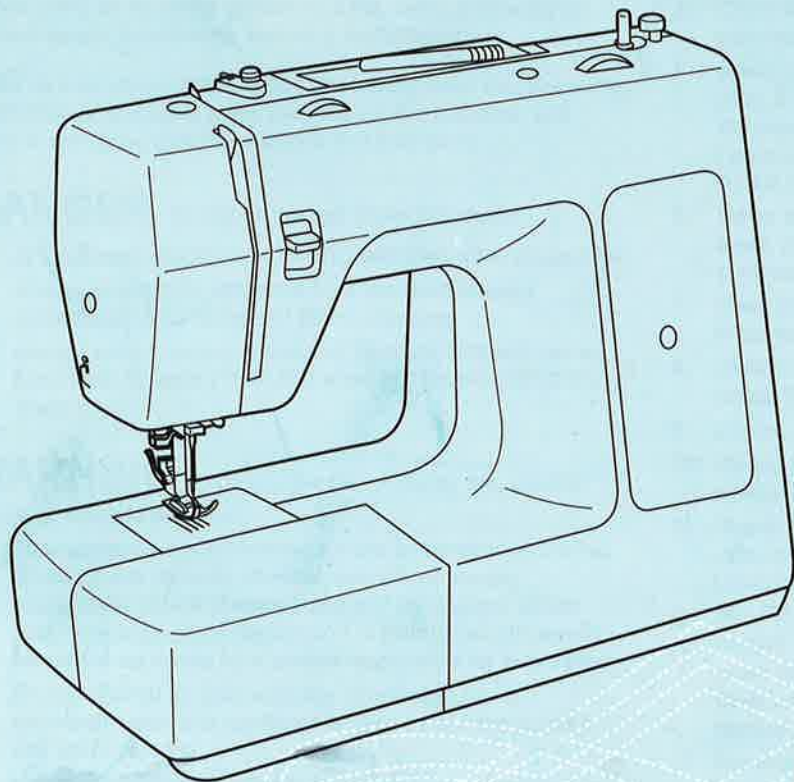


bernette 46

BERNINA[®]



Instruction Manual
Manual de Instrucciones
Manuel d'Instruction

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

Read all instructions before using this sewing machine. Keep the instruction at a suitable place that close to the machine, and hand it over if you give the machine to a third party.

DANGER- To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in.
2. Always unplug this appliance from the electric outlet immediately after using and before cleaning.
3. Always unplug before re-lamping. Replace bulb with same type rated 10 watts (110-120V area) or 15 watts (220-240V area).

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

1. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
2. Do not allow to be used as a toy. Close attention is necessary when this appliance is used by or near children and infirm persons.
3. Use this appliance only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.


4. Children should be supervised to ensure that they do not play with the appliance.
5. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
6. Never operate the appliance with any air openings blocked. Keep ventilation openings of the sewing machine and foot controller free from accumulation of lint, dust, and loose cloth.
7. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
8. Always use the proper needle plate. The wrong plate can cause the needle to break.
9. Do not use bent needles.
10. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
11. Switch the sewing machine off ("O") when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, and the like.
12. Always unplug sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual (pull power plug).
13. Never drop or insert any object into any opening.
14. Do not use outdoors.
15. Do not operate where aerosol spray products are being used or where oxygen is being administered.

16. To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.
17. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
18. If the supply cord fixed with foot controller is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person in order to avoid a hazard.
19. Never place anything on the foot control.
20. This sewing machine is provided with double insulation (except U.S.A / Canada). Use only identical replacement parts. See instructions for Servicing of double-insulated products.

SERVICING OF 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.



Environmental protection

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

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

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EN**Congratulations**

As the owner of a new sewing machine, you will enjoy precision quality stitching on all types of fabrics, from multiple layers of denim to delicate silks.

Your sewing machine offers the ultimate in simplicity and ease of operation. For your safety and to fully enjoy the many advantages and ease of operation of your sewing machine, we recommend that you read all the important safeguards and use and care instructions in this instruction book.

May we suggest that before you start to use your sewing machine, you discover the many features and advantages by going through this instruction book, step by step, while seated at your sewing machine.

ES**Enhorabuena**

Usted es dueña/o de una máquina de coser nueva con la cual disfrutará realizando costuras de precisión y calidad en todos los tejidos - de tejano grueso hasta seda delicada.

Su máquina de coser ofrece el máximo en simplicidad y manejo. Para su seguridad y para que tenga la mayor satisfacción aprovechando todas las ventajas y su fácil manejo, le recomendamos que lea en el manual de instrucciones todas las normas e indicaciones de seguridad, las aplicaciones y el mantenimiento.

Para que Usted descubra todas las características y ventajas de su máquina de coser le recomendamos que lea paso a paso este manual de instrucciones, mientras Usted esté sentada delante de su máquina de coser.

FR**Félicitations!**

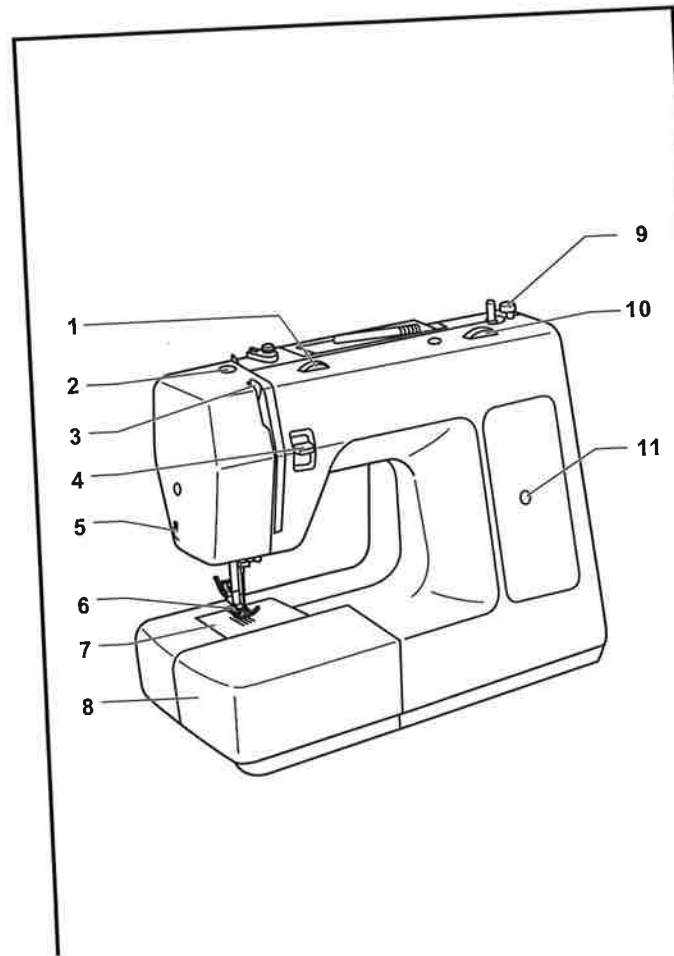
Vous venez d'acquérir une machine à coudre de grande classe dans la fameuse qualité et précision de point de BERNINA! Des tissus fins et fragiles comme la soie aux tissus robustes tels que les jeans ou la toile de voile, elle relève tous les défis!

Conviviale, votre machine vous accompagnera fidèlement dans tous vos travaux de couture. Pour votre sécurité, nous vous conseillons de lire attentivement les prescriptions de sécurité avant de commencer votre travail. Lisez également scrupuleusement les directives d'emploi et de maintenance pour profiter pleinement de tous les avantages de votre machine.

Découvrez progressivement toutes les applications et caractéristiques de votre nouvelle machine. Asseyez-vous devant votre machine et suivez pas à pas les directives D'emploi.

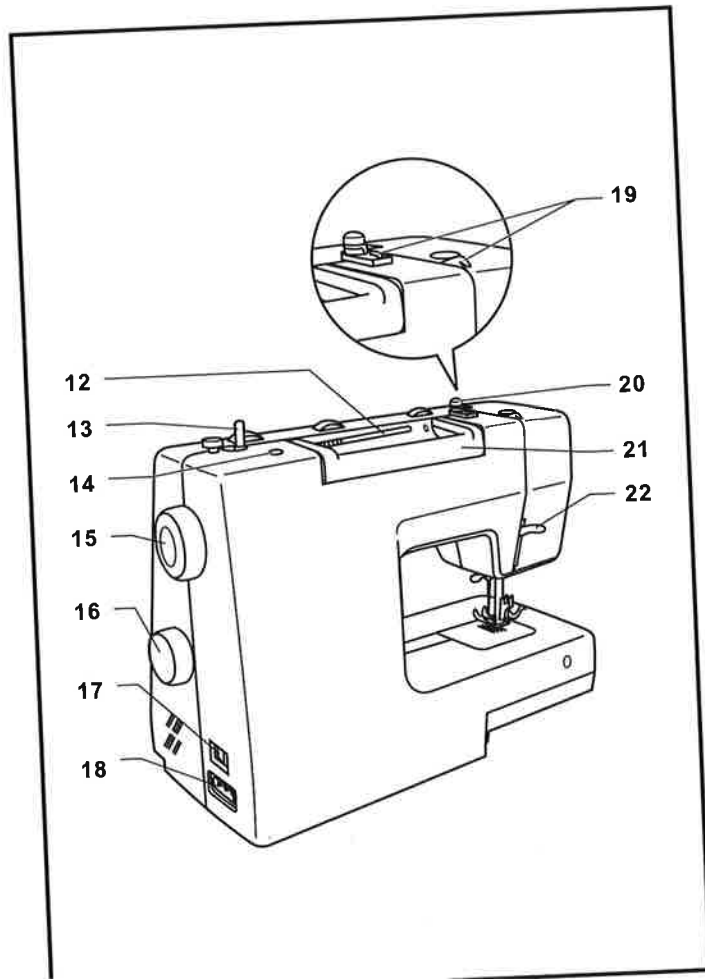
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Overview

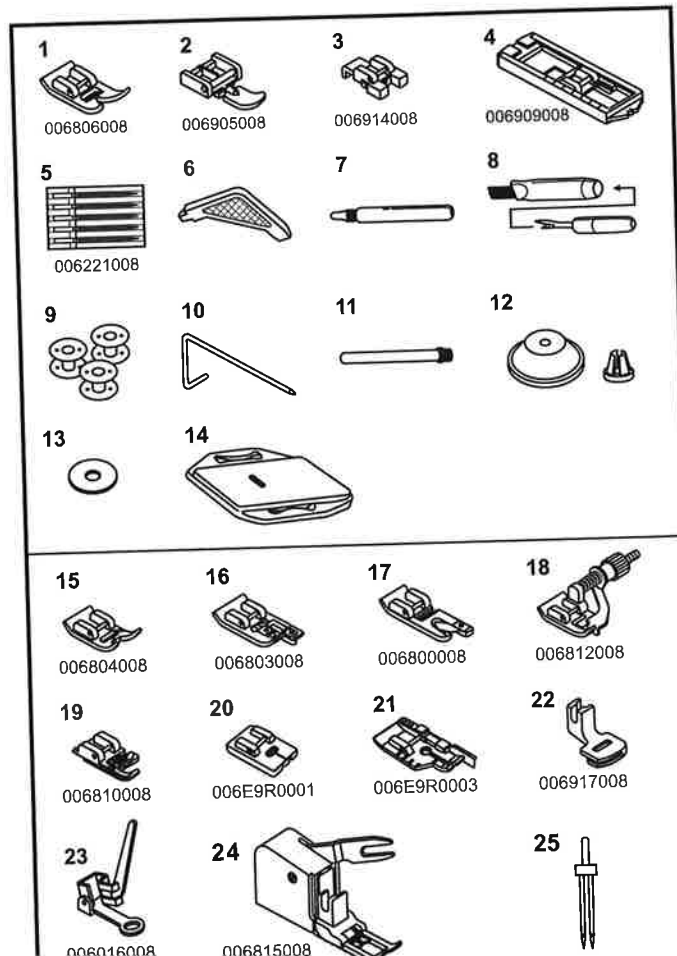


1. Thread tension dial
2. Presser foot pressure
3. Thread take-up lever
4. Reverse sewing lever
5. Thread cutting
6. Presser foot
7. Needle plate
8. Sewing table and accessory box
9. Bobbin winder stopper
10. Stitch length dial
11. Stitch display

EN Overview



- 12. Spool pin
- 13. Bobbin winder
- 14. Hole for second spool pin
- 15. Handwheel
- 16. Pattern selector dial
- 17. Power switch
- 18. Main plug socket
- 19. Upper thread guide
- 20. Bobbin thread guide/pre-tension
- 21. Handle
- 22. Presser foot lever

**Standard accessories**

1. All purpose foot (J)
2. Zipper foot (I)
3. Button sewing foot
4. Buttonhole foot (B)
5. Pack of needles (5x)
6. L-screwdriver
7. Oil bottle
8. Seam ripper/ brush
9. Bobbin (3x)
10. Seam guide
11. Second spool pin
12. Spool holder
13. Spool pin felt
14. Darning plate

Optional accessories *

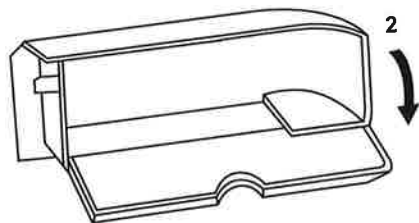
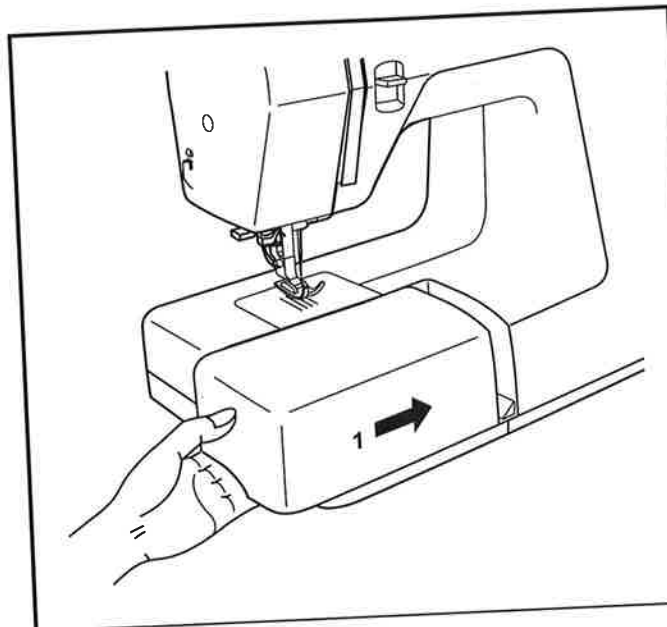
15. Satin stitch foot
16. Overcasting foot (G)
17. Hemmer foot
18. Blind hem foot (L)
19. Cording foot
20. Invisible Zipperfoot
21. Quilting foot 1/4"
22. Gathering foot
23. Darning/ Embroidery foot
24. Walking foot
25. Twin needle

* Optional accessories are not included. It must be bought separately.

