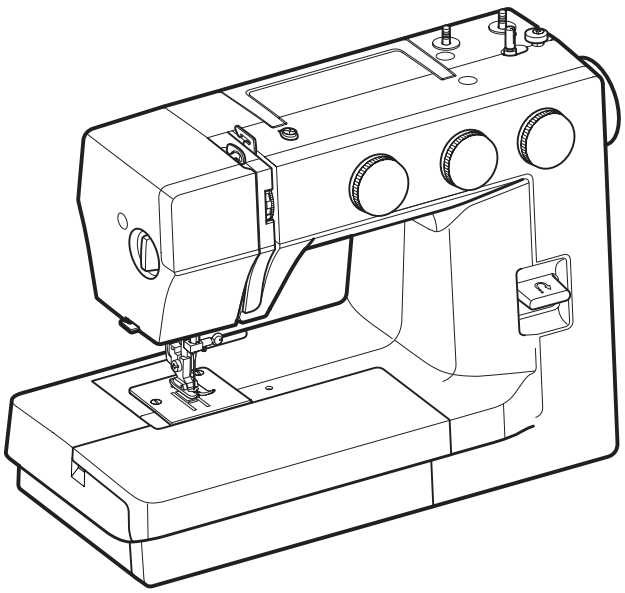
INSTRUCTION BOOK



IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety precautions should always be followed, including the following:
This sewing machine is designed and manufactured for household use only.
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. Always unplug this sewing machine from the electric outlet immediately after using and before cleaning.

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 sewing machine is used by or near children.
2. Use this appliance only for its intended use as described in this owner's manual.
   Use only attachments recommended by the manufacturer as contained in this owner's manual.
3. Never operate this sewing machine 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 this sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air opening blocked. Keep ventilation openings of this sewing machine and foot controller free from accumulation of lint, dust and loose cloth.
5. Never drop or insert any object into any opening.
6. Do not use outdoors.
7. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
8. To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.
9. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
10. Keep fingers away from all moving parts. Special care is required around the sewing machine needle and/or cutting blade.
11. Always use the proper needle plate. The wrong plate can cause the needle to break.
12. Do not use bent needles.
13. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
14. Switch this sewing machine off ("O") when making any adjustment in the needle area, such as threading the needle, changing the needle, threading the bobbin or changing the presser foot, and the like.
15. Always unplug this sewing machine from the electrical outlet when removing covers, lubricating, or when making any other adjustments mentioned in this owner's manual.

SAVE THESE INSTRUCTIONS

For Europe only:
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

For outside Europe (except U.S.A and Canada):
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. Children should be supervised to ensure that they do not play with the appliance.



Please note that on disposal, this product must be safely recycled in accordance with relevant National legislation relating to electrical/electronic products. If in doubt please contact your retailer for guidance. (European Union only)

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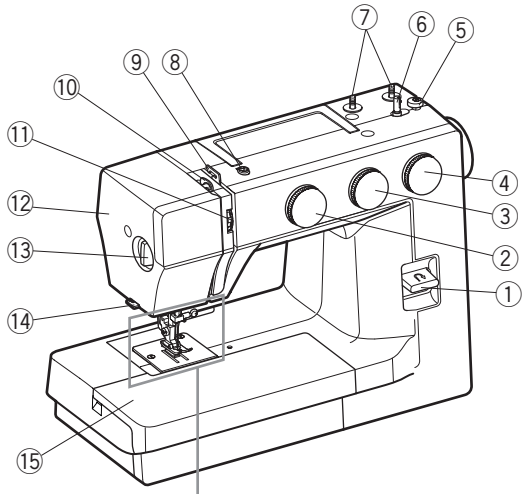
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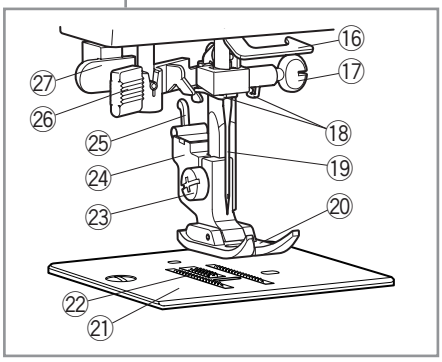
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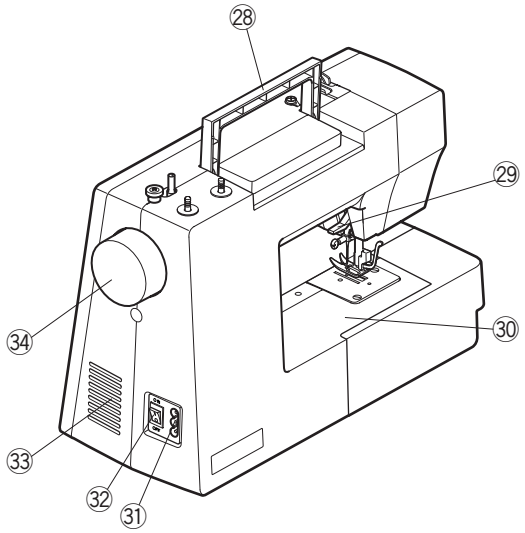
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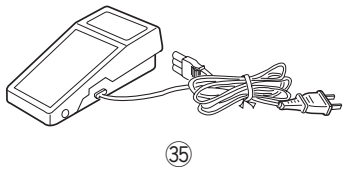
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ESSENTIAL PARTS

