleaning

During sewing pieces of thread and fluff collect under the stitch plate and around the hook. These remnants must be removed from time to time. The free-arm cover has to be removed for this purpose.

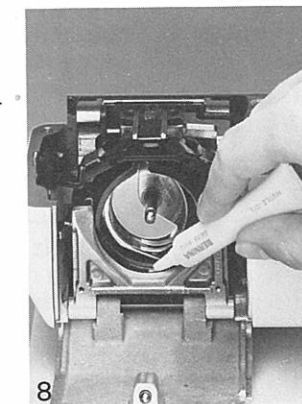
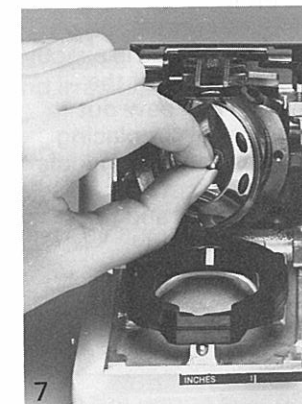
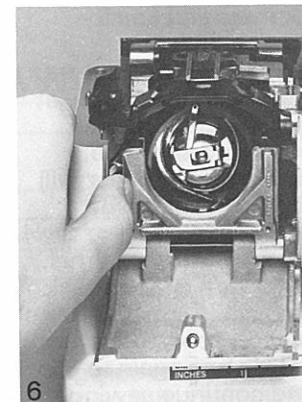
- Set power switch to \bigcirc .
- Remove presser foot and needle.
- Open hinged cover on free-arm.
- Press with right index finger on the upper releasing lever (Fig. 4).
- Lift off free-arm cover (Fig. 5).
- Clean feed-dog, underside of stitch plate and free-arm cover.



Lubricating the hook:
1–2 drops of oil after 3–4 hours sewing.

Cleaning the hook

- Set power switch to \bigcirc .
- Remove bobbin case (see page 5).
- Press lower releasing lever to left with the left thumb (Fig. 6). The half-round locking strap with the black hook race cover can now be swung down.
- Remove hook (Fig. 7).
- Clean hook race top and bottom with brush and cotton cloth. Never use a screwdriver or scissors, etc. to remove pieces of thread!
- Oil hook race slightly (Fig. 8).
- Turn hand-wheel if necessary until hook driver is on left and replace hook.
- Close back hook race cover and locking strap. The latch must engage.
- Check by turning hand-wheel.
- Insert bobbin case.



Prevention of Faults

If the sewing machine does not sew satisfactorily, it is usually due to incorrect operation.

Check whether:

- upper and lower threads are correctly threaded
- the needle size is correct, see Needle and Thread table, page 10
- the machine is clean, remove free-arm cover, brush out remnants of thread
- the hook race is clean and oiled
- remnants of thread are trapped between the thread tension discs and beneath the bobbin case spring
- the buttonhole knob is set to ○.

Upper thread breaks

- upper thread tension too tight
- poor quality needles, preferably buy needles from a Bernina dealer
- needle blunt or bent
- poor quality thread, knotted thread, thread dried out due to prolonged storage
- Needle plate or hook tip damaged, take to Bernina dealer.

Lower thread breaks

- lower thread tension too tight
- bobbin jams in bobbin case, replace bobbin
- hole in stitch plate damaged by needle, must be polished by expert
- needle blunt or bent.

Faulty stitches

- wrong needles, use only needle system 130/750
- wrong size needle for thread being used
- needle blunt or bent, not fitted correctly, push right up when inserting
- poor quality, roughly polished needle
- needle tip shape does not suit material to be sewn, if necessary use ball-tip for knitted materials and cutting tip for hard leather
- lower thread is still threaded in finger of bobbin case.

Needle breaks

- needle clamping screw not sufficiently tightened
- the material was withdrawn from the front instead of the rear under presser foot
- while sewing over thick parts material was pushed while needle was still in the material, use jeans foot
- poor quality thread, irregularly twisted or knotted.