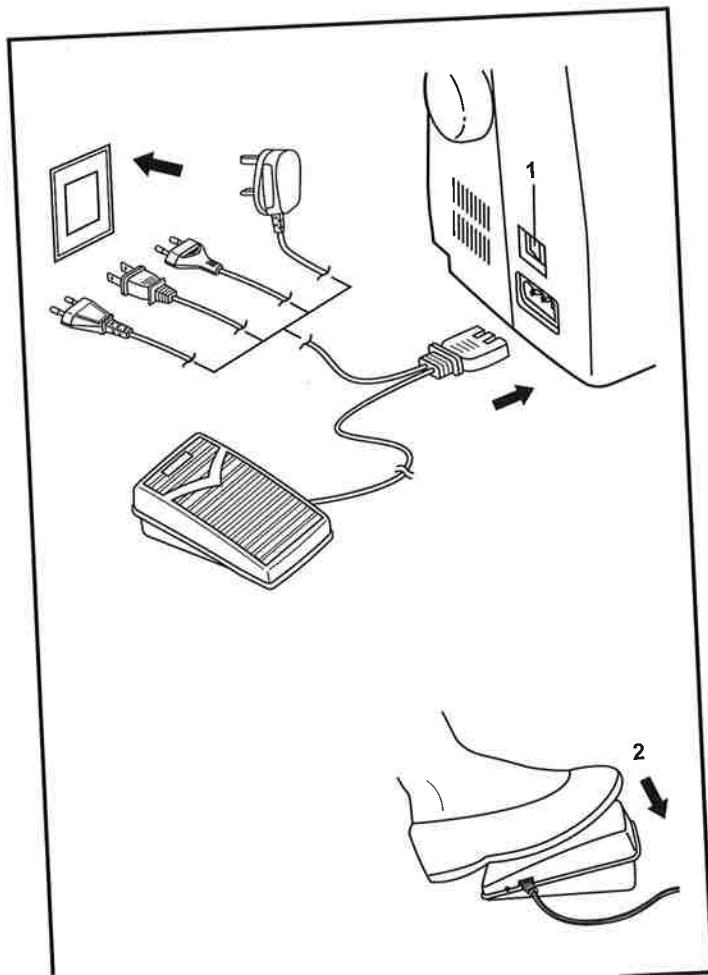
EN Sewing table

Hold the snap-in sewing table horizontal, and push it in the direction of the arrow. (1)

The inside of the snap-in sewing table can be utilized as an accessory box.



To open, tilt the cover towards you. (2)



EN

Connecting machine to power source

Connect the machine to a power source as illustrated.

Attention:

Unplug power cord when machine is not in use.

Sewing light

Press main switch for power and light on. (1)

Position 0 - Machine is switched off.

Position I - Machine and sewing light is switched on.

Foot control

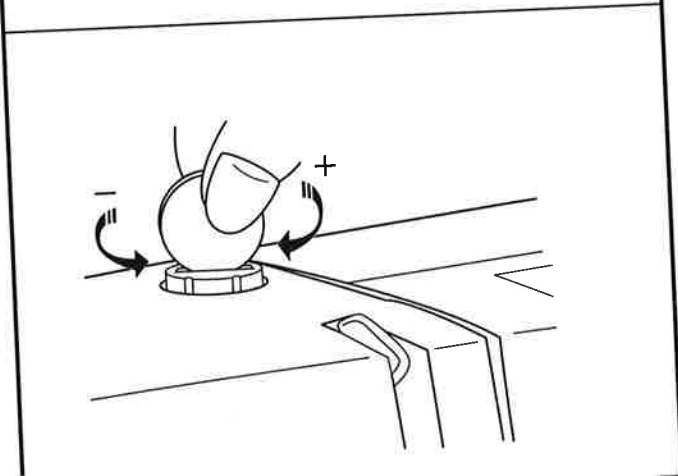
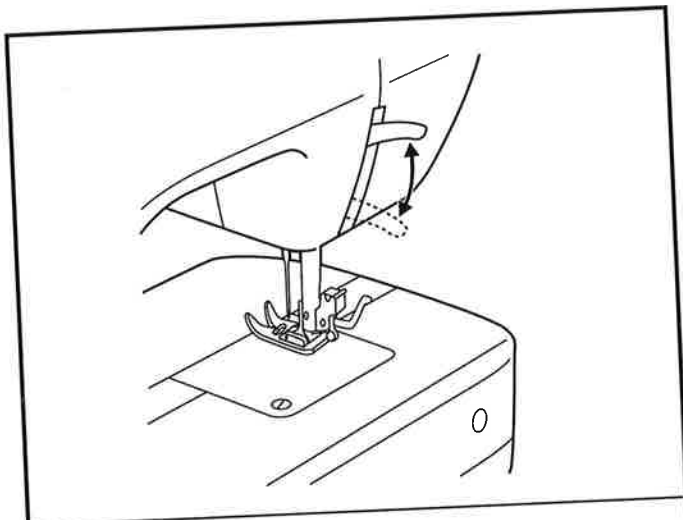
Foot control regulates the sewing speed. (2)

Attention:

Consult a qualified electrician if in doubt as to connect machine to power source. Unplug power cord when machine is not in use. The appliance must be used with the foot controller 4C-316B (110-120V area)/ 4C-326G (230V area)/ 4C-316C, 4C-326C (220-240V area) manufactured by Panasonic Co., Ltd. (TW) or KD-1902 (110-120V area)/ KD-2902 (220-240V area) manufactured by ZHEJIANG FOUNDER MOTOR CORPORATION Ltd. (China).

IMPORTANT NOTICE

If the appliance has a polarized plug (one blade is wider than the other). To reduce the risk of electric shock, this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not modify the plug in any way. The optimal operation temperature for the failure-free operation of this machine must be 68°F +/- 50°F.



EN Two-step presser foot lever

When sewing several layers or thick fabrics, the presser foot can be raised to a second stage for easy positioning of the work.

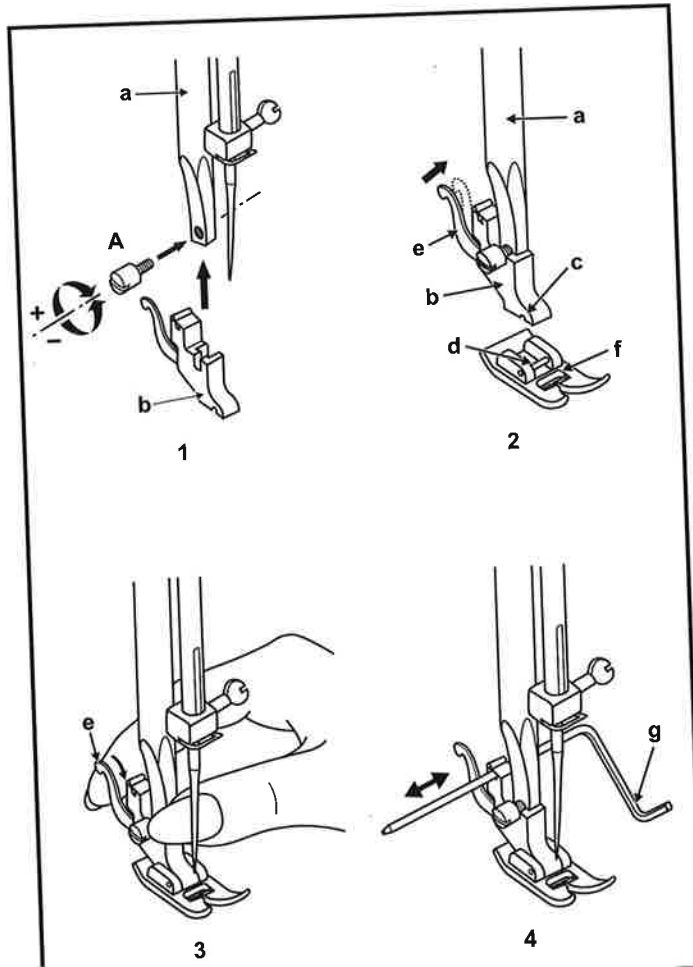
EN Adjusting the presser foot pressure

The presser foot pressure has been pre-set and requires no particular adjustment for regular sewing.

However, it can be adj. according your needs.

For sewing very thin fabric, loosen the pressure by turning the screw counter clockwise, and for heavy fabric, tighten by turning it clockwise.

EN Attaching the presser foot holder



Attention:

Turn power switch to "O" before carrying out any of the operations below.

Raise the needle to its highest position and raise the presser foot lever. Attach the presser foot holder (b) to the presser foot bar (a).
(1) Tighten the fixation screw. (A)

Attaching the presser foot:

Lower the presser foot holder (b) until the cut-out (c) is directly above the pin (d). (2)

Lower the presser foot holder (b) and the presser foot (f) will engage automatically.

Removing the presser foot:

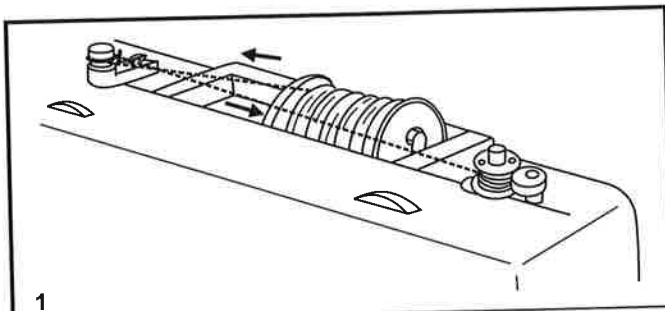
Raise the presser foot.

Release the pressure foot by raising lever (e) located at the back of the foot holder. (3)

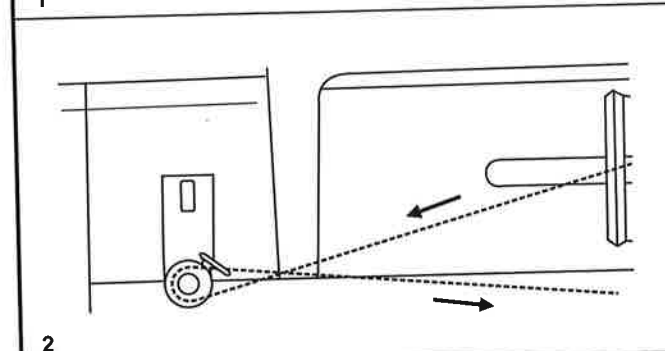
Attaching the seam guide:

Attach the seam guide (g) in the slot as illustrated.