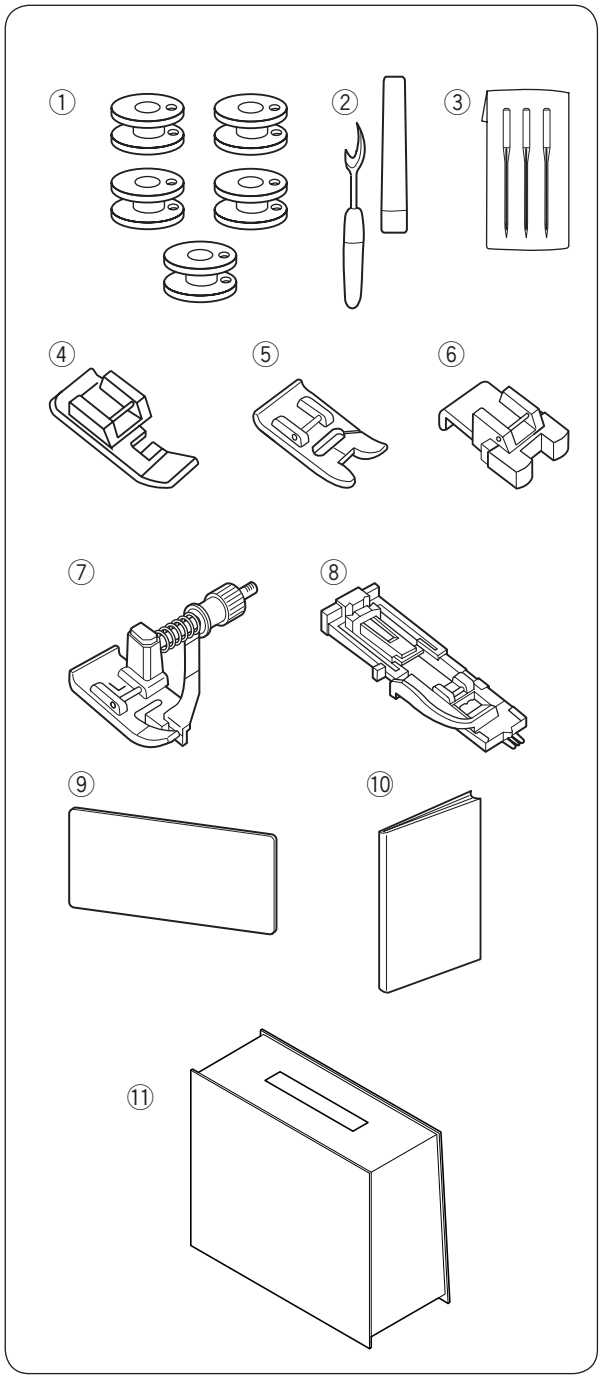
Names of Parts

① Reverse stitch lever
② Pattern selector dial
③ Stitch length dial
④ Stitch width dial
⑤ Bobbin winder stopper
⑥ Bobbin winder spindle
⑦ Spool pin
⑧ Bobbin winder thread guide
⑨ Thread guide
⑩ Thread take-up lever
⑪ Thread tension dial
⑫ Face cover
⑬ Presser foot pressure dial
⑭ Thread cutter
⑮ Extension table (Accessory box)
⑯ Lower thread guide
⑰ Needle clamp screw
⑱ Needle bar thread guide
⑲ Needle
⑳ Presser foot (Zigzag foot A)
㉑ Needle plate
㉒ Feed dog
㉓ Setscrew
㉔ Foot holder
㉕ Lever
㉖ Needle threader
㉗ Buttonhole lever
㉘ Carrying handle
㉙ Presser foot lifter
㉚ Free-arm
㉛ Machine socket
㉜ Power switch
㉝ Ventilation openings
㉞ Handwheel
㉟ Foot control*

NOTE:
To carry the sewing machine, hold the carrying handle with your hand, and support the sewing machine with the other hand.

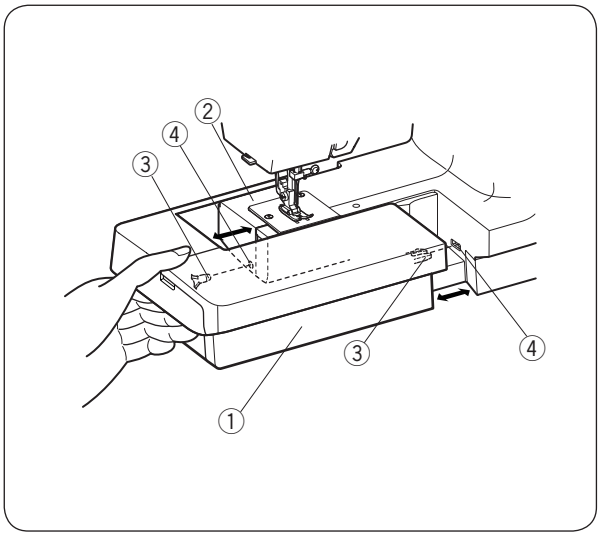
NOTE:
Design and specifications are subject to change without prior notice.

