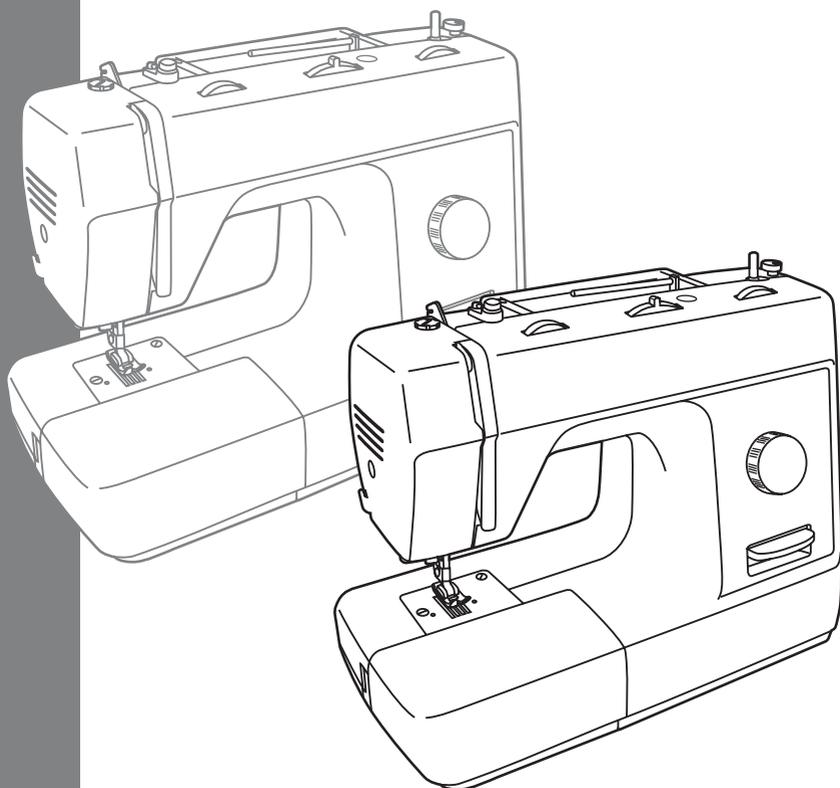


INSTRUCTION MANUAL



IMPORTANT SAFETY INSTRUCTIONS

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

Read all instructions before using this sewing machine.

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. Do not allow to be used as a toy. Close attention is necessary when this appliance is used by or near children.
2. 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.
3. 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.
4. Never operate the appliance with any air openings block. Keep ventilation openings of the sewing machine and

foot controller free from accumulation of lint, dust, and loose cloth.

5. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
6. Always use the proper needle plate. The wrong plate can cause the needle to break.
7. Do not use bent needles.
8. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
9. 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.
10. 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.
11. Never drop or insert any object into any opening.
12. Do not use outdoors.
13. Do not operate where aerosol spray products are being used or where oxygen is being administered.
14. To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.
15. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

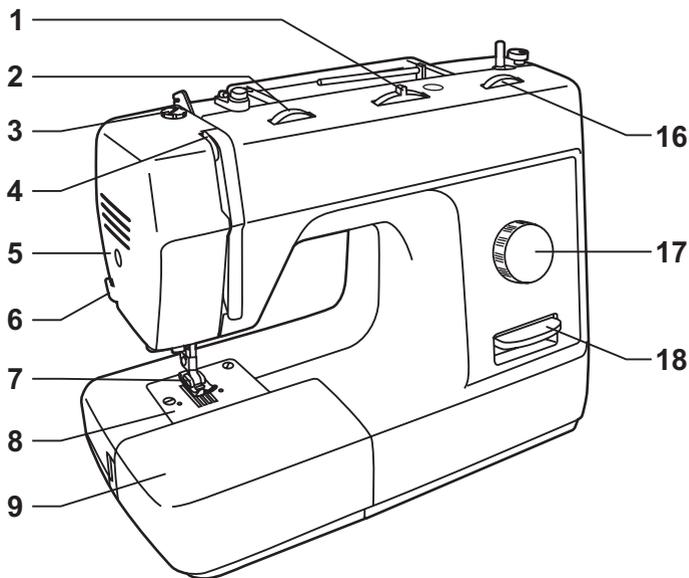
SAVE THESE INSTRUCTIONS

This sewing machine is intended for household use only.

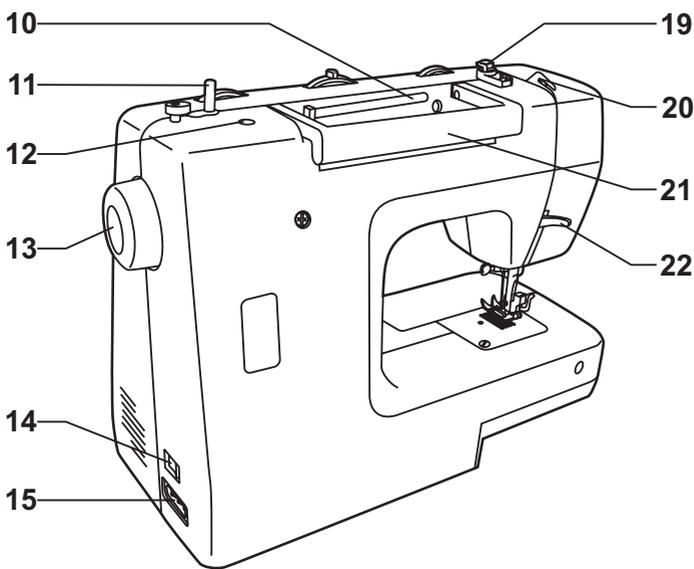
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Details of the machine



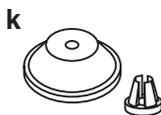
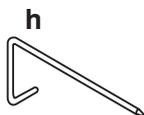
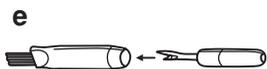
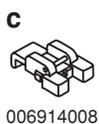
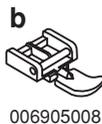
- 1 .Three Needle position dial
- 2 .Tension dial
- 3 .Presser foot pressure adjustment
- 4 .Thread take-up lever
- 5 .Face cover
- 6 .Thread cutting
- 7 .Presser foot
- 8 .Needle plate
- 9 .Sewing table and accessory box
- 10.Horizontal spool pin



- 11.Bobbin winder
- 12.Hole for second spool pin
- 13.Handwheel
- 14.Power and light switch
- 15.Main plug socket
- 16.Stitch width dial
- 17.Stitch length dial
- 18.Reverse lever
- 19.Bobbin thread guide
- 20.Upper thread guide
- 21.Handle
- 22.Presser foot lifter

Accessories

Standard accessories



Standard accessories

- a. All purpose foot
- b. Zipper foot
- c. Button sewing foot
- d. L-screwdriver
- e. Seam ripper/ brush
- f. Oil bottle
- g. Spool holder
- h. Pack of needles (3x)
- i. Bobbin (3x)
- j. Seam guide
- k. Darning plate
- l. Second spool pin
- m. Spool pin felt