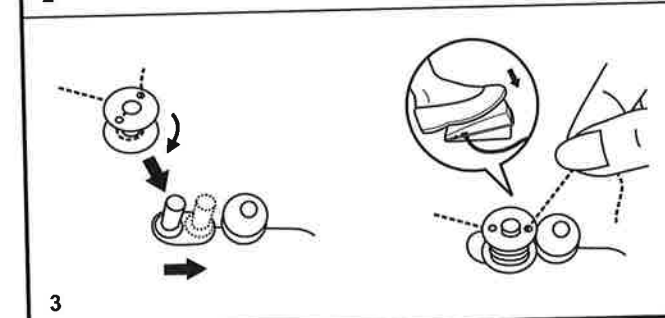
Adjust the distance as required for hems, pleats, etc....(4)



1



2

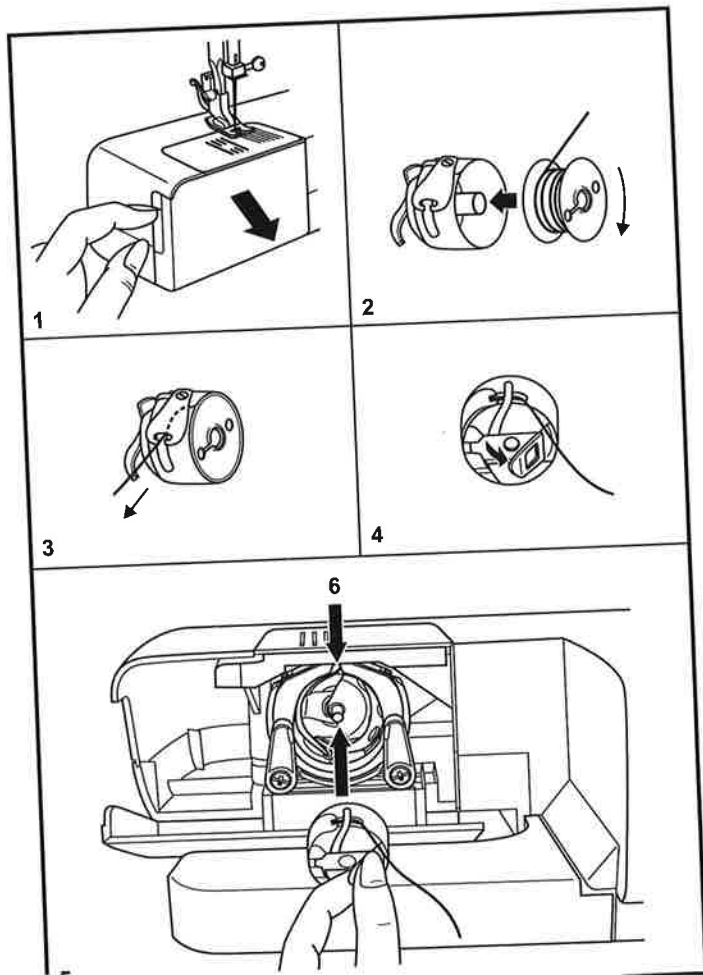


3

1. Place an empty bobbin on the spindle.
2. Guide the thread to the left, and pass it through the bobbin winder tension. Take the thread to the right till you reach the bobbin.
3. Wind the thread a few times by hand around the empty bobbin in a clockwise direction or pass the thread through one of the holes on the bobbin inside out and hold the thread. Push the bobbin to the right towards the bobbin winding position. Press the foot control gently. The bobbin will stop winding when it is full. Push the bobbin to the left to "sewing position" and remove it. Before threading the machine, cut the thread near the hole of the bobbin.

Please note:

When the bobbin winder spindle is in "bobbin winding" position, the machine and the handwheel can not be operated.
To start sewing, push the bobbin winder spindle to the left (sewing position).



EN

Inserting bobbin

When inserting or removing the bobbin, the needle must be fully raised.

- Open the hinged cover (1).
- Remove the bobbin case by pulling its latch towards you and pulling it out from the hook.
- Hold the bobbin case with one hand. Insert the bobbin so that the thread runs in a clockwise direction (arrow) (2).
- Pull the thread through the slit and under the finger (3). Spring
- Hold the bobbin case by the hinged latch (4).
- Insert it into the hook (5). Make sure the bobbin case finger fits into the notch (6) at the top of the race.

Attention:

Turn power switch to off ("O") before inserting or removing the bobbin.

EN Inserting the needle

Attention:

Turn power switch to "O" before inserting or removing the needle.

Change the needle regularly, especially if it is showing signs of wear and causing problems.

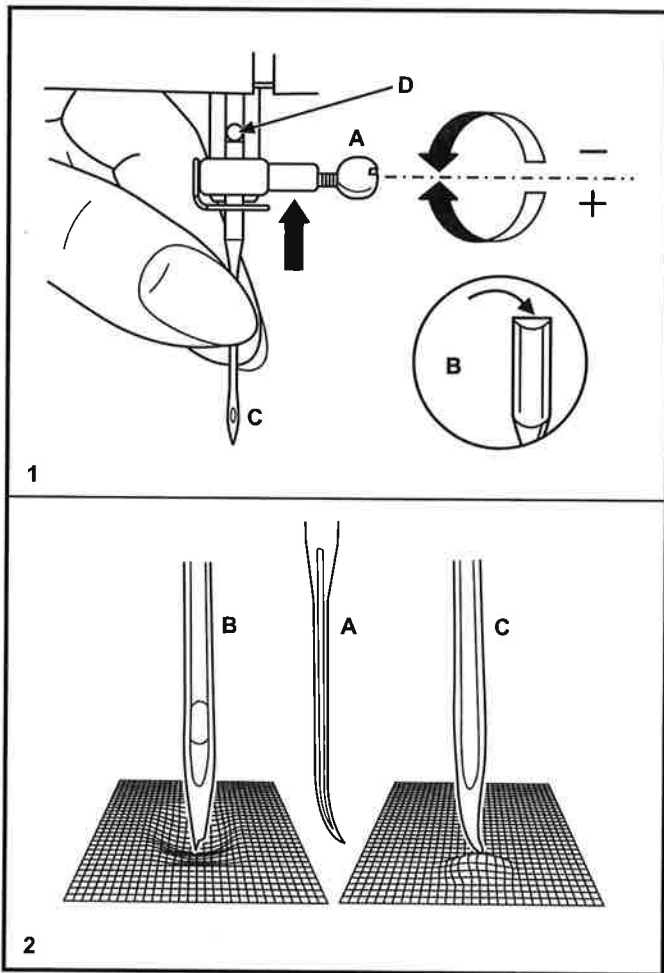
Insert the needle as illustrated:

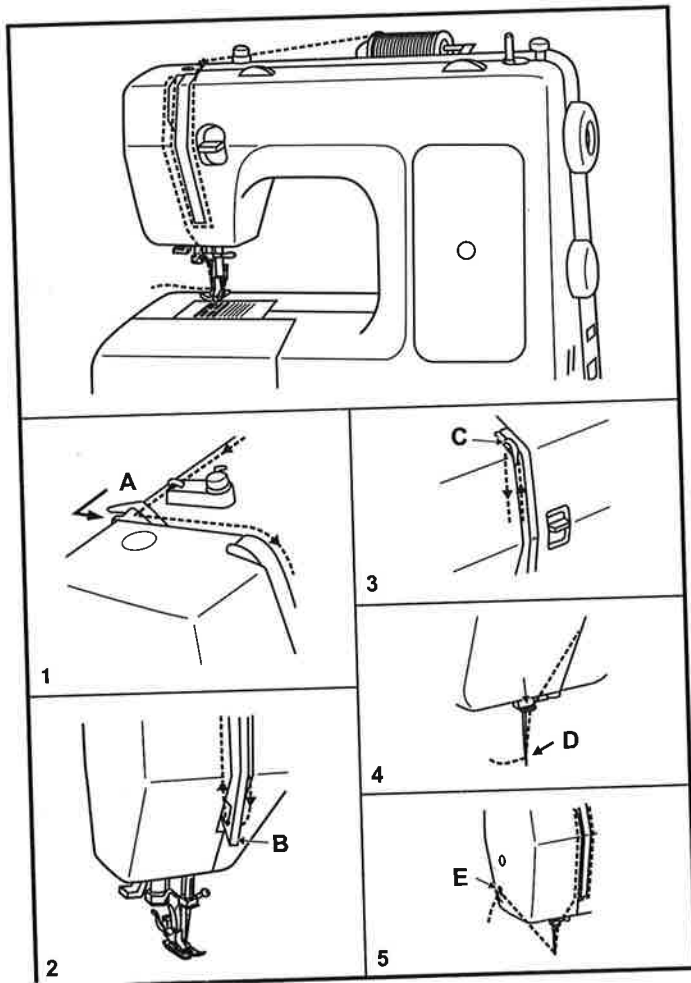
- A. Loosen the needle clamp screw and tighten again after inserting the new needle. (1)
- B. The flat side of the shaft should be towards the back.
- C/D. Insert the needle as far up as it will go.

Needles must be in perfect condition. (2)

Problems can occur with:

- A. Bent needles
- B. Blunt needles
- C. Damaged points



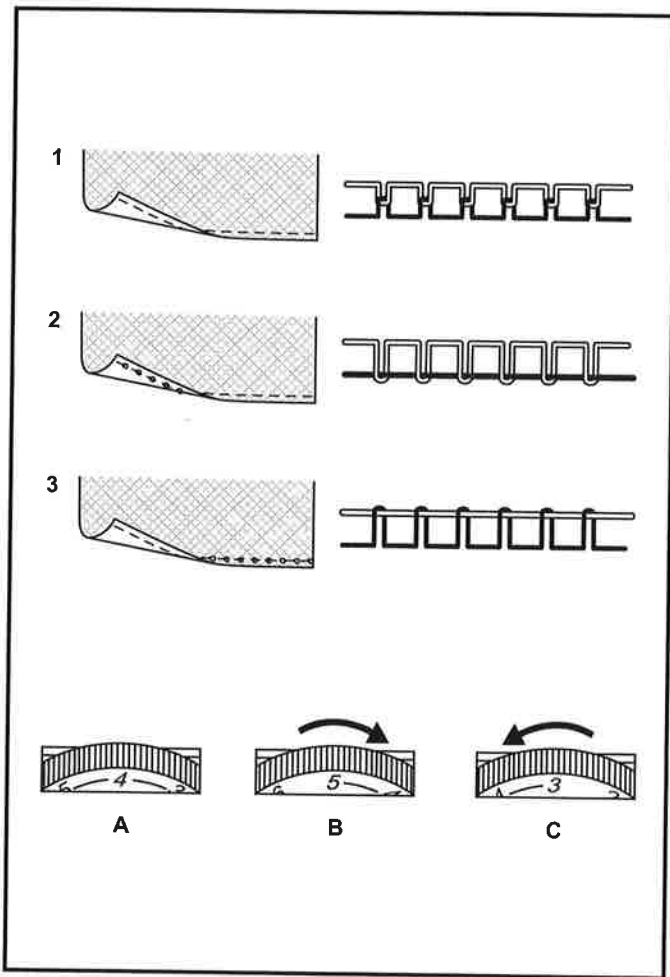


EN Threading the upper thread

Caution:

- Turn power switch to "O" before threading or unthreading the machine.
- To release the upper thread tension the presser foot lever has to be raised.
- The thread take-up lever must be in the highest position when threading.

1. Place spool on pin using appropriate spool disc (spool turns clockwise). Take thread through rear guide (A) and then into slit of upper thread tension.
2. Pull thread down to the right of the cover around point (B)
3. Take thread up to the left of the cover, placing it in the take-up lever (C).
4. Take thread down and through guide (D). Insert the thread through the eye of the needle from front to back.
5. Leave about 10 cm (4") of thread loose behind the needle, or cut the excess thread by using the thread cutter (E).



EN Upper thread tension

Basic thread tension setting: "4".

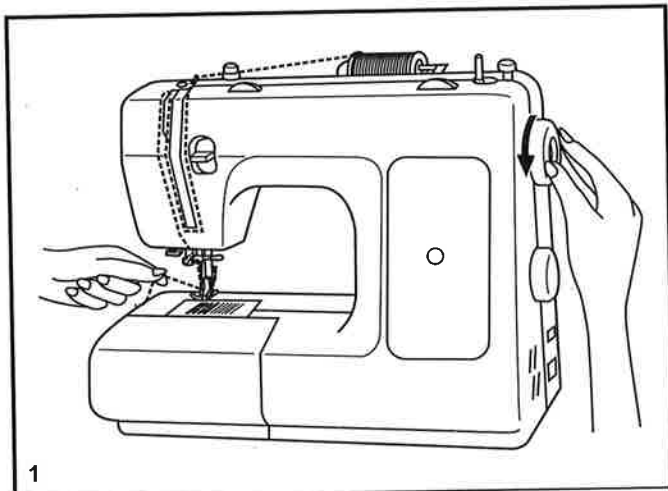
To increase the tension, turn the dial to the next number up.

To reduce the tension, turn the dial to the next number down.

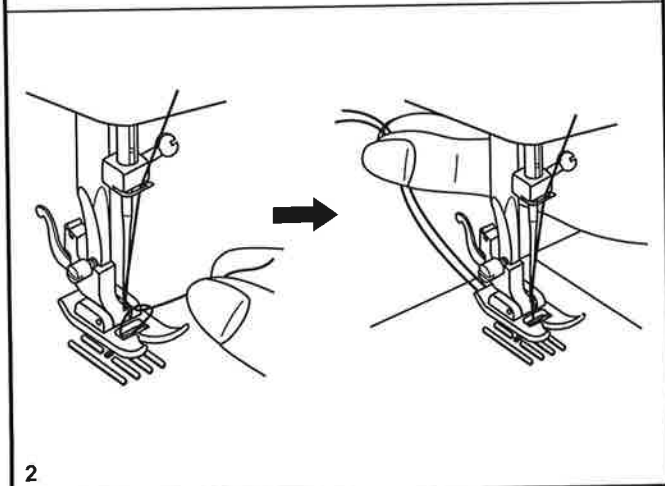
1. Normal upper thread tension (A)
2. The upper thread tension is too loose, increase setting (B)
3. The upper thread tension is too tight, decrease setting (C)

Note:

The tension is factory set for best possible sewing results using thread (Metrosene 100/2). The optimum tension may vary when using other or different types of thread, and it may be necessary to adjust tension to suit the fabric and stitch type.



1



2

EN

Bringing up the lower thread

Hold the upper thread with the left hand.
Turn the handwheel forward until the needle is raised, (1) again.