Tension errors

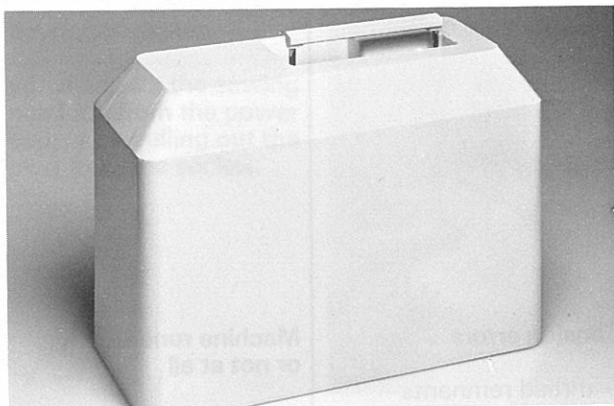
- thread remnants between the thread tension discs
- thread remnants under bobbin case spring
- thread threaded in finger of bobbin case as for buttonhole sewing
- threaded with foot lowered
- wrongly threaded, check upper and lower threads.

Machine runs slowly or not at all

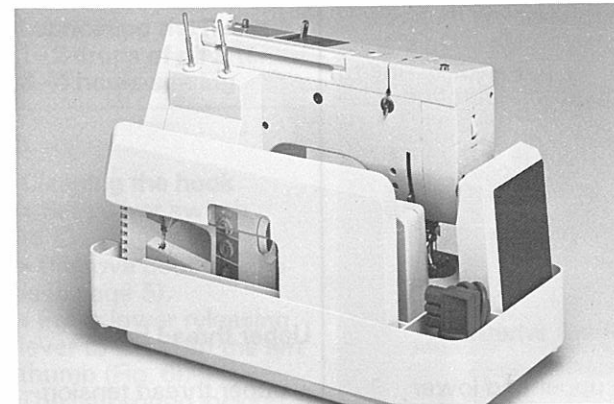
- plug not fully inserted
- main switch at ○
- winder cover not closed
- main switch at ● reduced sewing speed
- machine movement blocked by unsuitable oil, machine must be cleaned by an expert
- machine has been standing in a cold room.

If you take your machine to an expert, **please always take foot control and accessories!**