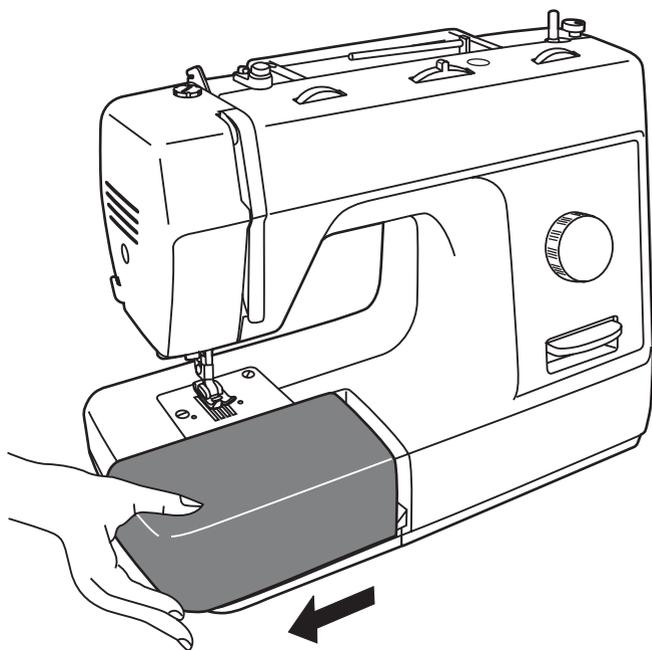
Extra accessories (optional)



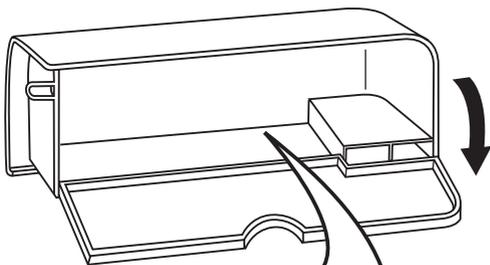
Extra accessories

- n. Satin stitch foot
- o. Overcasting foot
- p. Darning/ Embroidery foot
- q. Hemmer foot
- r. Cording foot
- s. Gathering foot
- t. Quilting foot
- u. Twin needle
- v. Walking foot

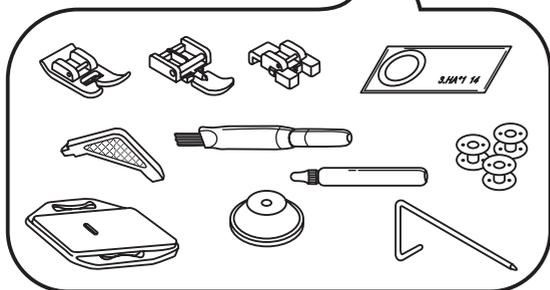
Installing the snap-in sewing table



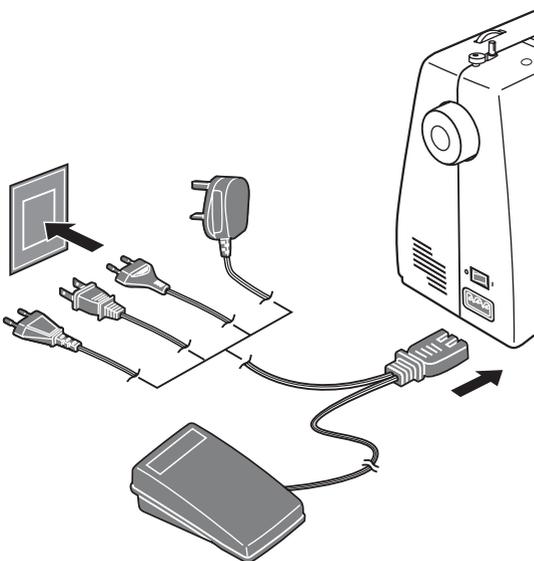
Keep the snap-in sewing table horizontal, and push it in the direction of the arrow.



Keep the snap-in sewing table horizontal, and push it in the direction of the arrow.



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. ("I")

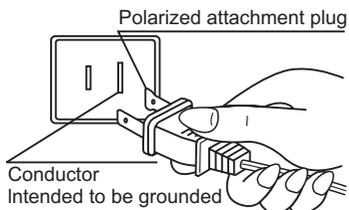
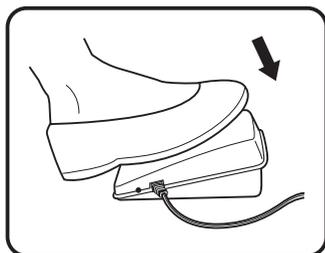
Foot control

Foot control regulates the sewing speed.

Attention:

Consult a qualified electrician if in doubt as to connect machine to power source. Unplug power cord when machine is not in use.

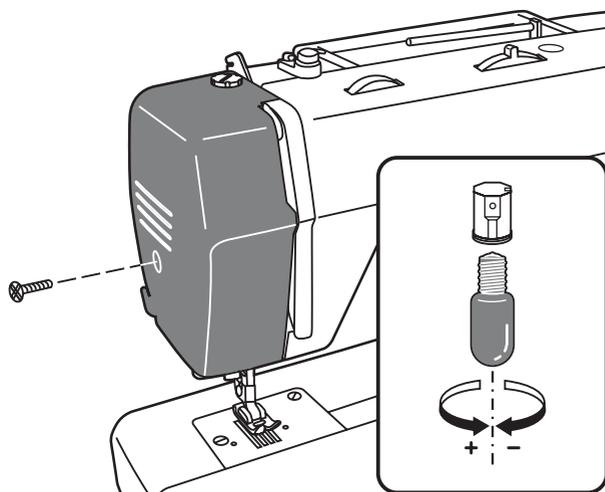
The foot control must be used with the appliance by 4C-316B (110-120V area) / 4C-326G (230V area) / 4C-316C, 4C-326C (220-240V area) manufactured by Panasonic Co., Ltd.(TW) or KD-1902 (110-120V area)/ KD-2902 (220-240V area) manufactured by ZHEJIANG FOUNDER MOTOR CORPORATION Ltd. (China)



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.

Changing the bulb

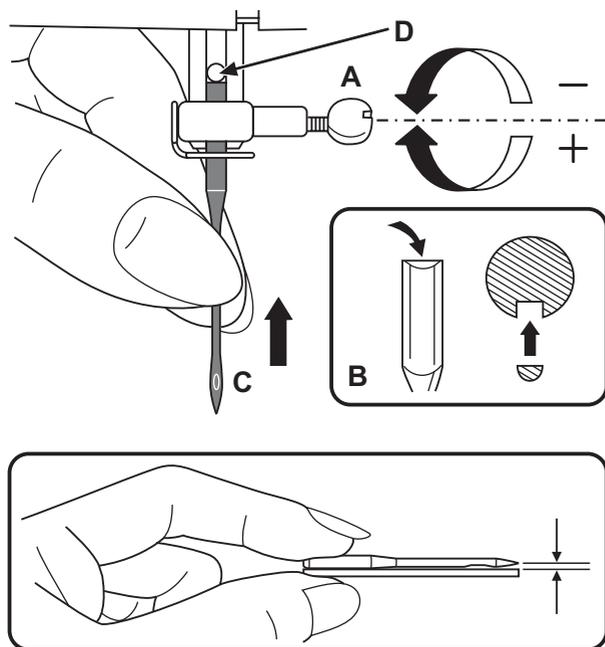


Disconnect the machine from the power supply by removing the plug from the main socket!

- Loosen screw as illustrated.
- Remove the face cover.
- Unscrew the bulb and fit new one.
- Replace the cover and tighten screw.

Should there be any problem. Ask your local dealer for advice.

Inserting the needle



Needles must be in perfect condition. Change the needle regularly, especially if it is showing signs of wear and causing problems.

Insert the needle following the illustrated instructions.

A. Loosen the needle clamp screw and tighten again after inserting the new needle.

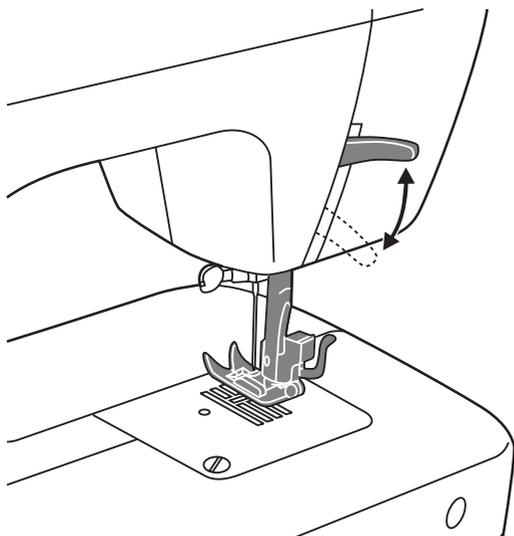
B. The flat side of the shaft should be towards the back.