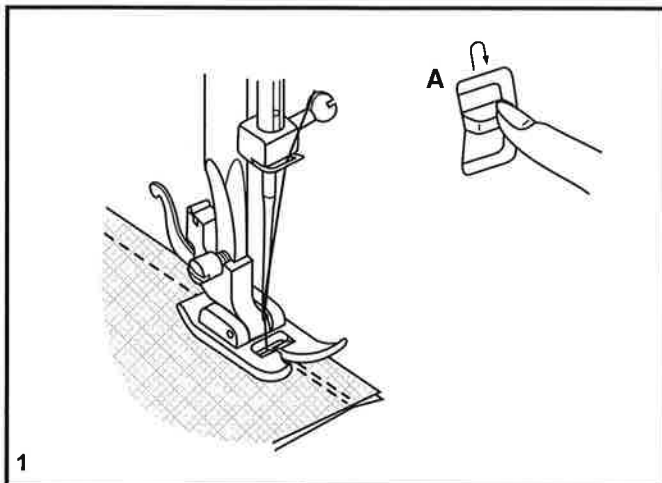
Pull on the upper thread to bring the lower thread up through the stitch plate hole. Lay both threads to the back under the presser foot. (2)

Note:

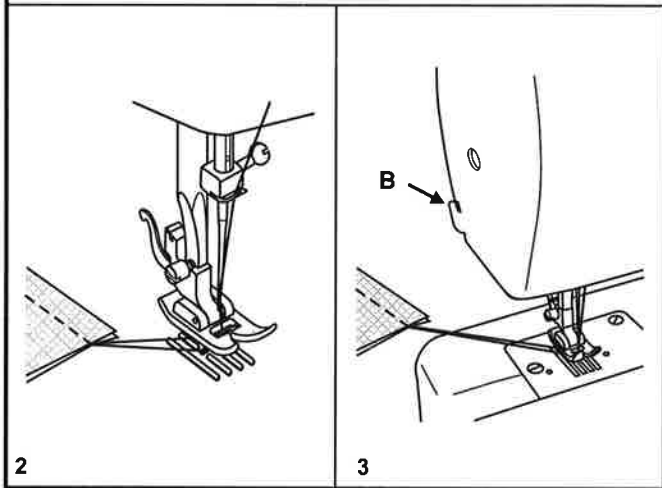
When the excess thread was cut, the thread can be brought up, however does not have to.

Caution:

When starting to sew do not pull on the taut threads under the presser foot.



1



2

3

EN Securing a seam (beginning and ending the seam)

Beginning the seam Place fabric approximately 1 cm (1/2") inward from the outer edge under the presser foot. Press the reverse sewing lever (A) while sewing backwards up to the fabric edge.

End of seam (1)

At the end of seam, press down the reverse sewing lever (A). Sew a few reverse stitches. Release the lever and the machine will sew forwards again.

Removing the work (2)

Turn the handwheel towards to bring the thread take up lever to its highest position, raise the presser foot and remove the work towards the back.

Cutting the thread (3)

Cut both threads with the thread cutter (B) located on the left rear side of the face plate.

Needle size**Fabrics**

9-11/65-75	Lightweight fabrics-thin cottons, voile, serge, silk, muslin, Qiana, interlocks, cotton knits, tricots, jerseys, crepes, woven polyester, shirt & blouse fabrics.
12/80	Medium weight fabrics-cotton, satin, kettlecote, sailcloth, double knits, lightweight woollens.
14/90	Medium weight fabrics-cotton duck, woolen, heavier knits, terrycloth, denims.
16/100	Heavyweight fabrics-canvas, woollens, outdoor tent and quilted fabrics, denims, upholstery material (light to medium).
18/110	Heavy woollens, overcoat fabrics, upholstery fabrics, some leathers and vinyls.

Thread

Light-duty thread in cotton, nylon or polyester.

Most threads sold are medium size and suitable for these fabrics and needle sizes.

Use polyester threads on synthetic materials and cotton on natural woven fabrics for best results.

Always use the same thread on top and bottom.

Heavy duty thread, carpet thread.
(Use heavy foot pressure large numbers.)

IMPORTANT: Match needle size to thread size and weight of fabric.

NEEDLE, FABRIC SELECTION**Needles****Explanation**

HA x 1 15 x 1	Standard sharp needles. Sizes range thin to large. 9 (65) to 18 (110)
15 x 1/ 130/ 705H	Semi-ball point needle, scarfed. 9 (65) to 18 (110)
15 x 1/ 130/ 705H (SUK)	Full ball point needle 9 (65) to 18 (110)
130PCL/ 705H-LR/LL	Leather needles. 12 (80) to 18 (110)

Type of fabric

Natural woven fabrics-wool, cotton, silk, etc.
Qiana. Not recommended for double knits.

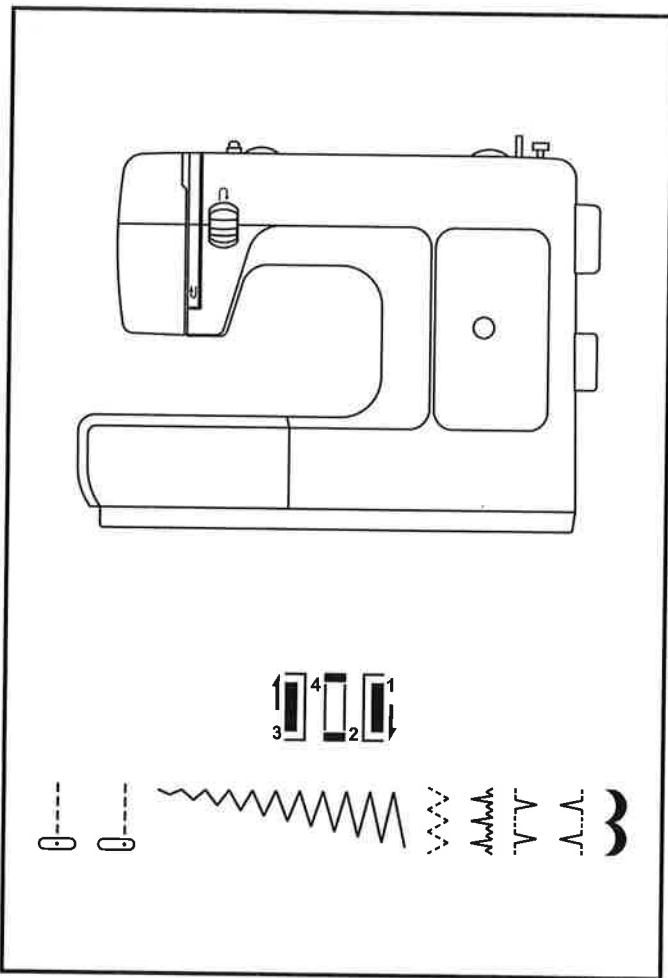
Natural and synthetic woven fabrics, polyester blends. Knits-polyesters, interlocks, tricot, single and double knits. Can be used instead of 15x1 for sewing all fabrics.

Sweater knits, Lycra, swimsuit fabric, elastic.


Leather, vinyl, upholstery. (Leaves smaller hole than standard large needle.)


Note:

1. Twin needles can be purchased for utility and decorative work.
2. When sewing with twin needles, the stitch width dial should be set less than "2.5".
3. European needles show sizes 65, 70, 80 etc. American and Japanese needles show size 9, 11, 12 etc.
4. Replace needle often (approximately every other garment) and / or at first thread breakage or skipped stitches.



EN **Stitch selection**

For **straight stitch**, select pattern "  " with pattern selector dial. Adjust the stitch length with the stitch length dial.

For **zigzag stitch**, select pattern "  " with pattern selector dial. Adjust the stitch length and stitch width according to the fabric being used.

To obtain any of the patterns shown on the stitch selection panel, select the pattern with the stitch selector dial. Adjust the stitch length with the control dials according to the result desired.

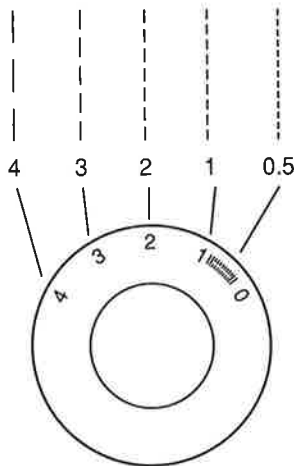
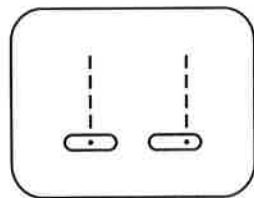
Function of stitch length dial Straight Stitching

Turn the pattern selector dial so that the stitch display shows the straight stitch position. You can select center or right needle position.

The stitch length is controlled with the stitch length dial. While "2" - "3" on the dial gives a suitable stitch length for ordinary purposes.

Generally speaking the finer the fabric the finer the thread and shorter the stitch length, the heavier the fabric the thicker the thread and longer the stitch length.

At stitch length "0" the fabric will not move and the needle will keep piercing at the same point.

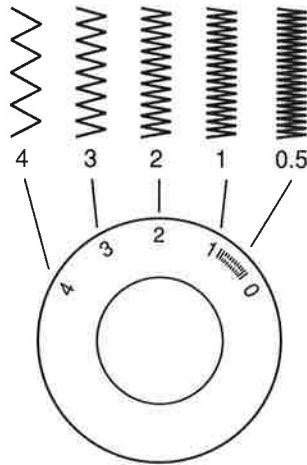
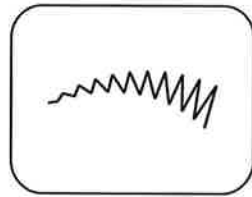


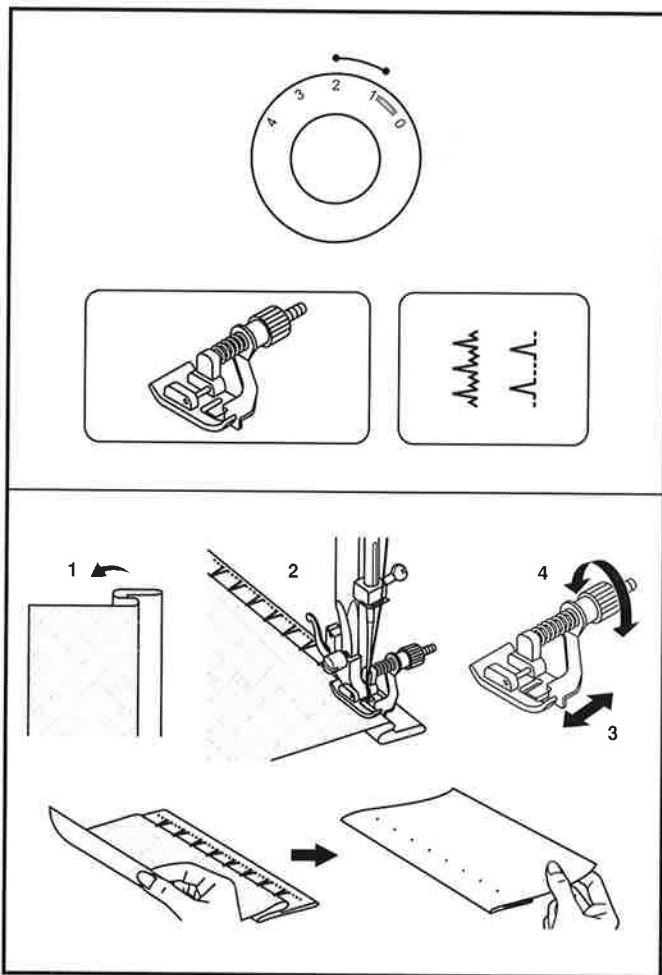
Function of stitch length dial while zigzagging

The density of zigzag stitches increase as the setting of stitch length dial approaches "0". Neat zigzag stitches are usually achieved at "2.5" or below.

Satin stitch

When the stitch length is set between "0" - "1", the stitches are very close together producing the "satin stitch" which is used for making buttonholes and decorative stitches.





Presser foot available as optional accessory.

For hems, curtains, trousers, skirts, etc.

..Λ..Λ. Blind hem/lingerie for firm fabrics.

ΛΛΛΛ. Blind hem for stretch fabrics.

Set the machine as illustrated.

Note:

It takes practice to sew blind hems. Always make a sewing test first.

Fold the fabric as illustrated with the wrong side uppermost. (1) Place the fabric under the foot. Turn the handwheel forward by hand until the needle swings fully to the left. It should just pierce the fold of the fabric. If it does not, adjust the stitch width accordingly. (2)

Adjust the guide (3) by turning the knob (4) so that the guide just rests against the fold. Sew slowly, by pressing the foot control lightly, guiding the fabric along the edge of the guide.

EN Edge Neatening

Use Overcasting presser foot available as optional accessory.

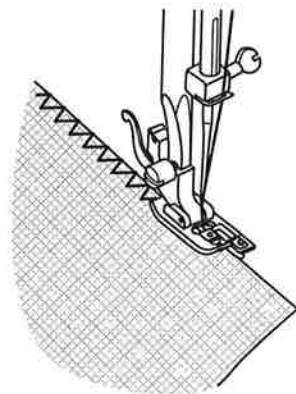
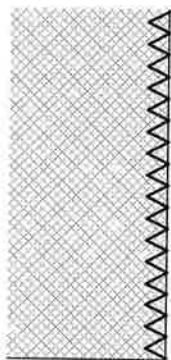
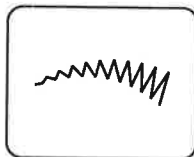
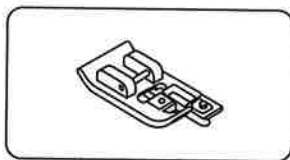
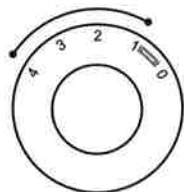
Set stitch length control between "1" - "4", the stitch width can be adjusted to suit the fabric.