* The foot control included may differ from the illustration.



Standard Accessories

① Bobbin x 5 (1 set on the machine)
② Seam ripper (buttonhole opener)
③ Needle set
④ Zipper foot
⑤ Satin stitch foot
⑥ Button sewing foot
⑦ Blind hem foot
⑧ Automatic buttonhole foot
⑨ Card
⑩ Instruction book
⑪ Semi hard cover (option)



Extension Table

The extension table provides added sewing surface and can be easily removed for free arm sewing.

Detaching the table:

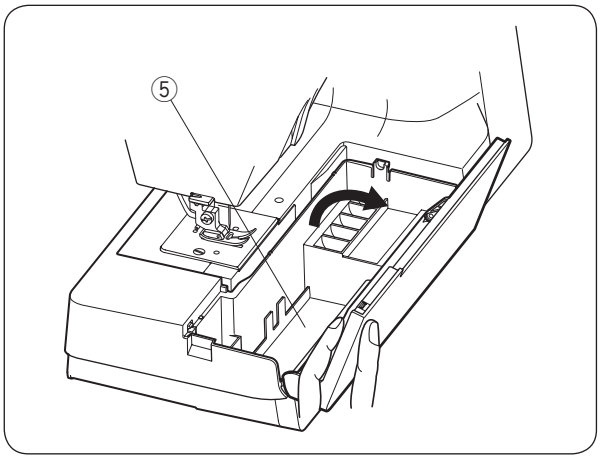
Pull the table away from the machine.

① Extension table

Attaching the table:

Slide the extension table along the free-arm and insert the guides into the holes until the table snaps into the machine.

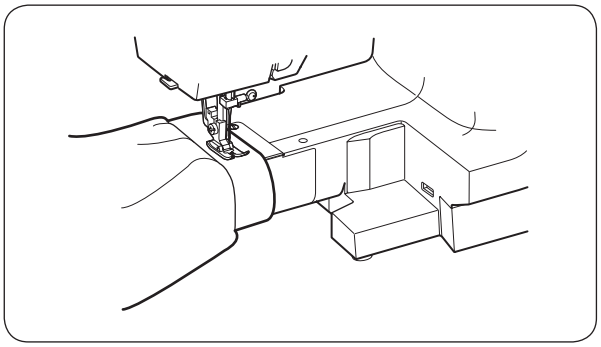
② Free-arm
③ Guide
④ Hole



Accessory Storage

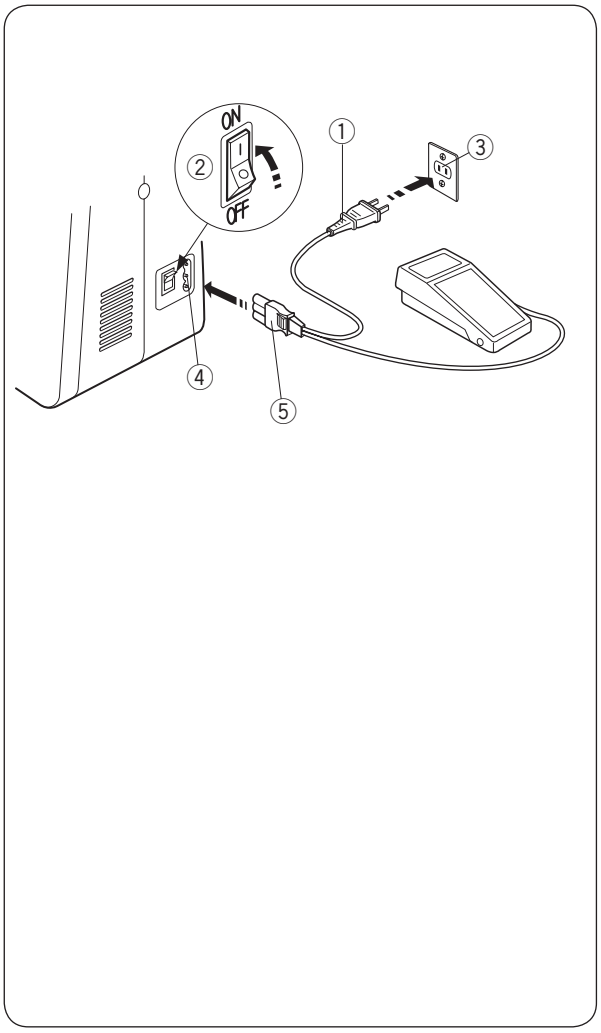
Accessories are stored inside the extension table. Pull the lid toward you to open the accessory storage.

⑤ Accessory storage



Free-arm Sewing

Free-arm sewing is used for stitching sleeves, waistbands, pant legs or any other tubular garments. It is also useful for darning socks or mending knees or elbows.