C/D. Insert the needle as far up as it will go.

Attention:

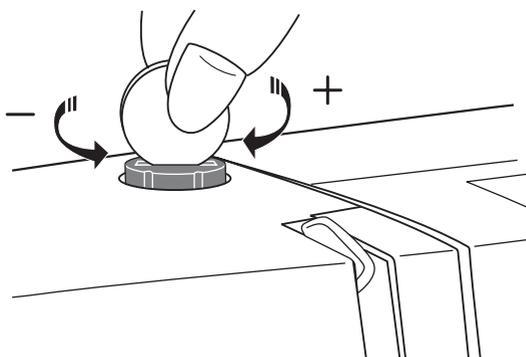
Turn power switch to off ("O").

Two-step presser foot lever



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

Adjust presser foot pressure

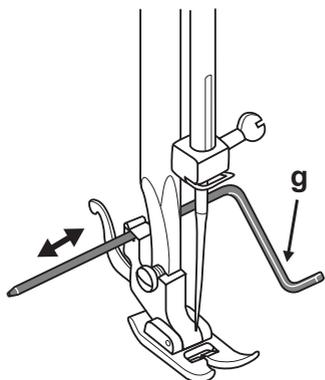
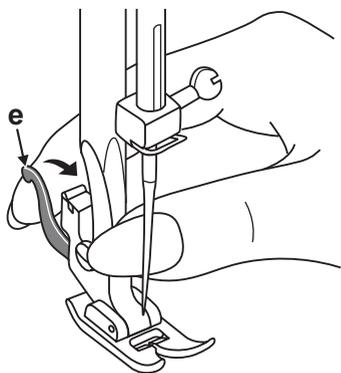
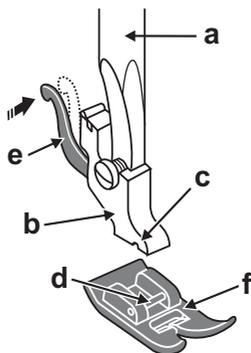
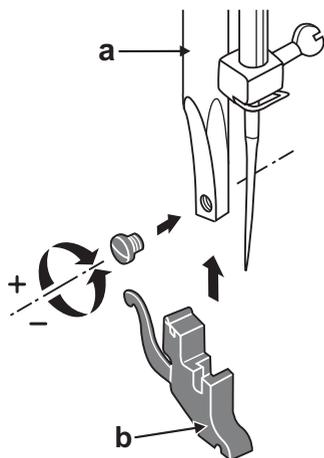


The presser foot pressure of the machine has been pre-set and requires no particular readjustment according to the type of fabric (light-or-heavy weight).

However, if you need to adjust the presser foot pressure, turn the presser adjusting screw with a coin.

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

Attaching the presser foot holder



Attaching the presser foot holder

Raise the presser foot clamp (a).

Attach the presser foot holder (b) as illustrated.

Attaching the presser foot

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

Raise the lever (e).

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

Removing the presser foot

Raise the presser foot.

Raise the lever (e) and the foot disengages.

Attaching the seam guide

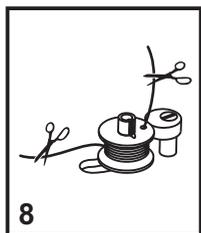
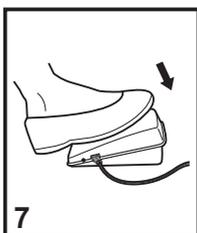
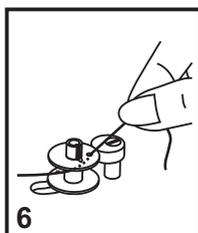
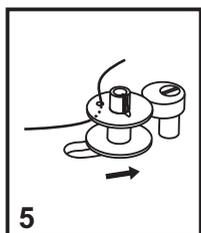
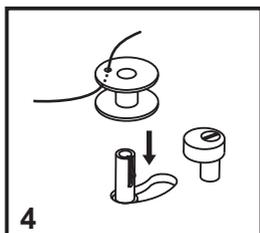
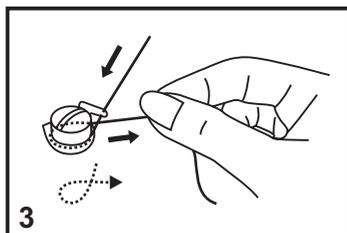
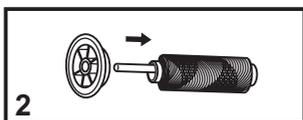
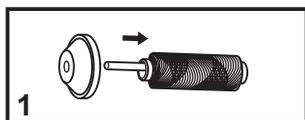
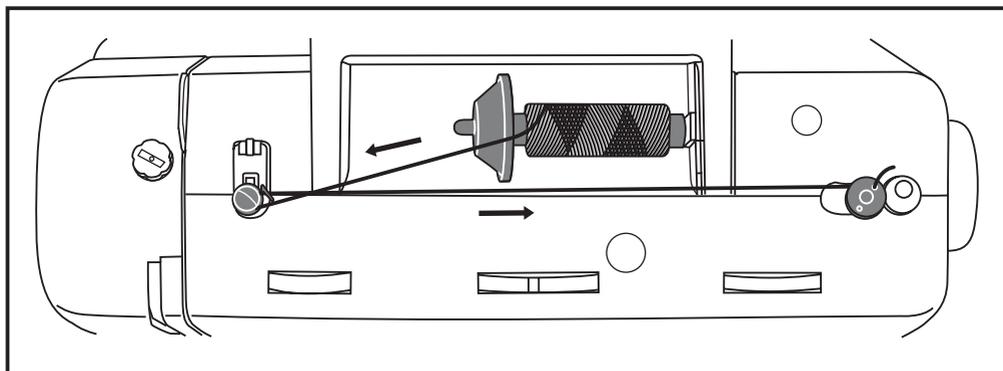
Attach the seam guide (g) in the slot as illustrated.

Adjust according to need for hems, pleats, etc.

Attention:

Turn power switch to off ("O") when carrying out any of the above operations!

Winding the bobbin



- Place thread and spool holder onto spool pin (1). For smaller spools of thread place spool holder with small side next to spool (2).

- Wind thread clockwise around bobbin winder tension discs (3).

- Thread bobbin as illustrated and place on spindle (4).

- Push bobbin to right (5).

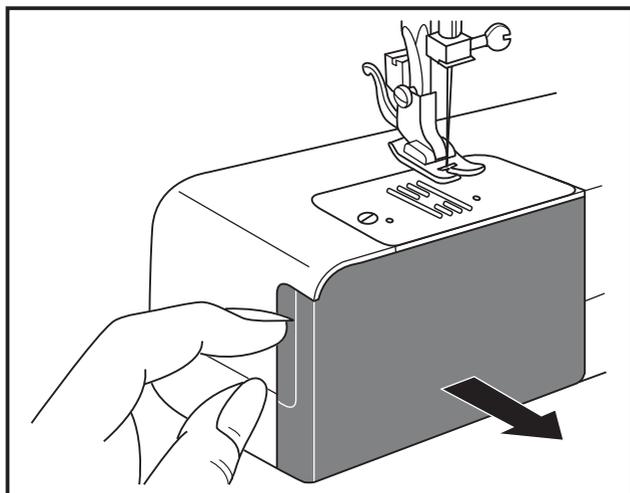
- Hold thread end (6). Step on foot control pedal (7).