Cover – Accessories



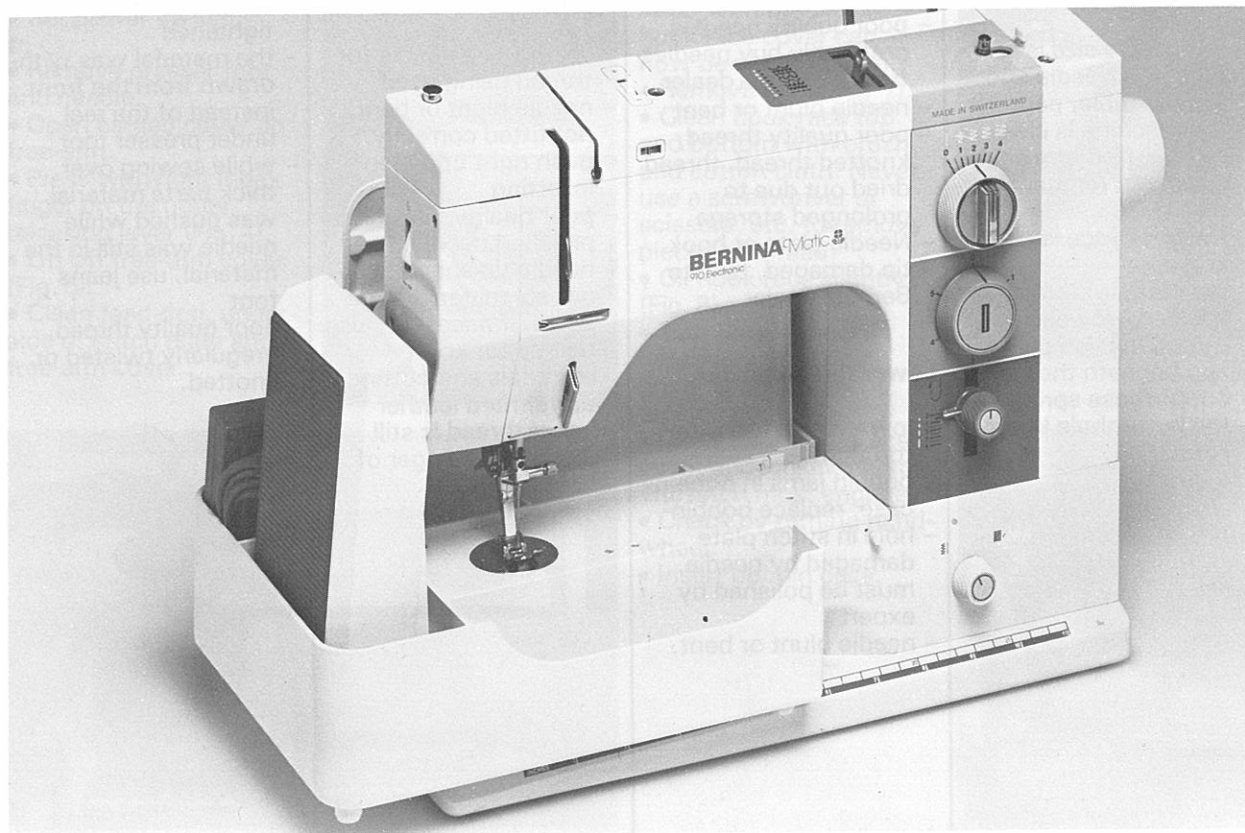
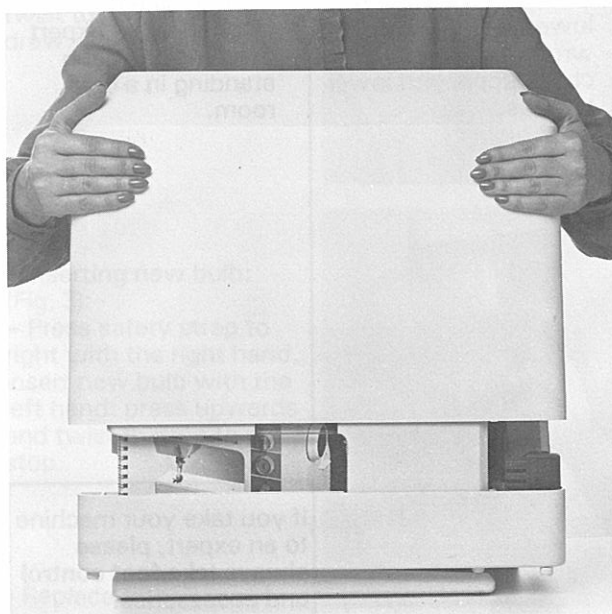
Always carry the machine by its handle.



The container which is attachable to the free-arm can be used to store the cable, foot control unit, sewing table, Bernina guide and accessories box.

A plastic cover protects the machine from dust and dirt.

Removing the cover.




Important!

Safety Regulations

Subject to BEAB and OSHA safety regulations (official testing centres in Great Britain and the U.S.A.).

The following safety regulations must be observed without fail:

- The moving needle is a source of danger (risk of injury to fingers). The sewing position must therefore be kept under constant observation.
- Manipulations within the area of movement of the needle, such as changing the needle, the presser foot or stitch plate, must only be performed with the machine switched off (main switch set to  position). The same applies when removing and replacing the lower thread bobbin or hook.
- During maintenance work (cleaning or lubricating) or changing the light bulb and interruptions in sewing or after completion of work, the machine must be disconnected from the power supply by pulling out the mains plug.
- Repairs to the electronic section, especially the changing of the lead wire to the foot control unit, may only be carried out by one of our service agencies.

The right to make constructional changes differing from text and illustrations is reserved.

Special accessories

The contents of the present "My Bernina Guide" only cover basic sewing work, especially practical routine sewing and the basic principles of embroidery with decorative stitches.