The overedge stitches are suitable for finishing seams and preventing them from fraying.

When finishing, the needle should just go over the edge of the fabric.

Attention:

Use new needles or ball point needles or stretch needle!



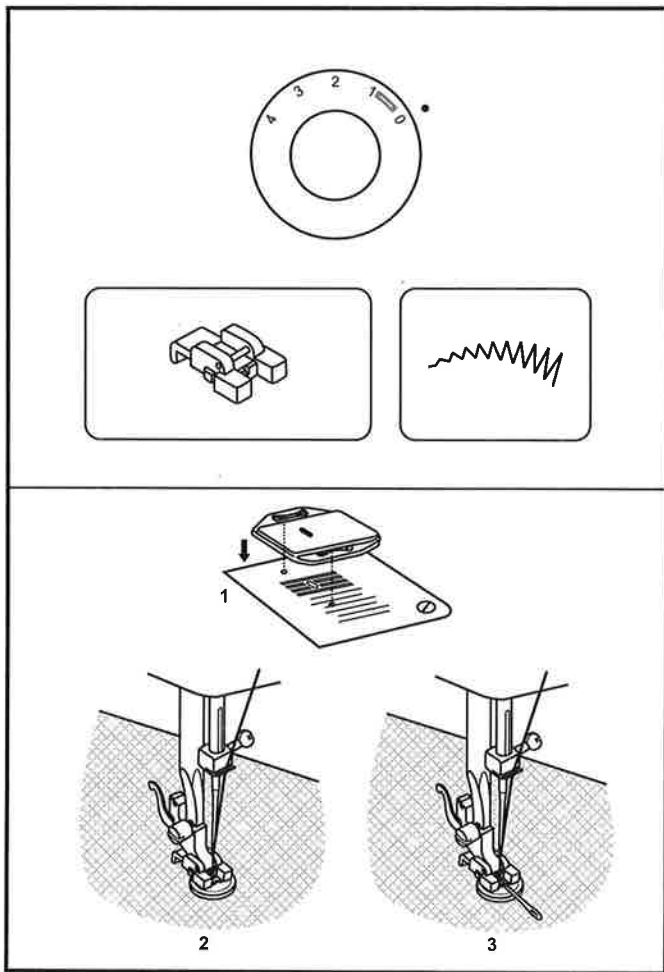
Install the darning plate. (1)

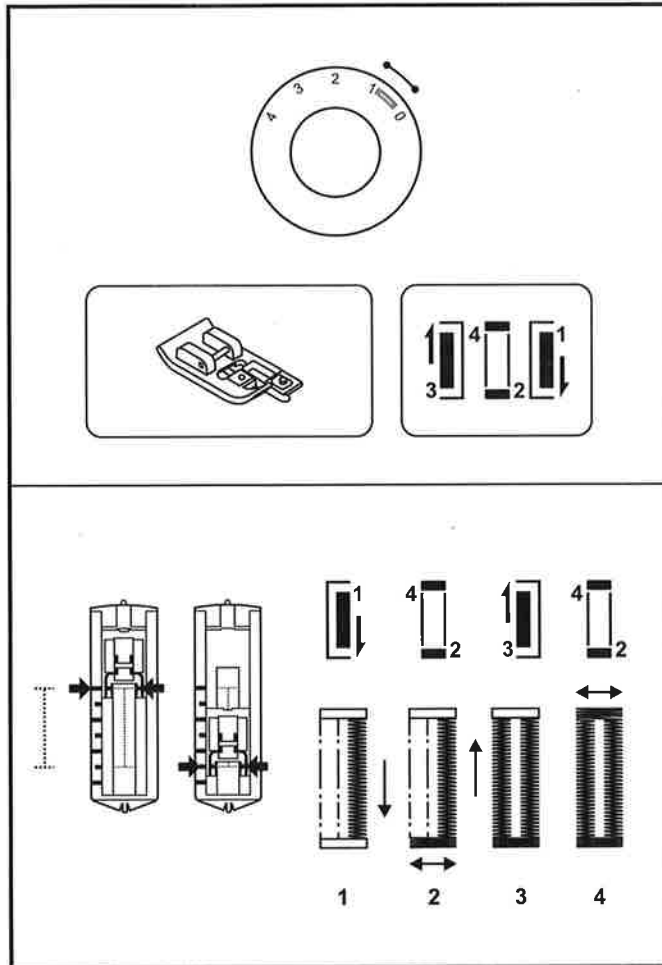
Change presser foot to button sewing foot.

Turn the stitch length dial to "0".

Position the work under the foot. Place the button on the marked position and lower the foot. Set the pattern selector knob on "0" and sew a few securing stitches. Select the zig-zag stitch width according to the distance between the two holes of the button. Turn the handwheel to check if the needle goes into the right and the left hole of the button without any obstruction (adjust the stitch width according to the button). Slowly sew on the button with about 10 stitches. Select pattern "0" and sew a few securing stitches.

If a shank is required, place a darning needle on top of the button and sew. (3) For buttons with 4 holes, sew through the front two holes first (2), push work forward and then sew through the back two holes as described. (3)



**Prepare**

Set the pattern selector dial to "1".

1. Take off the all purpose foot and attach the buttonhole foot.
2. Measure diameter and thickness of button add together plus 0.3 cm (1/8") for bar tacks; mark buttonhole size on fabric.
3. Place fabric under the foot, so that mark on the buttonhole foot lines up with the marking on the fabric. Lower the foot, so that the center line of the fabric buttonhole comes to the center of the foot hole.

Adjust the stitch length dial between "0.5-1" for stitch density.

Note:

Density varies according to the fabric. Always test sew a buttonhole

Follow the 4-step sequence changing from one step to another with the stitch pattern selector dial. Take care not to sew too many stitches in stages 1 and 3. Use seam ripper and cut buttonhole open from both ends towards the middle.

Tips:

- Slightly reduce upper thread tension to produce better results.
- Use a backing for fine or stretchy fabrics.
- It is advisable to use heavy thread or cord for stretch or knit fabrics.
- The zig-zag should sew over the heavy thread or cord.(simb)

EN Zippers and piping

Set the machine as illustrated.

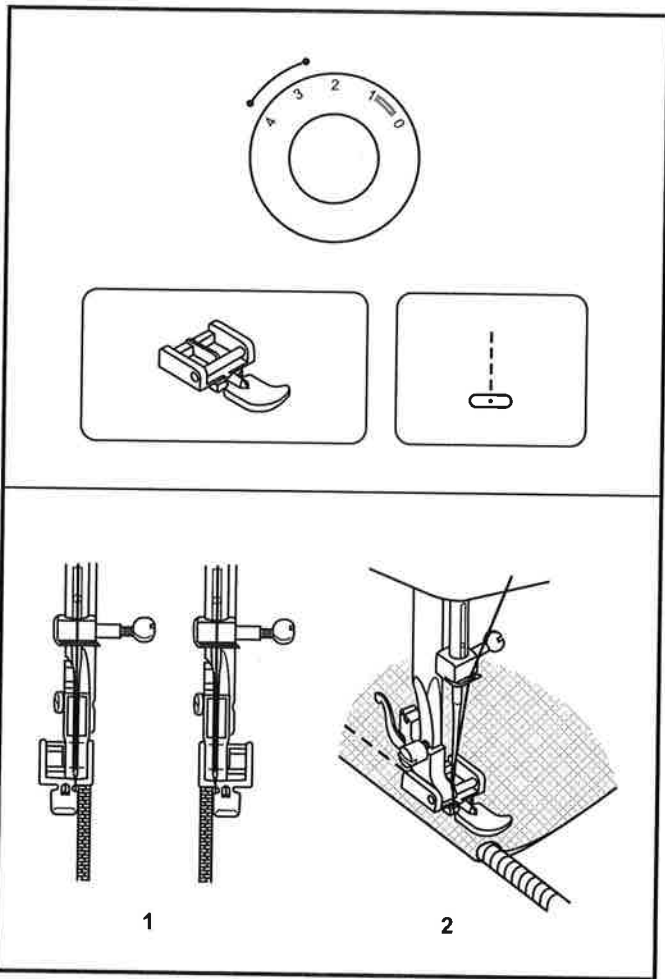
Pattern selector on "  ".

Set stitch length control between "2.5" - "4" (according to thickness of fabric).

The zip foot can be inserted right or left, depending on which side of the foot you are going to sew. (1)

To sew past the zip pull, lower the needle into the fabric, raise the presser foot and push the zip pull behind the presser foot. Lower the foot and continue to sew.

It is also possible to sew in a length of cord, into a bias strip to form a "welt". (2)



EN Hammer foot

Presser foot available as optional accessory.

For hems in fine or sheer fabrics.

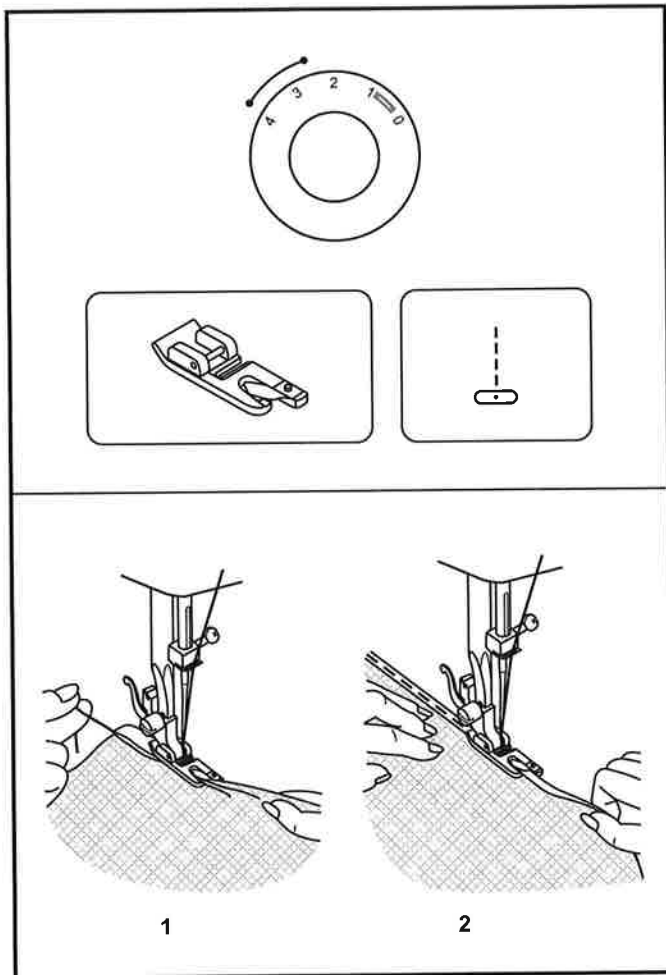
Set the machine as illustrated.

Pattern selector on "  ".

Set stitch length control between "2.5" - "4".

Neaten the edge of the fabric. At the beginning of the hem, turn under the edge twice by about 3 mm (1/8") and sew 4-5 stitches to secure. Pull the thread slightly towards the back. Insert the needle into the fabric, raise the presser foot and guide the fold into the scroll on the foot. (1)

Gently pull the fabric edge towards you and lower the presser foot. Begin sewing, guiding the fabric into the scroll by holding it upright and slightly to the left. (2)



EN 3-step zig-zag

Sewing on lace and elastic, darning, mending, reinforcing edge

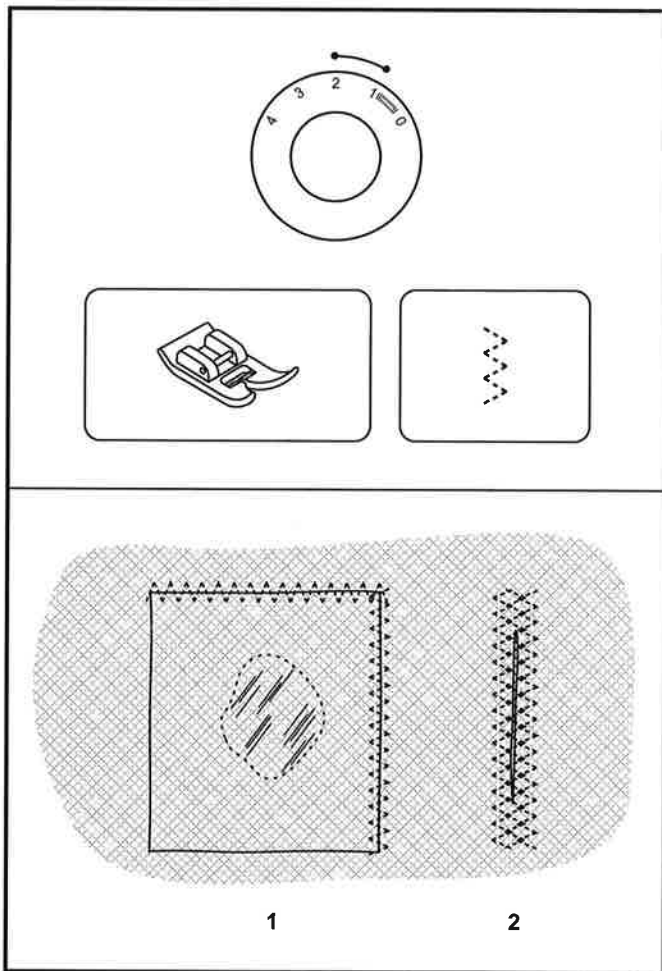
Set the machine as illustrated.