- Cut thread (8). Push bobbin to left (9) and remove.

Please Note:

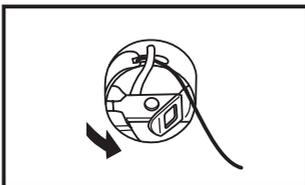
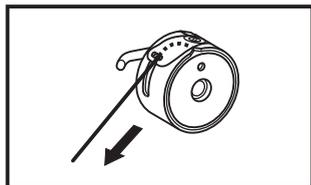
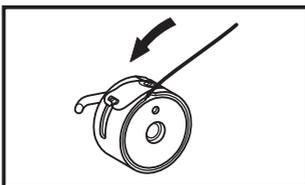
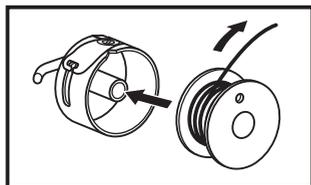
When the bobbin winder spindle is in "bobbin winding" position, the machine will not sew and the hand wheel will not turn. To start sewing, push the bobbin winder spindle to the left (sewing position).

Inserting the bobbin



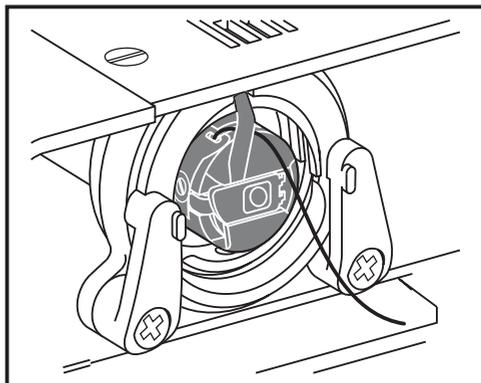
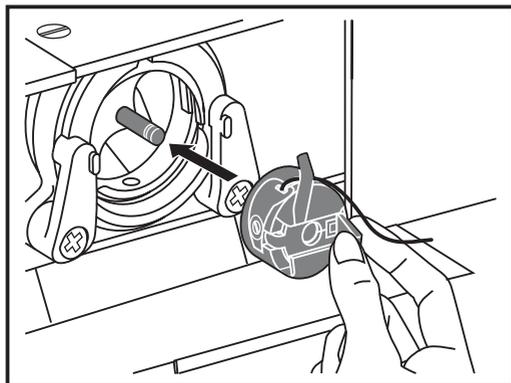
When inserting or removing the bobbin, the needle must be fully raised.

- Open the hinged cover.
- Hold the bobbin case with one hand. Insert the bobbin so that the thread runs in a clockwise direction (arrow).
- Put the thread under the tension spring.
- Hold the bobbin case by the hinged latch.
- Insert it into the shuttle.

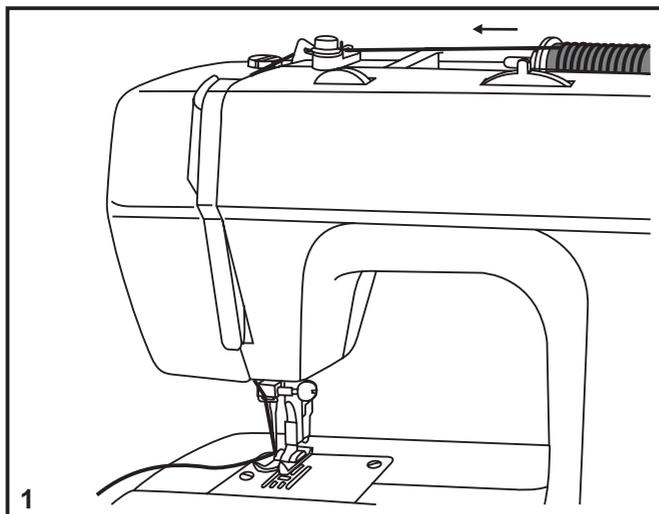


Attention:

Turn power switch to off ("O").



Threading the upper thread

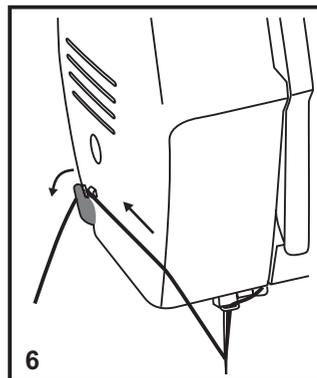
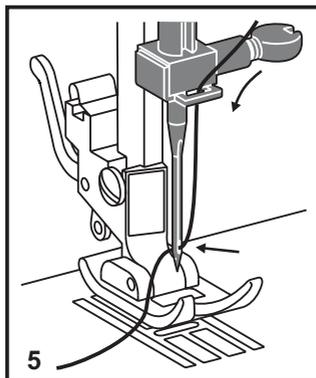
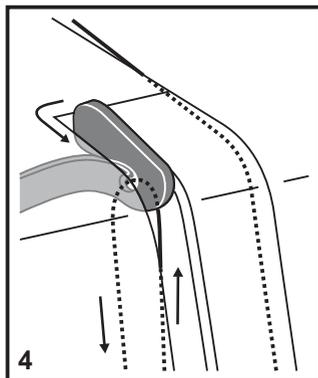
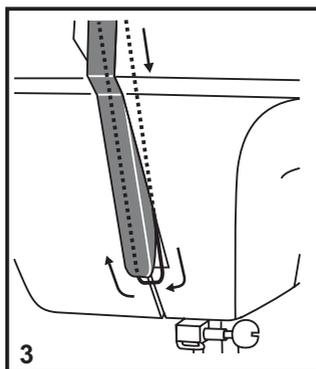
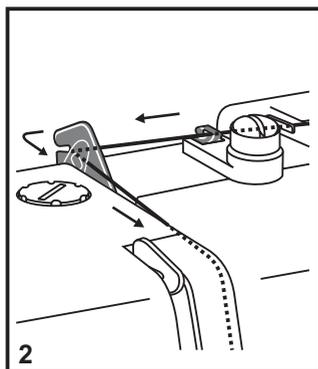


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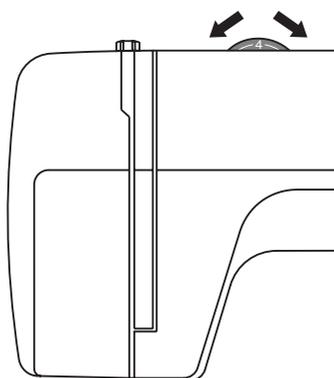
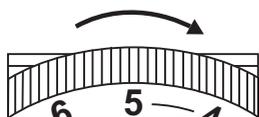
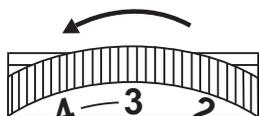
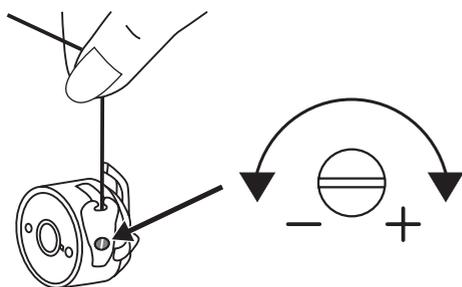
Turn power switch to off ("O"). Raise the needle bar.