GETTING READY TO SEW

Connecting the Power Supply

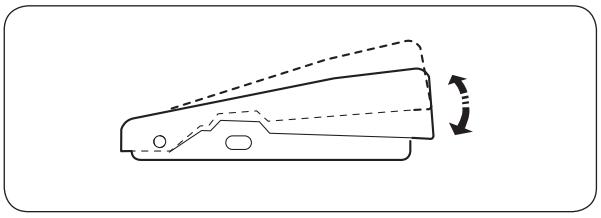
1 Turn the power switch off.
2 Insert the machine plug into the machine socket.
3 Insert the power supply plug into the wall outlet.
4 Turn the power switch on.

① Power supply plug
② Power switch
③ Wall outlet
④ Machine socket
⑤ Machine plug

⚠ CAUTION:
Before connecting to the power supply, make sure the voltage shown on the machine conforms to your electrical power.

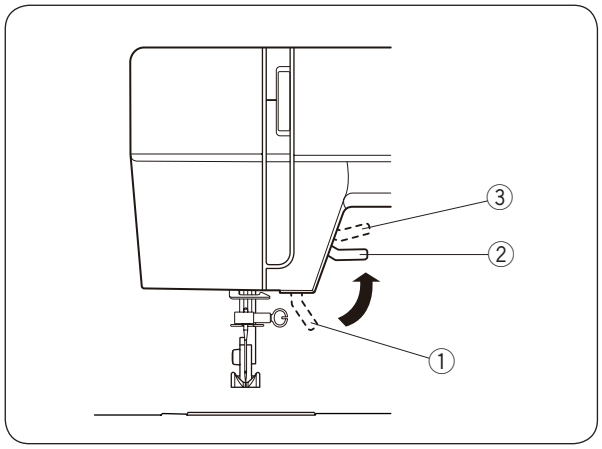
⚠ WARNING:
While in operation, always keep your eyes on the sewing area, and do not touch any moving parts such as the thread take-up lever, handwheel or needle.
Always turn off the power switch and unplug from the power supply:
- when leaving the machine unattended.
- when attaching or removing parts.
- when cleaning the machine.

Do not place anything on the foot control, otherwise the machine will run intermittently.



Controlling the Sewing Speed

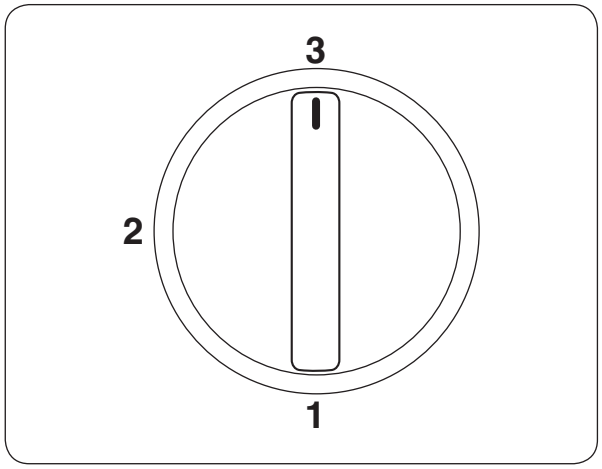
Sewing speed can be varied by the foot control. The harder you depress the foot control, the faster the machine runs.



Presser Foot Lifter

The presser foot lifter raises and lowers the presser foot.
You can raise it about 1/4″ (0.6 cm) higher than the normal up position for easy removal of the presser foot, or to help you place heavy fabric under the foot.

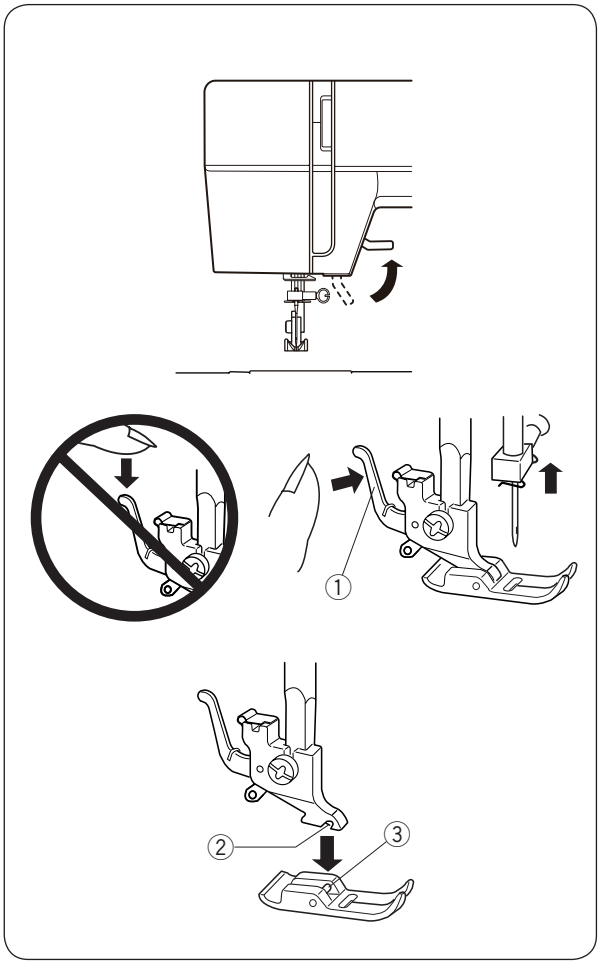
① Lowered position
② Normal up position
③ Highest position



Presser Foot Pressure Dial

The presser foot pressure dial should be set at 3 for regular sewing.
Reduce the pressure to 2 for applique, cutwork, drawnwork, basting and embroidery for better maneuverability of fabric.