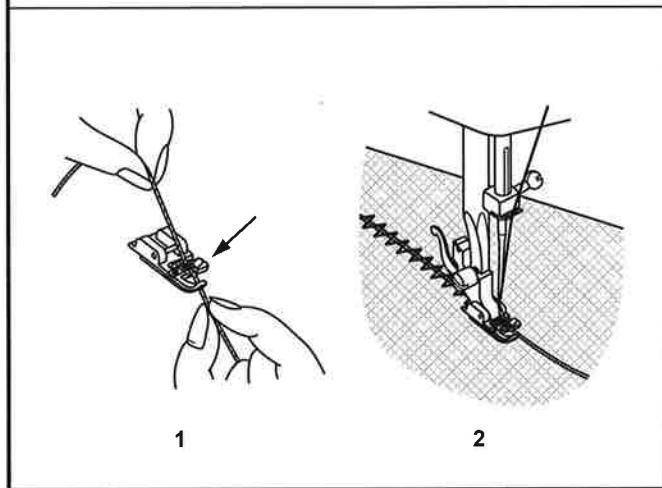
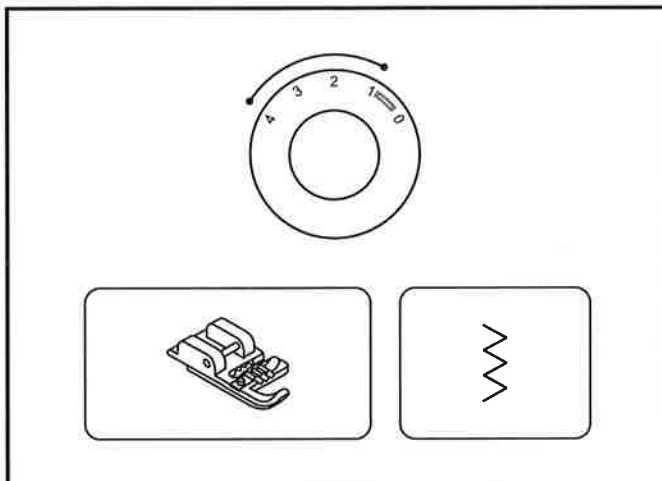
Pattern selector on " ".

Set stitch length control between "1" - "2".

Place patch in position. The stitch length can be shortened to produce very close stitches. (1)

When mending tears, it is advisable to use a piece of backing fabric to reinforce. The stitch density can be varied by adjusting the stitch length. First sew over the center and then overlap on both sides. Depending on the type of fabric and damage, sew between 3 and 5 rows. (2)





EN Cording foot

Presser foot available as optional accessory.

Decorative effects, cushions, tablecloths, etc.

Set the machine as illustrated.

Various stitches are suitable for sewing on cord, e.g. Zig-zag, decorative stitches.

Pattern selector on "  ",

Set stitch length control between "1" - "4".

Insert the cord between the spring covering the cord groove and the foot. The cord should run in the groove. One, two or three cords can be sewn on. The stitch width is adjusted according to the number of cords and the stitch selected. (1/2)

EN Free motion darning

Presser foot available as optional accessory.

Set the machine as illustrated.

Install the darning plate. (1)

Remove the presser foot holder. (2)

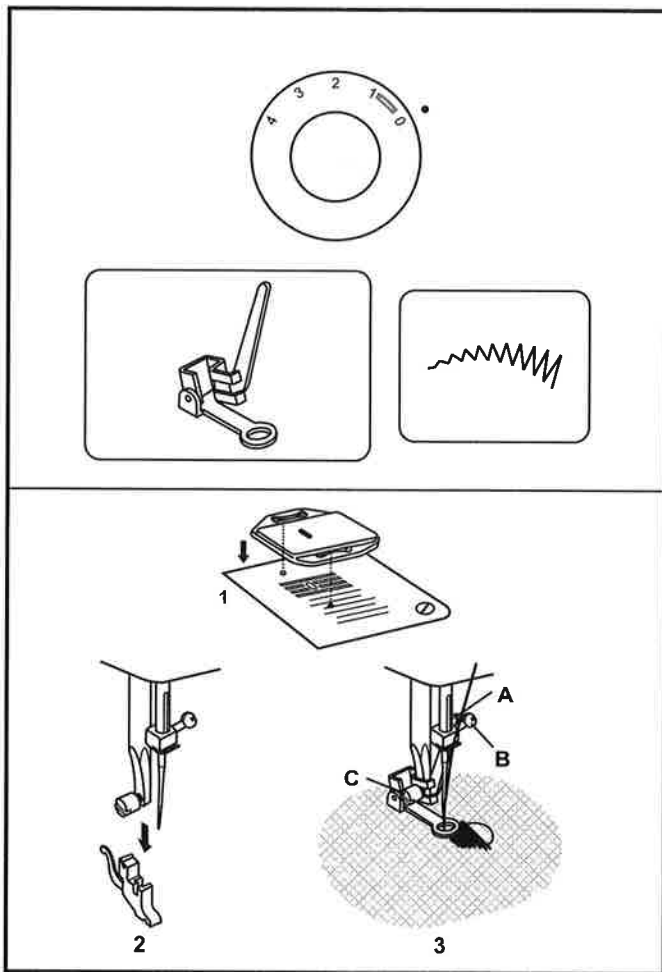
Pattern selector on "  ".

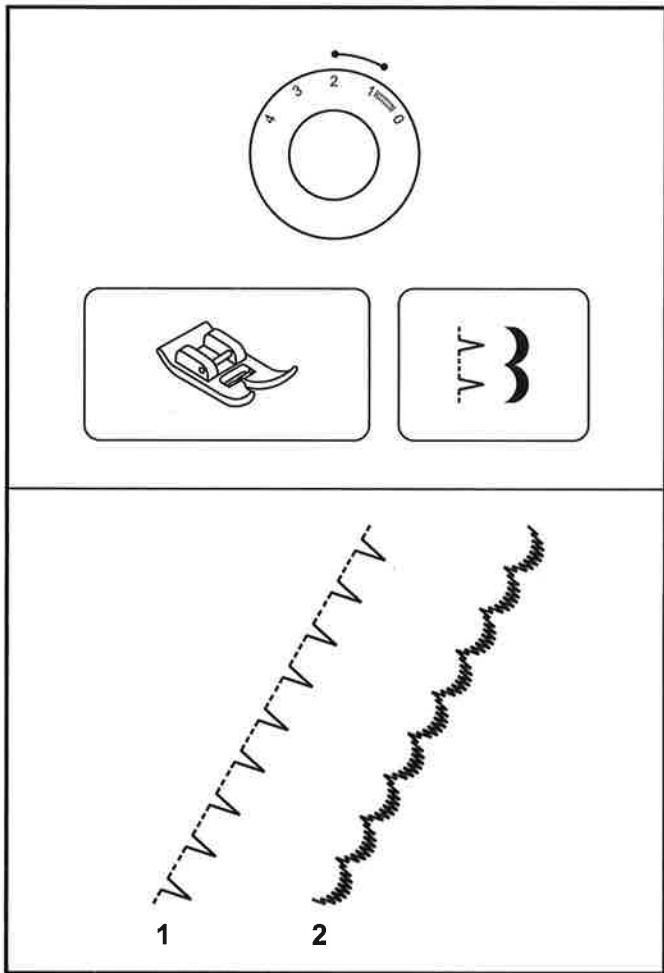
Turn the stitch length dial to "0".

Attach the darning foot to the presser foot bar. The lever (A) should be behind the needle clamp screw (B). Press the darning foot firmly from behind with your index finger and tighten the screw (C). (3)

First sew round the edge of the hole (to secure the threads). (4)
First row: Always work from left to right. Turn work by 1/4 and oversew.

A darning ring is recommended for easier sewing and better results.





Set the machine as illustrated.

Set stitch length control between "1" - "2".

Shell hem (1)

Pattern selector on "3".

For decorative edges.

Suitable for edges on sheer, fine and stretch fabrics.


The larger stitch should go just over the edge of the fabric to create the shell effect.

Scallop stitch (2)

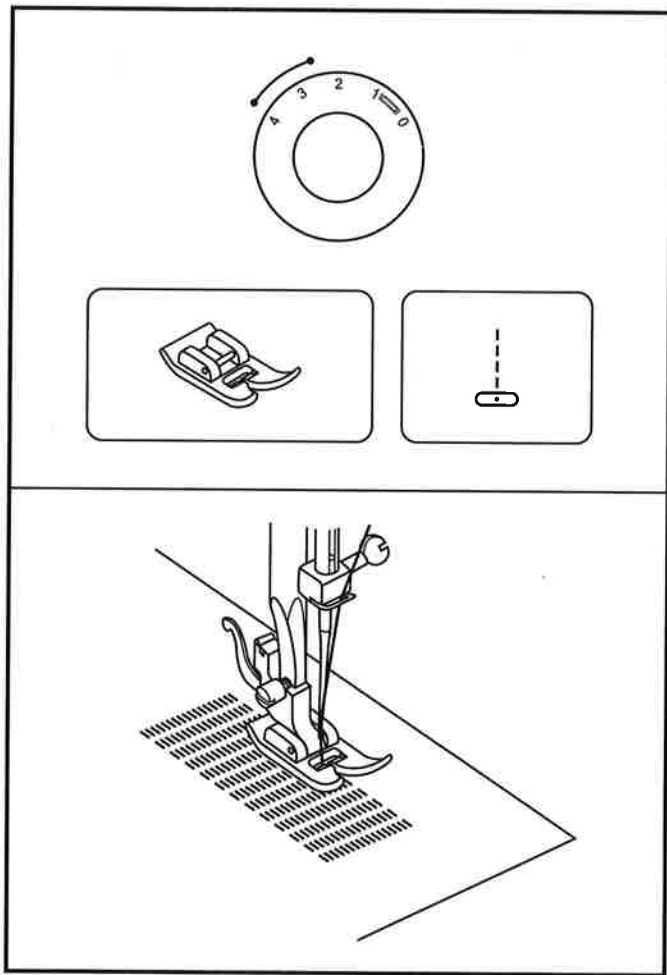
Pattern selector on "3".

For a delicate edge finish along the edge of Fabric.


EN Darning

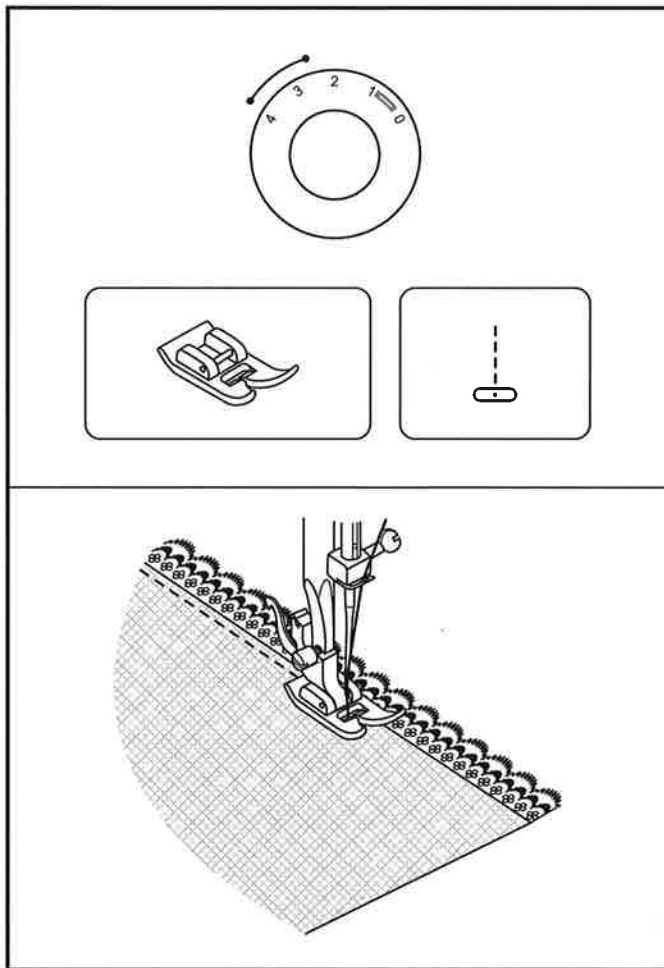
- Turn stitch length dial to the desired length.
- Pattern selector on "  ". Center needle position.
- Position the fabric to be darned under the presser foot together with the under laying fabric to be used.
- Lower the presser foot and alternately sew forward or reverse using the reverse sewing lever.
- Repeat this motion until the area to be darned is filled with rows of stitching.

For reverse sewing instructions, see figure A, page 36.