Follow completely the numbered sequence in upper threading. Should you skip or fail to properly engage the thread with any of the thread guides, you will not sew properly. (1-5)

Continue to draw the thread down and into the needle bar thread guide. Pass the thread through the eye of the needle from front to back. Leave loose about 10 cm (4") of thread. (6)



Thread tension



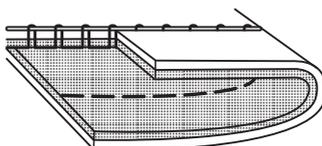
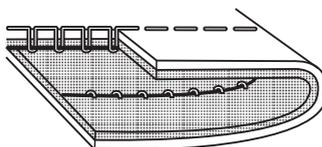
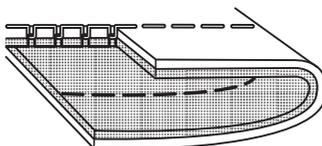
Lower thread tension

To test the bobbin thread tension, remove the bobbin case and bobbin and hold it by suspending it by the thread. Jerk it once or twice. If the tension is correct, the thread will unwind by about an inch or two. If the tension is too tight, it does not unwind at all. If the tension is too loose, it will drop too much. To adjust, turn the small screw on the side of the bobbin case.

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.

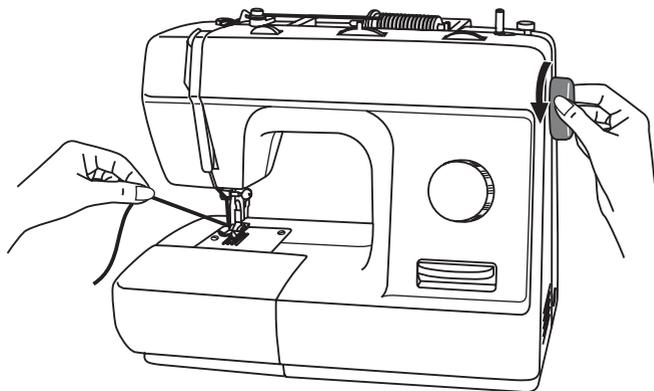


- A. Normal thread tension
- B. Upper thread tension too loose
- C. Upper thread tension too tight

Note:

The bobbin thread tension does not normally have to be adjusted.

Bringing up the lower thread

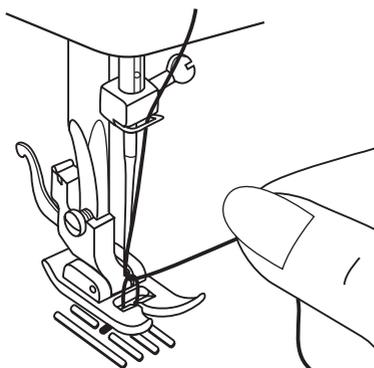


Raise the presser foot.

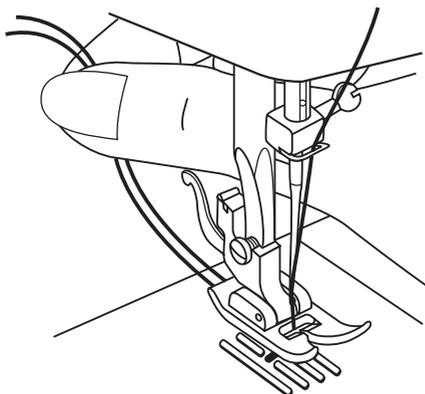
Hold the upper thread loosely with the left hand.

Turn the hand wheel forwards until the needle is raised. The hand wheel will turn one complete turn.

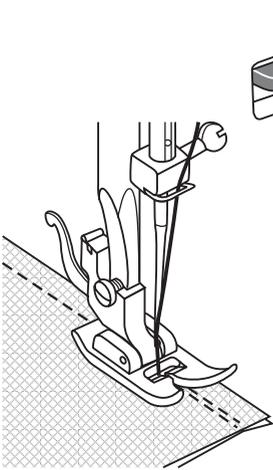
Pull on the upper thread lightly. Bobbin thread will come up in a loop.



Pull both upper and bobbin threads about 10 cm toward the back of presser foot.

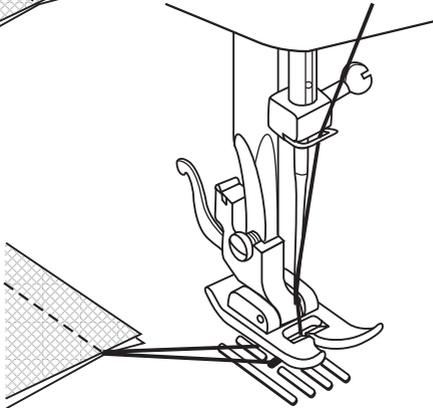


Starting to sew



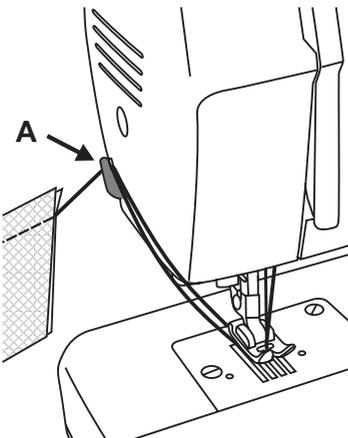
Reverse sewing

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



Removing the work

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



Cutting the thread

Hold the threads behind the presser foot with both hands, guide them to the slit (A) and press down.

Matching needle/ fabric/ thread

NEEDLE, FABRIC, THREAD SELECTION GUIDE

NEEDLE SIZE	FABRICS	THREAD
9-11(65-75)	Lightweight fabrics-thin cottons, voile, serge, silk , muslin, Qiana, interlocks, cotton knits, tricot, jerseys, crepes, woven polyester, shirt & blouse fabrics.	Light-duty thread in cotton, nylon or polyester.
12(80)	Medium weight fabrics-cotton, satin, kettleclote, sailcloth, double knits, lightweight woollens.	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.
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.	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

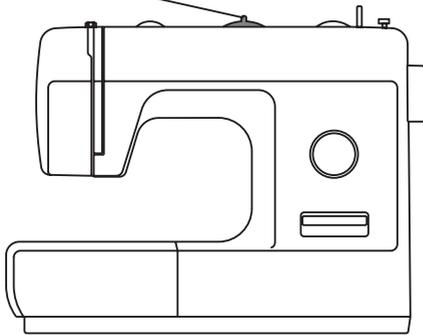
NEEDLES	EXPLANATION	TYPE OF FABRIC
HA×1 15×1	Standard sharp needles. Sizes range thin to large. 9 (65) to 18(110)	Natural woven fabrics-wool, cotton, silk, etc. Qiana. Not recommended for double knits.
15×1/705H	Semi-ball point needle, scarfed. 9(65) to 18(110)	Natural and synthetic woven fabrics, polyester blends. Knits-polyesters, interlocks, tricot, single and double knits. Can be used instead of 15×1 for sewing all fabrics.
15×1/705H (SUK)	Full ball point needle 9(65) to 18(110)	Sweater knits, Lycra, swimsuit fabric, elastic.
130 PCL	Leather needles. 12(80) to 18(110)	Leather, vinyl, upholstery. (Leaves smaller hole than standard large needle.)

Note twin needle:

1. Twin needles, can be purchased for utility and decorative work.
2. When sewing with twin needles, the stitch width dial should be set at less than "3" and set the needle position dial to middle position.
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.

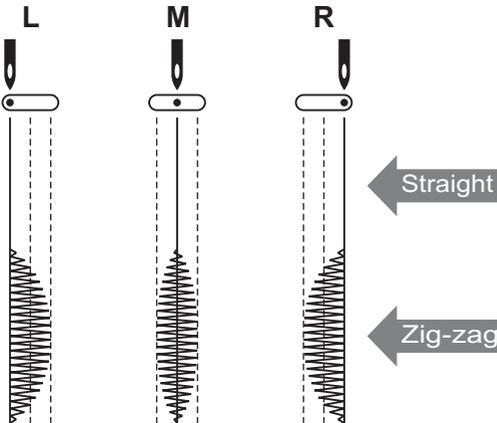
Three needle position dial / Twin needle

Three needle position dial



The needle position can be altered with the "Three needle position dial". For normal work, the needle position is middle. For edge stitching or sewing parallel lines of top stitch, select needle position left or right.