Velours and knit with a lot of stretch may require a 1 setting.



Changing the Presser Foot

⚠ CAUTION:

- Turn OFF the power switch before changing the foot.
- Always use the proper foot for the selected pattern.
  The wrong foot can cause the needle to break.

To remove:

Raise the needle to its highest position by turning the handwheel counterclockwise.

Raise the presser foot, and press the lever on the back of the foot holder.

① Lever

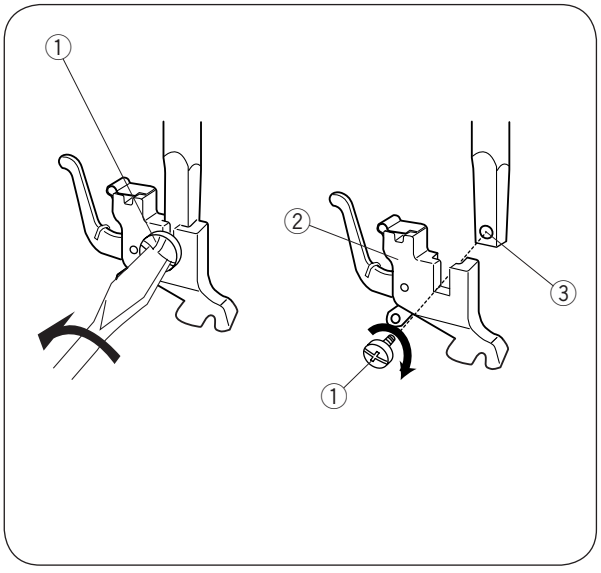
To attach:

Place the selected presser foot so that the pin on the foot lies just under the groove in the foot holder.

Lower the presser bar to lock the foot into the place.

② Groove

③ Pin



To Attach and Remove the Foot Holder

⚠ CAUTION:

Turn OFF the power switch before changing the foot holder.

① Setscrew

② Foot holder

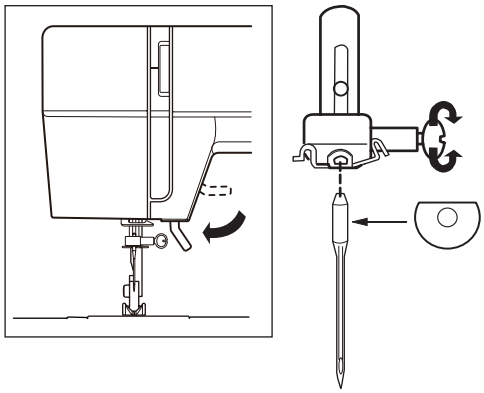
③ Threaded hole

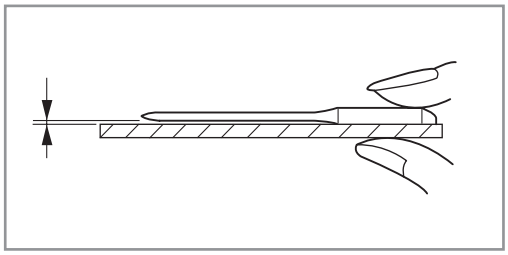
To remove:

Remove the setscrew by turning it counterclockwise with a screwdriver.

To attach:

Match the hole in the foot holder with the threaded hole in the presser bar. Fit the setscrew into the hole. Tighten the screw by turning it clockwise with screwdriver.





Changing Needles

⚠ CAUTION:
Always make sure to turn the power switch off and disconnect the machine from power supply before changing the needle.

Raise the needle by turning the handwheel and lower the presser foot.
Turn off the power switch.

1. Loosen the needle clamp screw by turning it counterclockwise.
   Remove the needle from the clamp.
2. Insert a new needle into the needle clamp with the flat side of the needle to the rear.
   When inserting the needle into the needle clamp, push it up against the stopper pin and tighten the needle clamp screw firmly.

To check the needle:
To check needle straightness, place the flat side of the needle onto something flat (a needle plate, glass etc.) The gap between the needle and the flat surface should be consistent.
Never use a blunt needle.