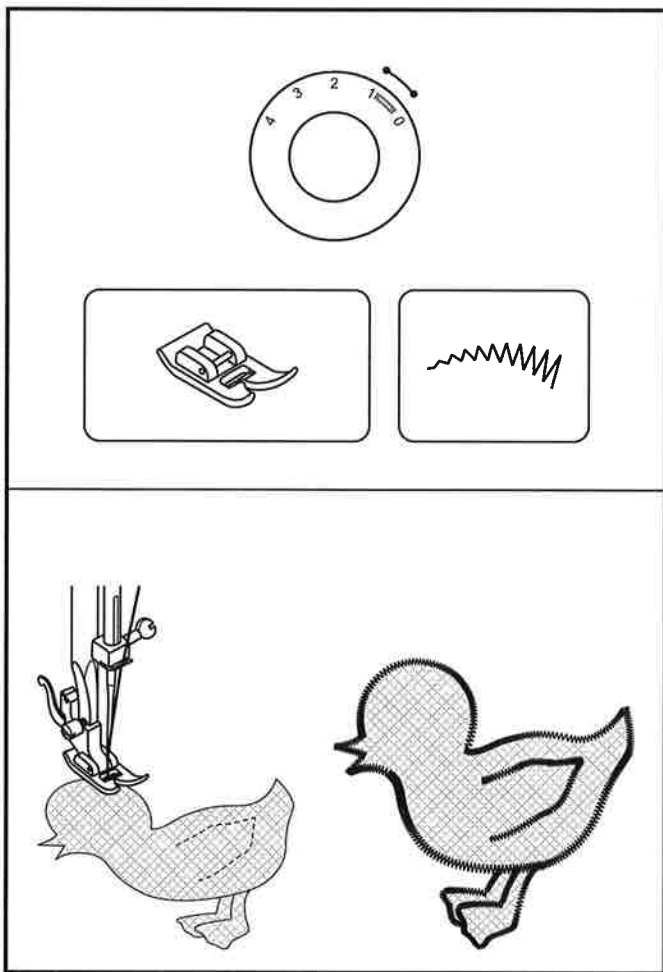
EN Attaching lace

- Turn stitch length dial to the desired length.
- Pattern selector on "  ". Center needle position.
- Fold in the edge of the fabric (approximately 6 mm 1/4").
- Place the lace under the folded edge of the fabric allowing it to underlap the fabric slightly as required by the pattern of the lace.
- Sew on the edge of the fabric fold.
- You can add a decorative touch by using the satin stitch to sew on the lace.

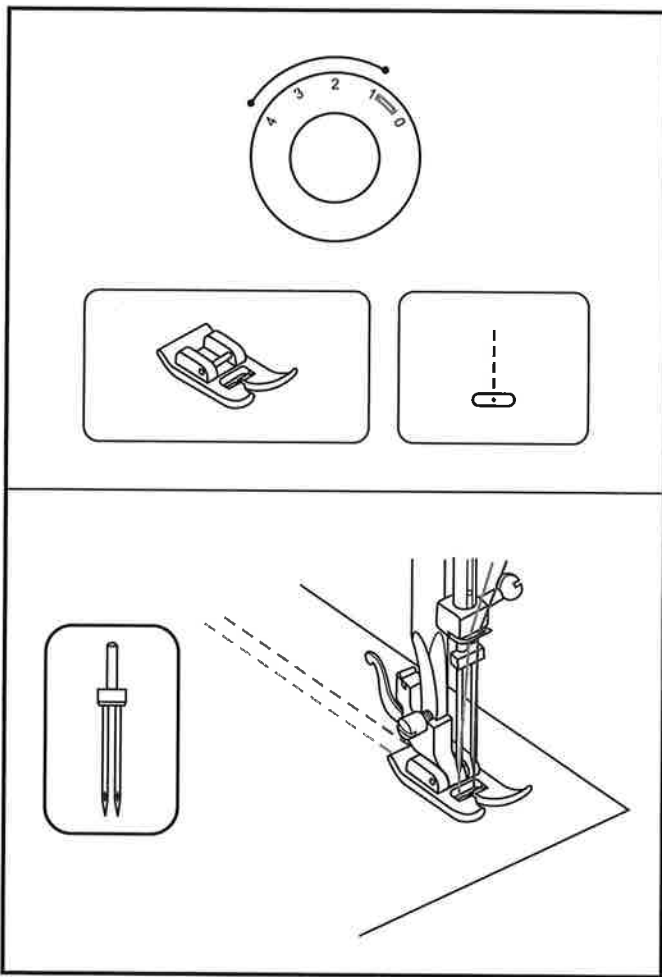



EN Applique

- Turn stitch length dial to the desired length.
- Pattern selector dial on " ".
- Cut out the applique design and baste it to the fabric.
- Sew slowly around the edge of the design.
- Trim excess material outside the stitching. Make sure not to cut any stitches.
- Remove the basting thread.
- Tie top and bottom thread under the applique to avoid unraveling.



EN Twin needle

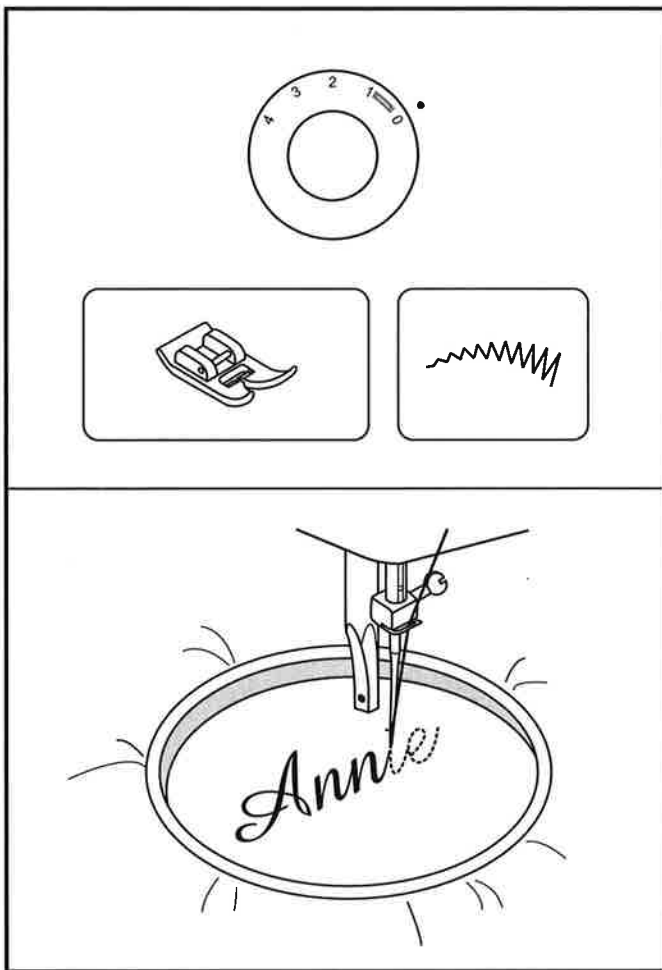


- Turn stitch length dial to the desired stitch length.
- Pattern selector on "  ". Center needle position.
- Make sure that the two threads used to thread the twin needle are of the same weight. You can use one or two colors.
- Insert the twin needle in the same way as single needle. Flat side of needle should face away from you.
- Follow instructions for single needle threading. Thread each needle separately.


Please note:

When sewing with twin needle, always proceed slowly, and make sure to maintain low speed to insure quality stitching.

Use only twin needle assemblies with max. 2 mm needle distance.
(i.e. bernette part number 502020.62.91)

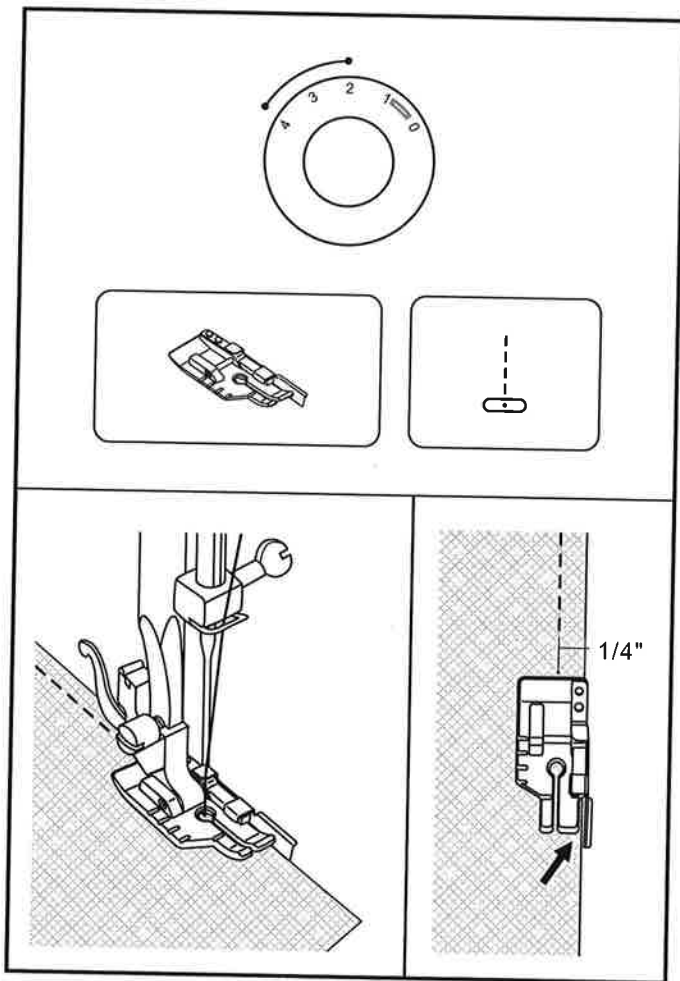


Embroidery hoop available as optional accessory.

- Set the machine as illustrated.
- Pattern selector on "  ".
- Remove the presser foot and the presser foot holder.
- Install the darning plate. (1)
- Lower presser foot lever before starting to sew.
- Turn the stitch length dial to "0".
- Adjust the stitch width according to the size of lettering or design.


Preparation for Monogramming and Embroidering

- Draw the desired lettering or design on the right side of the fabric.
- Stretch the fabric between embroidery hoop as firmly as possible.
- Place the fabric under the needle. Make sure the presser foot bar is down in its lowest position.
- Turn the balance wheel towards you to bring up the lower thread through the fabric. Sew a few securing stitches at the starting point.
- Hold the hoop with both hands and guide it.



1/4" Quilting foot available as optional accessory.

Set stitch length control between "2" - "4".

Pattern selector on "  ". Center needle position.

Procedure:

Seam allowance 1/4 inch (6 mm)

Place the fabric under the presser foot so that the raw edges are aligned with the seam guide sew seam by guiding the fabric along the guide so that perfect 1/4 inch seams are stitched.

Seam allowance 1/8 inch (3 mm)

Position the fabric under the foot raw edges aligned with the outer edge of the right toe (see arrow). Stitch perfect 1/8 inch seams.

The notches on the left edge of the foot are 1/4 inch in front and behind the needle located. The centre notch is in line with the point of needle penetration. The markings are helpful when the patchwork seam should start or end 1/4 inch in from the fabric edge.

Caution:

This foot can only be used with straight stitch in centre position.

EN Invisible zipper foot

This foot is available as special accessory.

This foot is used to insert invisible zippers so that they are covered by the seam, and thus hidden. Attach the invisible zipper foot to the machine. Adjust needle center position and straight stitch. Stitch length depends from the fabric. Adjust 1,0 - 3,0 mm. Place open zipper face - down on right side of fabric as shown in picture 1.

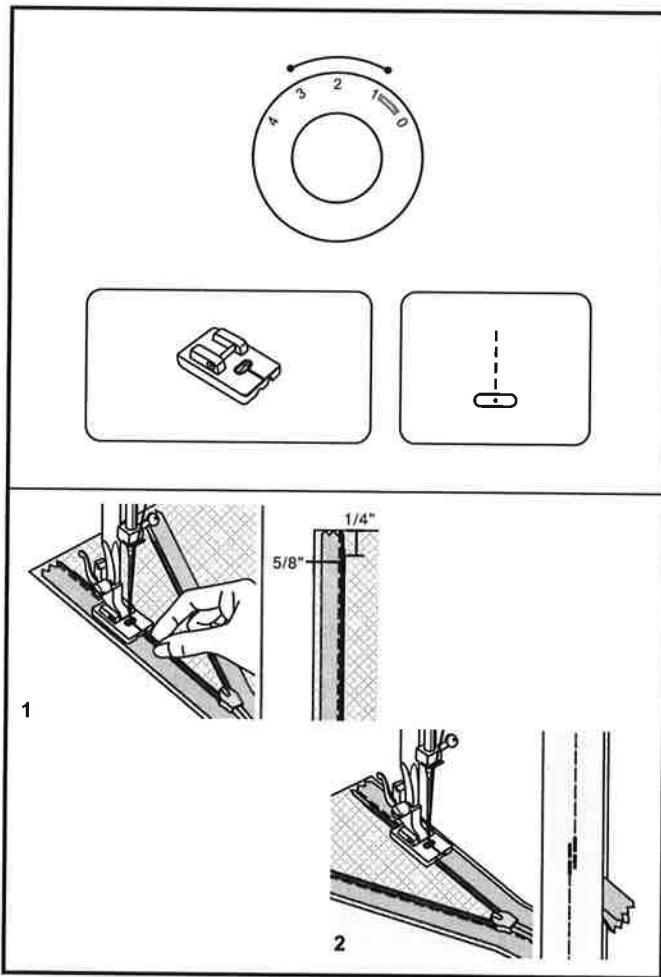
Place the fabric edge at the 5/8 inch marking line on the needle plate surface. Place the zipper 1/4 inch below raw edge of garment.

With right-hand groove of foot over coil, stitch zipper until the foot hits the slider. Remove the garment from the machine.

To attach the other half of the zipper, place the fabric edge on the 5/8 inch marking line on the needle plate as shown in picture 2. With the left-hand groove of foot over coil, stitch zipper until the foot hits the slider.