- A. Left needle position
- B. Middle needle position
- C. Right needle position

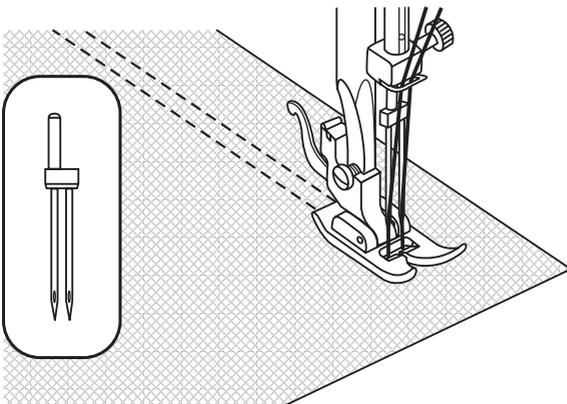


Twin needle (Optional)

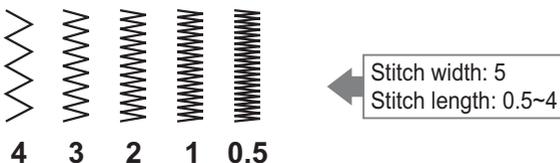
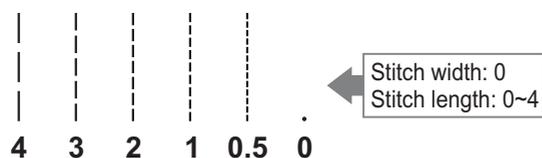
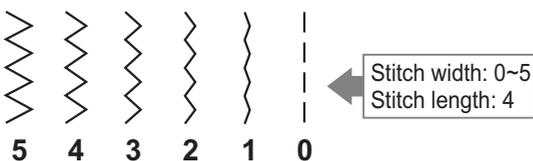
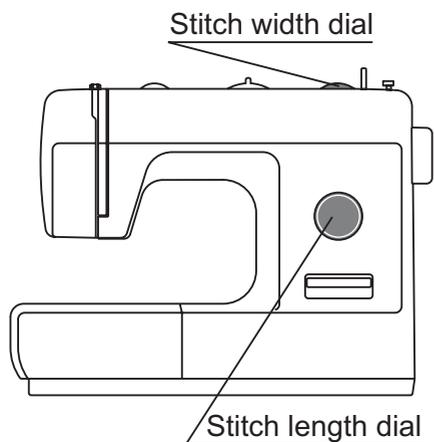
- For twin needle sewing, insert the extra spool pin (include with the accessories) into the hole on top of the machine. (See page 5 and 6)
- Make sure that the two threads are of the same weight. You can use one or two color.
- Insert the twin needle in the same way as single needle. Flat side of needle should face away from you.
- Thread each needle separately.
- When sewing with twin needle, always proceed slowly, and make sure to maintain a low speed to insure quality stitching.

Attention:

Use needle position "Middle" only. The stitch width should not be more than "3". For safety's sake, turn the handwheel to check that the needle does not go into the stitch plate.



Stitch width / length dial



Function of stitch width dial

The maximum zigzag stitch width for zigzag stitching is "5", however, the width can be reduced on any patterns. The width increases as you move zigzag dial from "0" to "5". For twin needle sewing, never set the width wider than "3".

Function of stitch length dial

Straight stitching

Set the stitch width dial to "0".

The stitch length is controlled with the stitch length dial. While "2" or "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 "0" the fabric will not move ahead, and the needle will keep piercing the same point.

Zigzag stitching

The density of zigzag stitches increases as the setting of stitch length dial approaches "0".

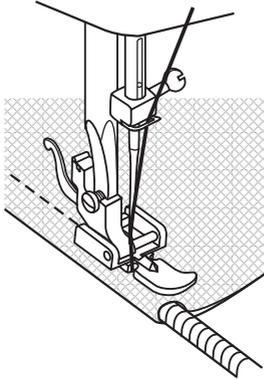
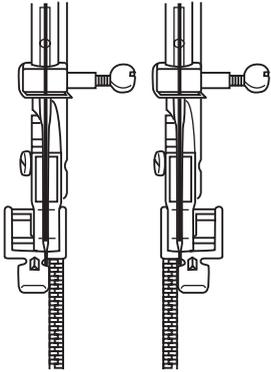
Neat zigzag stitches are usually achieved at "2.5" or below.

Closed up zigzag stitches (close together) are referred to as a "satin stitch".



Zipper foot

Needle position	Stitch width	Stitch length
Middle	0	1~4



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

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.

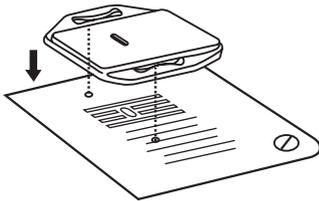
It is also possible to sew in a length of cord, into a bias strip to form a "welt".

According to thickness of fabric to set stitch length control.



Button sewing foot

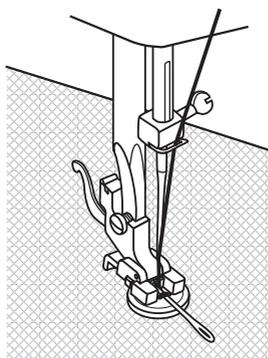
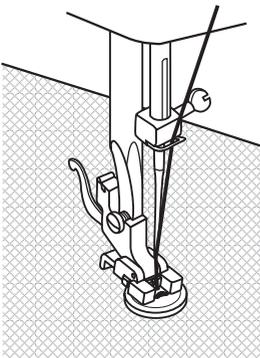
Needle position	Stitch width	Stitch length
Left or Right	Any	0



Install the darning plate. This will cover the feeddog and the stitch length will be disabled.

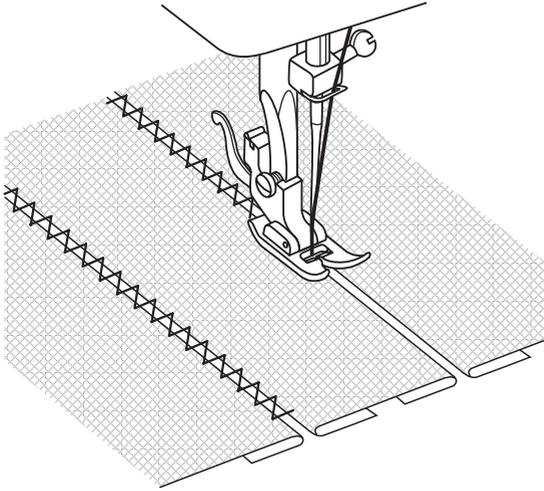
Position the work under the foot. Place the button on the marked position, lower the foot, adjust stitch width to "0" and sew a few securing stitches. Adjust the stitch width according to the button. Turn the handwheel to check that the needle goes cleanly into the left or right hole of the button, and sew on the button. Adjust the stitch width to "0" and sew a few securing stitches.

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



Patch work

Needle position	Stitch width	Stitch length
Middle	3~5	1~4

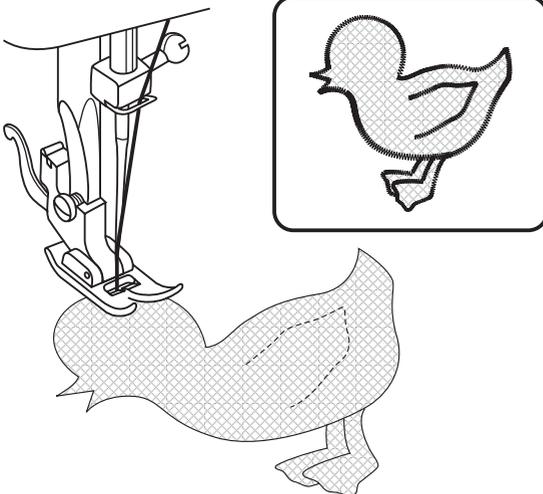


To join two pieces of fabric while leaving a space between their edges.