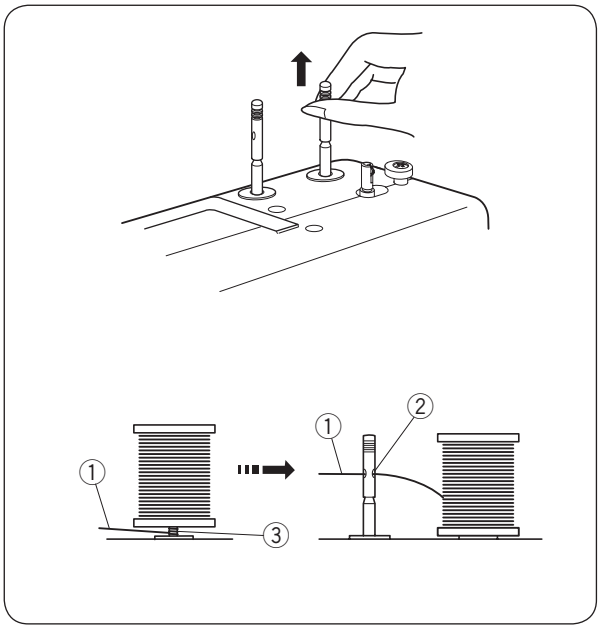
Fabric		Thread	Needle
Fine	Lawn Georgette Tricot Organza Crepe	Cotton #80-100 Synthetic #80-100	#9/65-11/75
Medium	Sheeting Jersey Broadcloth Fleece	Cotton #50-80 Synthetic #50-80	#11/75-14/90
Heavy weight	Denim Tweed Coating Quilting	Cotton #40-50 Synthetic #40-50	#14/90-16/100

Fabric, Thread and Needle Chart

- For general sewing, use needle size 11/75 or 14/90.
- A fine thread and needle should be used for sewing lightweight fabrics, so the fabric will not be marred.
- Heavy fabrics require a needle large enough to pierce the fabric without fraying the needle thread.
- Always test the needle size on a small scrap of the fabric that will be used for actual sewing.
- In general, use the same thread for the needle and bobbin.

NOTE:
3 x #14/90 needles are included in the envelop. (Part No. 639804000).

NOTE:
When sewing stretch fabrics, very fine fabrics and synthetics, use a blue tip needle (Part No. 990311000, sold separately). The blue tip needle effectively prevents skipped stitches.

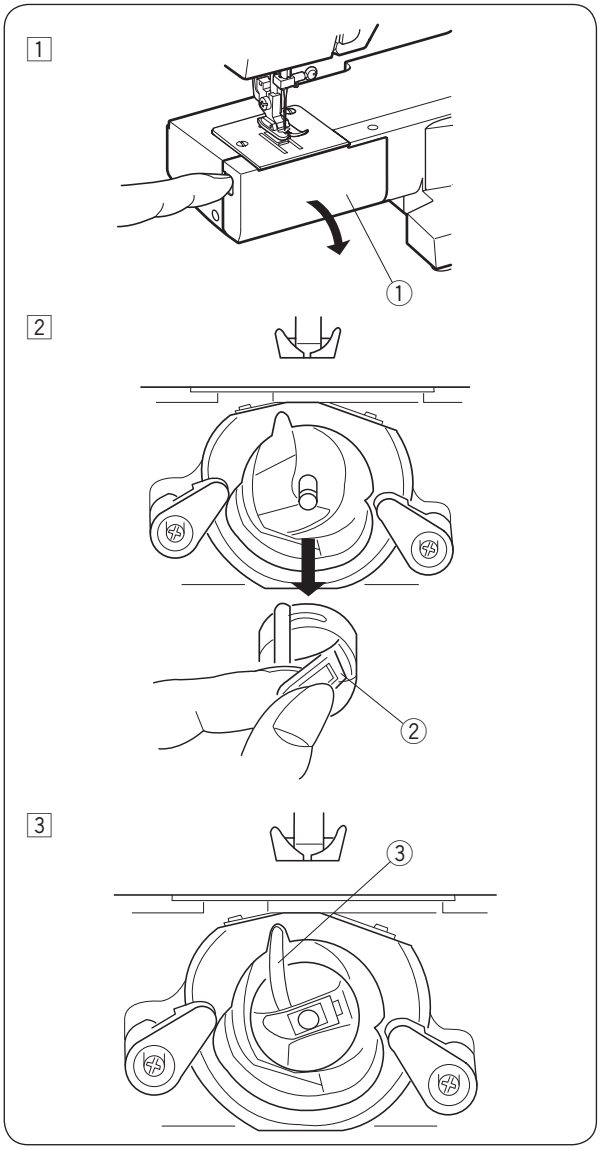


Setting Spool Pins

The spool pins are used for holding the spool of thread in order to feed thread to the machine. To use, pull up the spool pin. Push down for storage.

NOTE: :
When using thread which has tendency to tangle around spool pin, thread through the hole of spool pin as shown. The hole should face the thread spool.

① Upper thread
② Hole
③ Tangle



Removing or Inserting the Bobbin Case

1 Remove the extension table by pulling it to the left.
Open the hook cover.

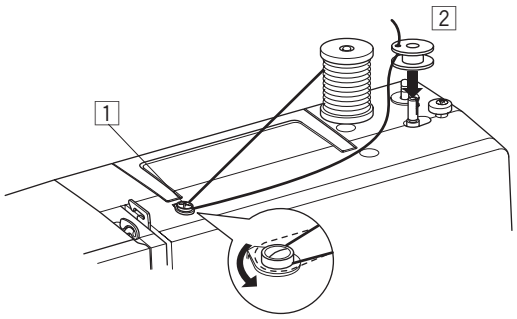
① Hook cover

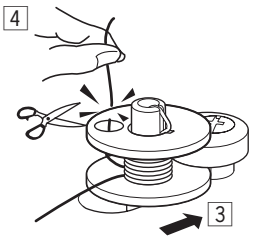
2 Raise the needle by turning the handwheel toward you. Take out the bobbin case by holding the latch.