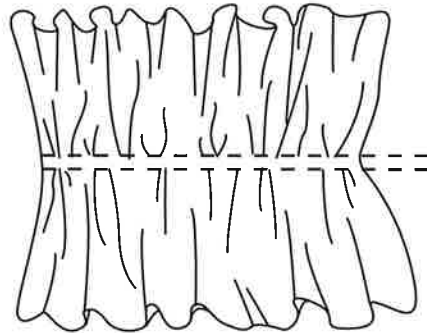
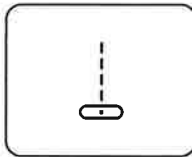
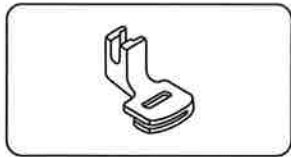
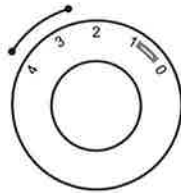
Close zipper. Fold the fabric that the zipper is on ride - hand side out of the way as shown in picture 2.

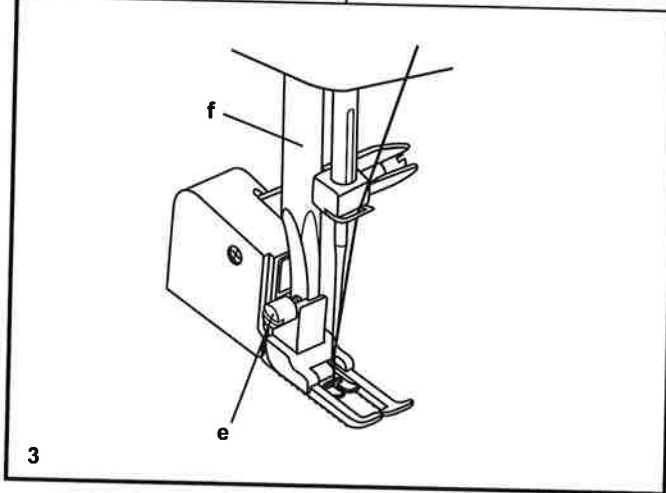
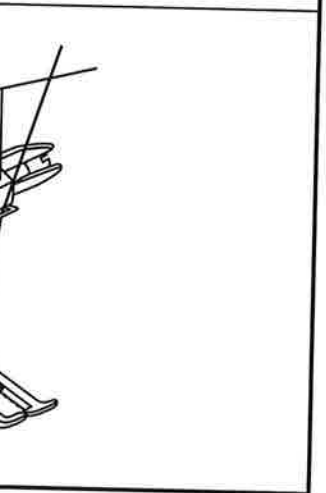
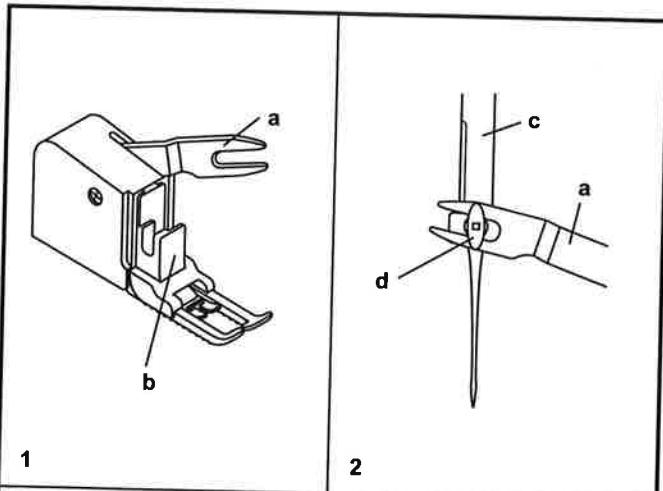
Use a pin for fixing the fabric. Change to regular sewing foot and sew as close as possible with straight stitch against the zipper. At last carry out tie off with some forward and reverse stitches.



Presser foot available as optional accessory.

1. Attach the gathering foot. Pattern selector on "0". Center needle position
2. Set stitch length control between "2.5" - "4".
3. Sew a single row or multiple rows of straight stitches.
4. If more gathering is required, loosen the upper thread (to about 2) so that the lower thread lies on the under side of the material.
5. Pull the lower thread to gather more of the material.





EN Walking foot

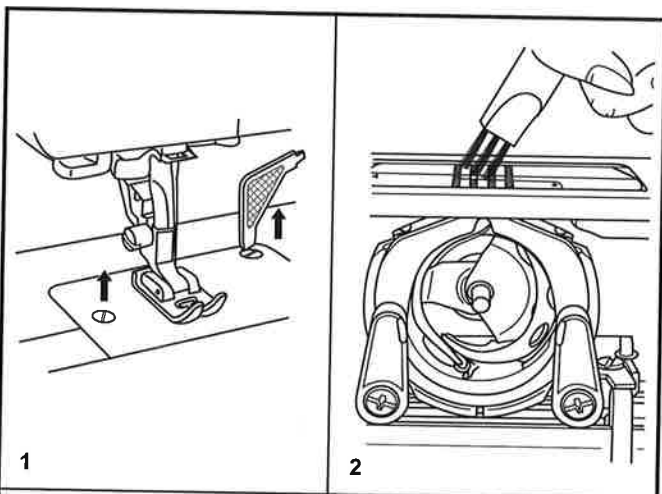
Presser foot available as optional accessory.

Always try to sew first without the walking foot accessory which should be used only when necessary.

The "Walking foot" accessory equalizes the feeding of the upper and lower layers of fabric and improves the matching of plaids, stripes and patterns. This foot helps to prevent uneven feeding of very difficult fabrics.

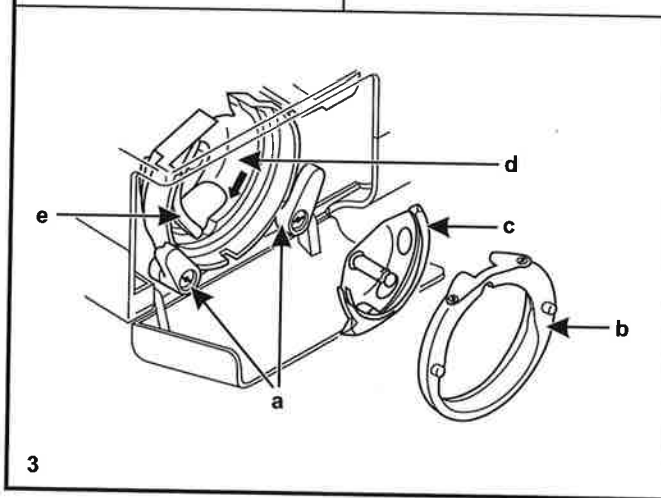
1. Lift the presser foot bar.
2. Remove the "presser foot holder".
3. Attach the "walking foot" to the machine in the following way.
 - i) The fork arm should fit into the needle screw and clamp. (2)
 - ii) Slide the plastic "attaching head" from your left to right so that it is fitted on the "presser foot bar".
 - iii) Lower the "presser foot bar".
 - iv) Tighten the fixation screw
4. Make sure both the "needle screw" and the "fixation screw" are tight.
5. Draw the bobbin thread up. Lay both threads to the back under the foot

- a Fork arm
- b Attaching head
- c Needle bar
- d Needle screw & clamp
- e Presser bar attaching screw
- f Presser foot bar



1

2



3

Caution:

Main switch on "O". Disconnect machine from electricity supply before inserting or removing any parts and before cleaning.

Cleaning**Remove the stitch plate:**

Raise the needle to its highest position. Remove the extension table and open the hinged front cover on the front of the free arm. Loosen the two screws, then remove the stitch plate. (1)

Cleaning and lubricating the hook:

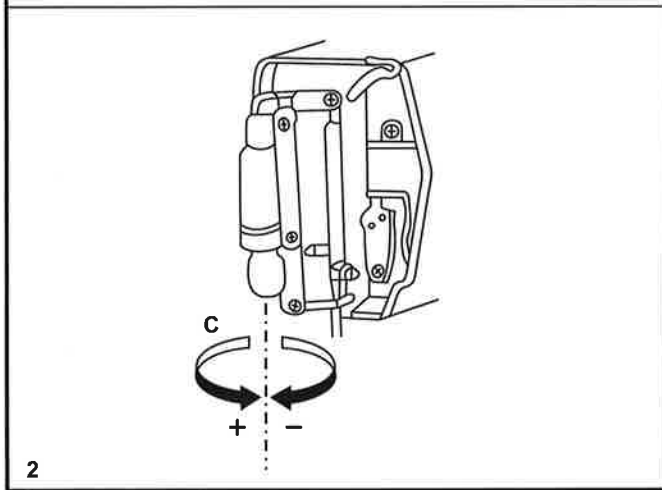
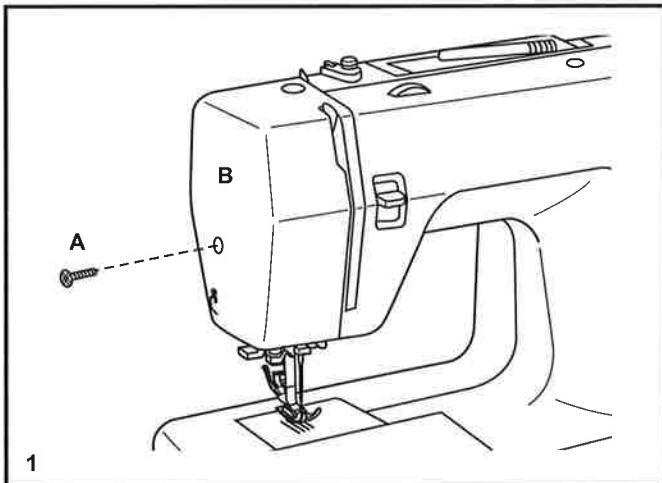
Take out the bobbin case by opening its latch and pulling it out from the shuttle race (3). Snap the two hook retaining arms (a) outwards. Remove the hook race cover (b) and the hook (c). Clean first the feed dogs with the brush (2). Then clean with a soft cloth hook (c), hook race (d) and hook race cover (b). Lubricate at the point (d) (1 to 2 drops) with sewing machine oil. Turn the handwheel until the driver (e) is in the left position. Replace the hook (c) then the hook race cover (b), snap back the two retaining arms (a). Insert bobbin and bobbin case and replace the stitch plate.

Note:

When the needle is lowered, the shuttle hook cannot be removed.

Important:

Fabric, fluff and threads must be removed regularly. Your machine should be serviced at regular intervals at your local dealer.



EN Light bulb replacement

Disconnect the machine from the power supply by removing the plug from the main socket!

Replace bulb with same type rated 10 watts (110-120V area) or 15 watts (220-240V area).

- Loosen screw (A) as illustrated. (1)
- Remove the face plate (B).
- Unscrew the bulb and install a new one (C). (2)
- Replace the face plate and tighten screw.

Should there be any problem, ask your local dealer for advice.

Problem	Cause	Correction
Upper thread breaks	<ol style="list-style-type: none"> 1. The machine is not threaded correctly 2. The thread tension is too tight 3. The thread is too thick for the needle 4. The needle is not inserted correctly 5. The thread is round wound the spool holder pin 6. The needle is damaged 	<ol style="list-style-type: none"> 1. Rethread the machine 2. Reduce the thread tension (lower number) 3. Select a larger needle 4. Remove and reinsert the needle (flat side towards the back) 5. Remove the reel and wind thread onto reel 6. Replace the needle
Skipped stitches	<ol style="list-style-type: none"> 1. The needle is not inserted correctly 2. The needle is damaged 3. The wrong size needle has been used 4. The foot is not attached correctly 	<ol style="list-style-type: none"> 1. Remove and reinsert needle (flat side towards the back) 2. Insert a new needle 3. Choose a needle to suit the thread and fabric 4. Check and attach foot correctly
Needle breaks	<ol style="list-style-type: none"> 1. The needle is damaged 2. The needle is not correctly inserted 3. Wrong needle size for the fabric 4. The wrong foot is attached 	<ol style="list-style-type: none"> 1. Insert a new needle 2. Insert the needle correctly (flat side towards the back) 3. Choose a needle to suit the thread and fabric 4. Select the correct foot
Loose stitches	<ol style="list-style-type: none"> 1. The machine is not correctly threaded 2. The bobbin case is not correctly threaded 3. Needle/ fabric/ thread combination is wrong 4. Thread tension wrong 	<ol style="list-style-type: none"> 1. Check the threading 2. Thread the bobbin case as illustrated 3. The needle size must suit the fabric and thread 4. Correct the thread tension
Seams gather or pucker	<ol style="list-style-type: none"> 1. The needle is too thick for the fabric 2. The stitch length is wrongly adjusted 3. The thread tension is too tight 	<ol style="list-style-type: none"> 1. Select a finer needle 2. Readjust the stitch length 3. Loosen the thread tension
Uneven stitches, uneven feed	<ol style="list-style-type: none"> 1. Poor quality thread 2. The bobbin case is wrongly threaded 3. Fabric has been pulled 	<ol style="list-style-type: none"> 1. Select a better quality thread 2. Remove bobbin case and rethread and insert correctly 3. Do not pull on the fabric while sewing, let it be taken up by the machine
The machine is noisy	<ol style="list-style-type: none"> 1. The machine must be lubricated 2. Fluff or oil have collected on the hook or needle bar 3. Poor quality oil has been used 4. The needle is damaged 	<ol style="list-style-type: none"> 1. Lubricate as described 2. Clean the hook and feed dog as described 3. Only use good quality sewing machine oil 4. Replace the needle
The machine jams	Thread is caught in the hook	

Remove the upper thread and bobbin case, turn the handwheel backwards and forwards by hand and remove the thread remnants. Lubricate as described.