- Fold over the edges of the two pieces of fabric for the hem and baste the edges to a thin piece of paper leaving a small space between them.
- Stitch along the edge, pulling both threads slightly when beginning to sew.
- Use thicker than normal threads for sewing.
- After sewing, remove the basting and the paper. Finish by tying knots on the reverse side at the beginning and the end of the seams.

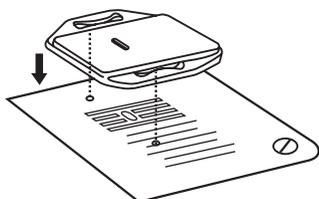
Applique

Needle position	Stitch width	Stitch length
Middle	1~5	0.5~1



- Set stitch width and length dial as illustrated.
- 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.

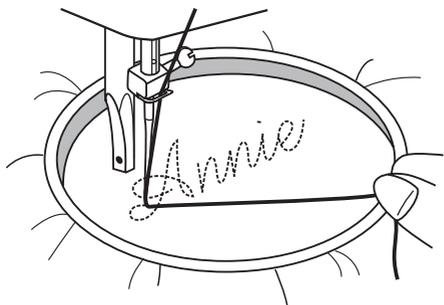
Monogramming and embroidering with embroidery hoop



Needle position	Stitch width	Stitch length
Middle	Any	0

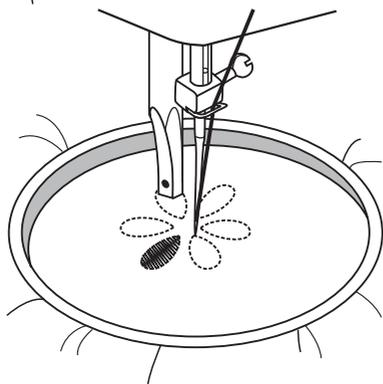
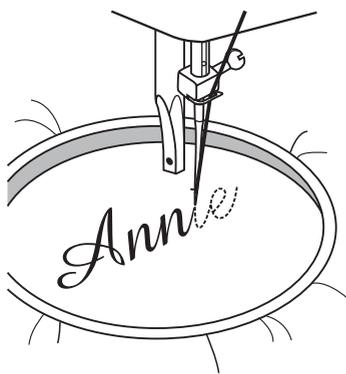
Attach the darning plate

- Remove the presser foot and the presser foot holder.
- Lower presser foot lever before starting to sew.
- 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 thumb and forefingers of both hands.
- Coordinate sewing speed and movement of hoop.

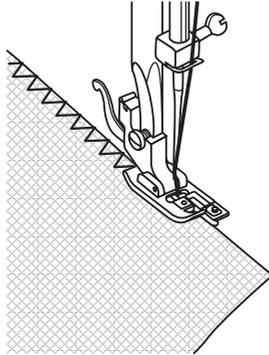
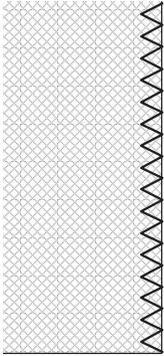


*Embroidery hoop not included with machine.



Overcasting foot

<Optional>



Needle position	Stitch width	Stitch length
Left	3~5	1~4

Turn stitch length dial to "1" ~ "4",
The stitch width can be adjusted to
suit the fabric.

The overlock stitches are suitable
for sewing and neatening edges and
visible seams in one operation.

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

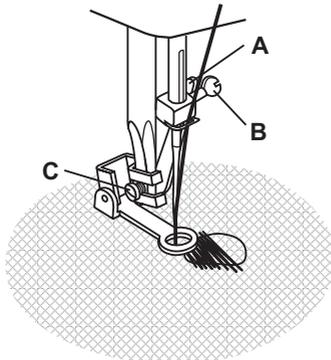
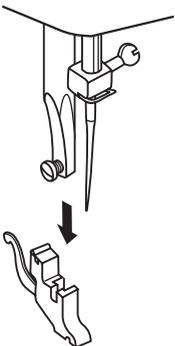
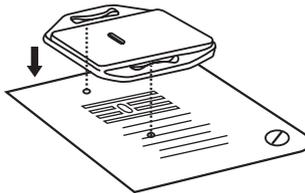
Attention:

Use new needles or ball point
needles or stretch needle!



Darning/ Embroidery foot

<Optional>



Needle position	Stitch width	Stitch length
Middle	0	0

Install the darning plate, the stitch
length cannot be controlled with dial.

Remove the presser foot clamp.

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

First sew around the edge of the
hole (to secure the threads). 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.



Hemmer foot

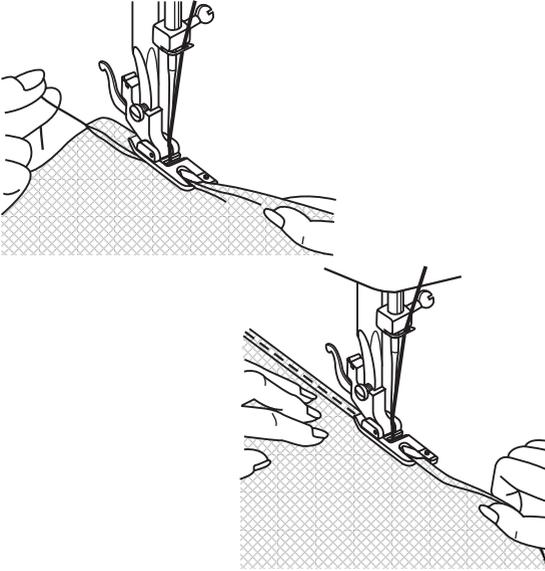
<Optional>

Needle position	Stitch width	Stitch length
Middle	0	1~4

For hems in fine or sheer fabrics.

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.

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.



Cording foot

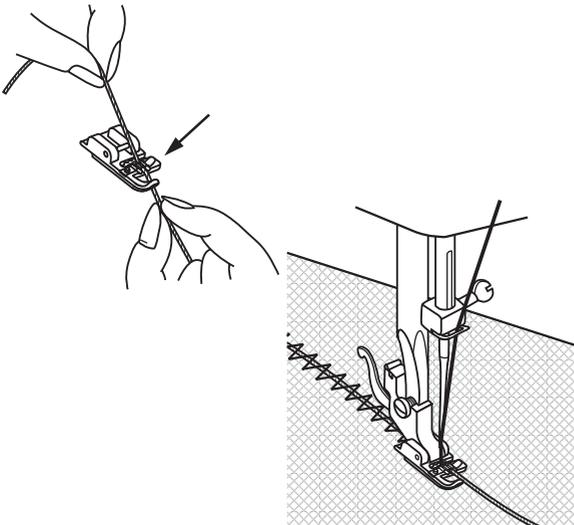
<Optional>

Needle position	Stitch width	Stitch length
Middle	1~5	1~2

Decorative effects, cushions, tablecloths, etc.

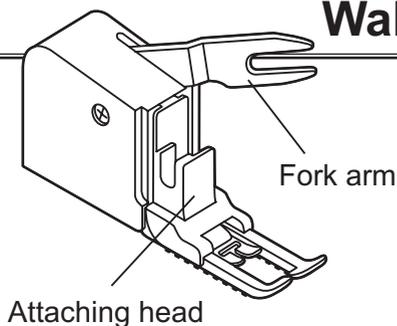
Zig-zag stitches are suitable for sewing on cord.

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.