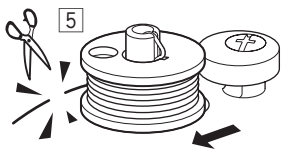
② Latch

3 When inserting the bobbin case, place the horn into the recess of the hook race.

③ Horn



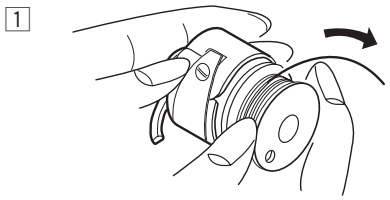




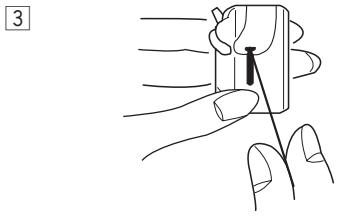
Winding the Bobbin

1 Draw the thread from the spool.
Guide the thread around the bobbin winder thread guide.
2 Insert the thread through the hole in the bobbin from the inside to the outside.
Put the bobbin on the bobbin winder spindle.
3 Push the bobbin winder spindle to the right.
4 With the free end of the thread held in your hand, depress the foot control.
Stop the machine when it has made a few turns, and cut the thread close to the hole in the bobbin.
5 Depress the foot control again.
When the bobbin is fully wound, stop the machine.
Return the bobbin winder spindle to its original position by moving the spindle to the left, and cut the thread.

NOTE:
Return the bobbin winder spindle when the machine stops.







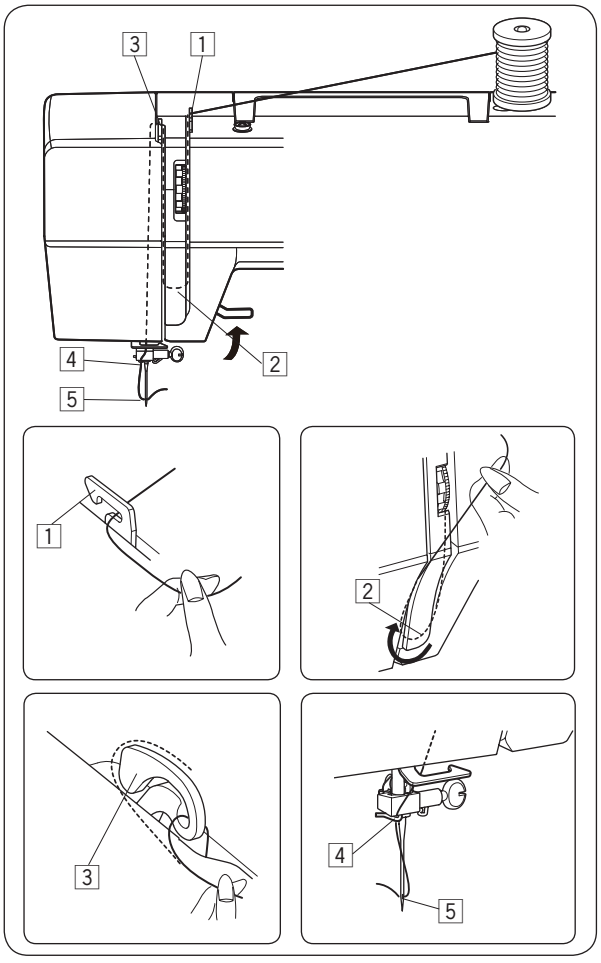
Threading Bobbin Case

1 Place the bobbin into the bobbin case.
Make sure the thread unwinds in the direction of arrow.

2 Pull the thread into the bobbin case slot.

3 Draw the thread under the tension spring and into the delivery eye.

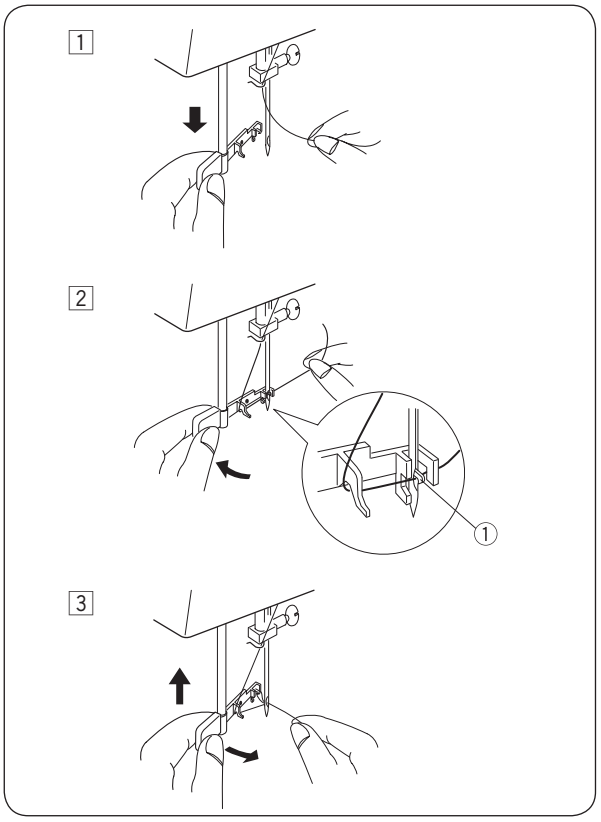
* Leave about 10 cm (4″) of free thread.