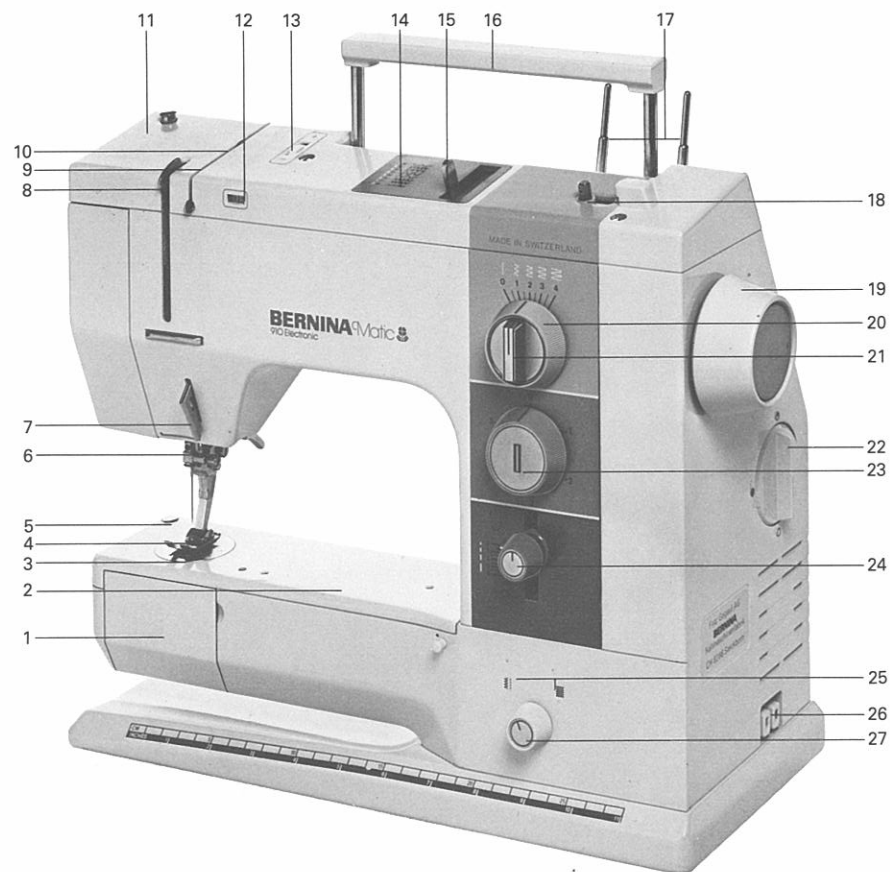
Your BERNINA has of course many more possibilities to offer you particularly in the field of embroidery and design, for example:

- *) Broderie anglaise
- *) Circular embroidery
- *) Cording
- *) 2- and 3-needle work
- Free-hand embroidery
- *) Hem stitches
- *) Embroidery with pearl yarn/wool
- *) Embroidery with metal thread
- *) Buttonhole stitch embroidery (Cavelier foot)
- Imitation smocking
- Practical application of the decorative stitches
- *) Sewing on buttons
- Hemmer/shell hemmer/lap hemmer etc.

*) For this type of sewing a special foot or special accessory is available.

Your BERNINA dealer will be glad to give you information and advice on the additional possibilities your machine has to offer.

View of Machine



- | | |
|----|------------------------------------|
| 1 | Hinged cover on free-arm |
| 2 | Free-arm cover |
| 3 | Needle plate |
| 4 | Presser foot |
| 5 | Thread cutter |
| 6 | Needle holder clamp |
| 7 | Thread regulator |
| 8 | Thread take-up lever |
| 9 | Thread tension slot |
| 10 | Thread tension disc |
| 11 | Top frame cover |
| 12 | Thread tension indicator |
| 13 | Adjusting wheel for thread tension |
| 14 | Practical stitches |
| 15 | Selector lever |
| 16 | Carrying handle |
| 17 | Reel holder pins |
| 18 | Bobbin spindle |
| 19 | Hand-wheel |
| 20 | Stitch width knob |
| 21 | Needle position knob |
| 22 | Power switch |
| 23 | Buttonhole knob |
| 24 | Stitch length knob |
| 25 | Symbol for sewing/darning |
| 26 | Connection for foot control unit |
| 27 | Sewing/darning knob |

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