Walking foot

<Optional>



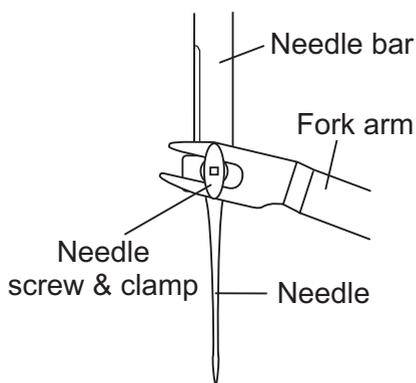
Needle position	Stitch width	Stitch length
Any	Any	1~4

* The walking foot accessory is optional. It is not included with this machine.

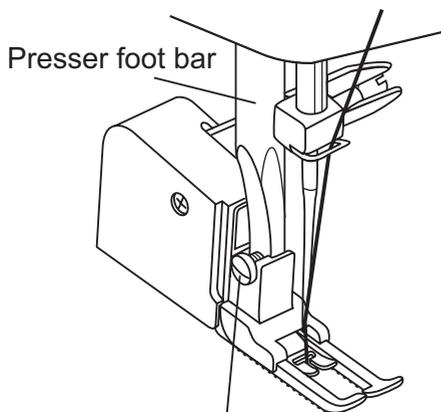
Always try to sew first without the walking foot accessory which should be used only when necessary.

It is easier to guide the fabric and you have a better view of the seam when using the standard, regular foot on your machine. Your sewing machine offers excellent stitch quality on a wide range of fabrics from delicate chiffons to multiple layers of denim.

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.



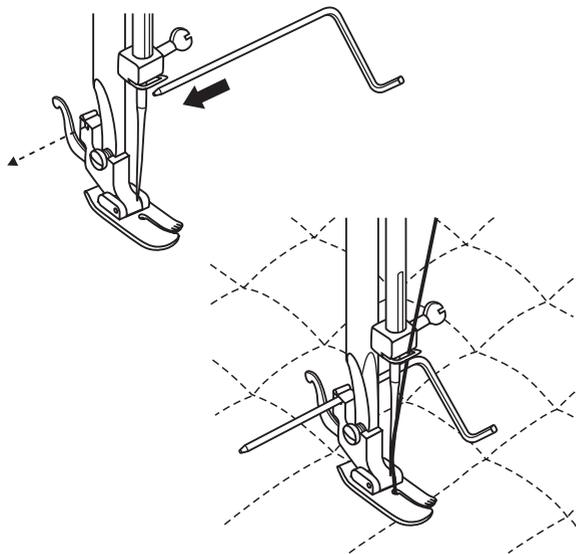
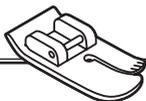
1. Lift the presser foot bar.
2. Remove the "foot holder" by opening counter clockwise the presser bar attaching screw.
3. Attach the "walking foot" to the machine in the following way.



- i) The fork arm should fit into the needle screw and clamp.
 - ii) Slide the plastic 'attaching head' from your left to right so that it is fitted into the "presser foot bar"
 - iii) Lower the 'presser foot bar'.
 - iv) Replace and tighten clockwise the "presser bar attaching screw"
4. Make sure both the "needle screw" and the "presser bar attaching screw" are tightly secured.
 5. Draw the bobbin thread up and place both the bobbin thread and the needle thread behind the walking foot attachment.

Quilting foot

<Optional>



Needle position	Stitch width	Stitch length
Middle	0	1~4

Insert the quilting guide in presser foot holder and set the space as you desired.

Move the fabric over and sew successive rows with the guide riding along on the previous row of stitching.

Gathering foot

<Optional>



Needle position	Stitch width	Stitch length
Any	0	1~2

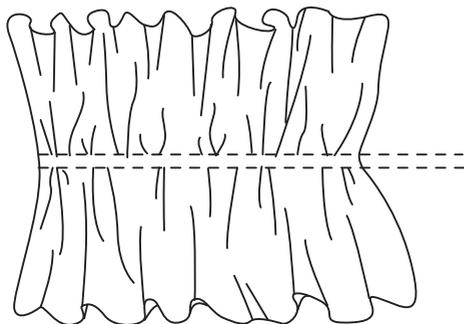
Attach the gathering foot.

Sew a single row or multiple rows of straight stitches.

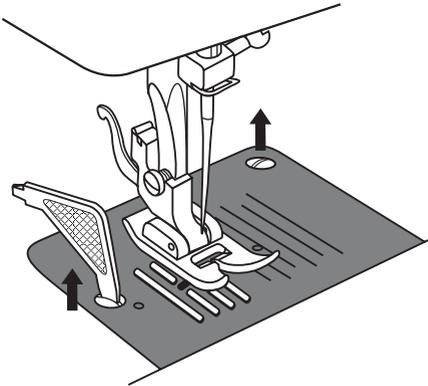
Pull the lower thread to gather more of the material.

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.

Pull the lower thread to gather more of the material.



Maintenance



Attention:

Disconnect the machine from the electricity supply by removing the plug from the mains socket. When cleaning the machine, it must always be disconnected from the electricity supply.

Remove the stitch plate

Turn the handwheel until the needle is fully raised. Open the hinged front cover and unscrew the needle plate screw with the screw driver.

Cleaning the feed dog:

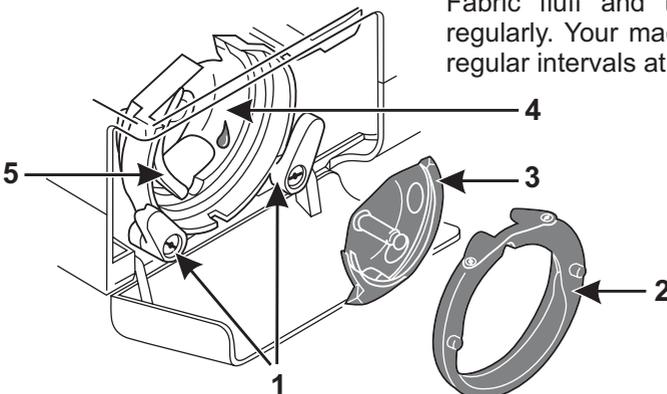
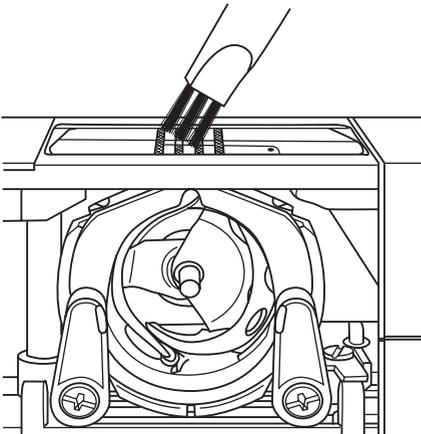
Remove the bobbin case and use the brush supplied to clean the whole area.

Cleaning and lubricating the hook

Remove the bobbin case. Snap the two hook retaining arms (1) outwards. Remove the hook race cover (2) and the hook (3) and clean with a soft cloth. Lubricate at the points (4) (1-2 drops) with sewing machine oil. Turn the handwheel until the hook race (5) is in the left position. Replace the hook (3). Replace the hook race cover and snap back the two hook retaining arms. Insert the bobbin case and bobbin and replace the stitch plate.

Important:

Fabric fluff and threads must be removed regularly. Your machine should be serviced at regular intervals at one of our service agencies.



Trouble shooting guide

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.
Lower thread breaks	<ol style="list-style-type: none"> 1.The bobbin case is not inserted correctly. 2.The bobbin case is threaded wrongly. 3.The lower thread tension is too tight. 	<ol style="list-style-type: none"> 1.Remove and reinsert the bobbin case and pull on the thread. The thread should pull easily. 2.Check both bobbin and bobbin case. 3.Loosen lower thread tension as described.
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 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.