Threading the Machine

Raise the take-up lever to its highest position by turning the handwheel toward you.
Raise the presser foot.
Place a spool on the spool pin as shown, with thread coming from back of the spool.

1 Draw the thread into thread guide using both hands.
2 While holding the thread near spool, draw thread down into the tension area and then around the check spring holder.
3 Firmly draw the thread up and through the take–up lever from right to left.
4 Then draw the thread down and slip it into needle bar thread guide on the left.
5 Thread the needle eye from front to back.

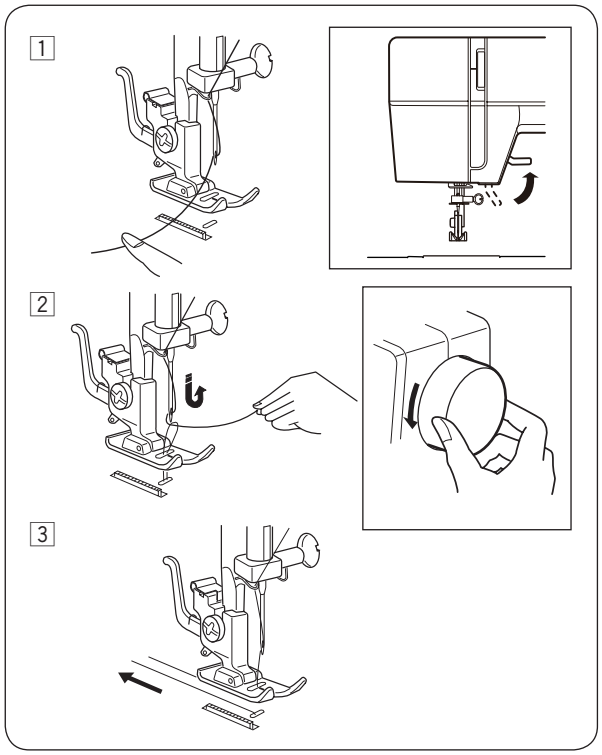


Needle Threader

1 Raise the needle to its highest position. Pull down the needle threader knob as far as it will go.

2 Turn the knob away from you so the hook comes out through the needle eye from behind.
Paying close attention to the needle point, draw the thread around the guide and under the hook.
① Hook

3 Turn the knob toward you to pull the thread through the needle eye. Release the knob slowly while holding the thread end with your hand. A loop of the thread is pulled up through the needle eye.

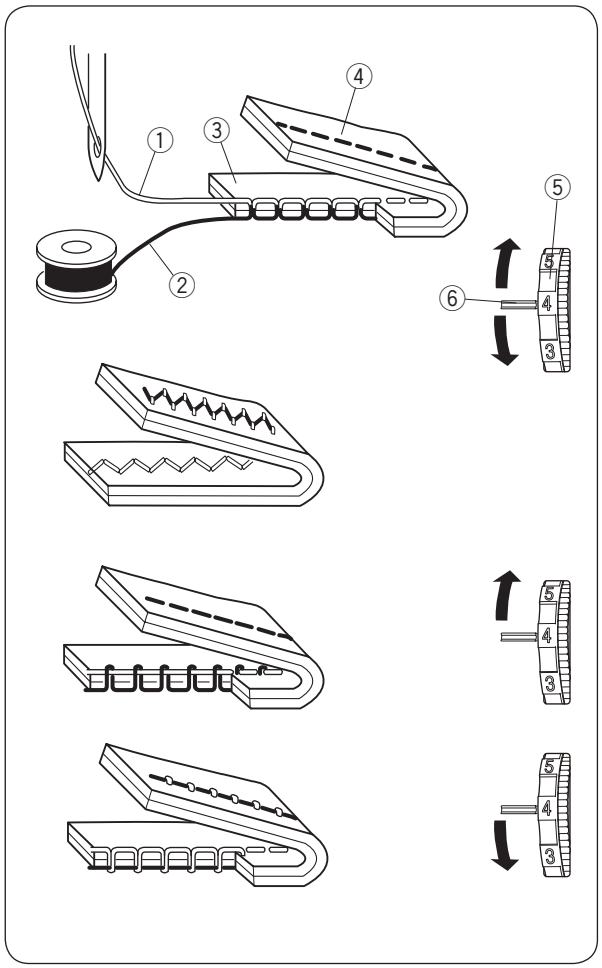


Drawing Up Bobbin Thread

1 Raise the presser foot and hold the needle thread lightly with your left hand.

2 Turn the handwheel slowly toward you with your right hand until the needle goes down and continue turning the handwheel until the take-up lever is at its highest position.
Lightly draw up the needle thread forming a loop of the bobbin thread.

3 Pull 10 cm (4″) of both threads back and under the presser foot.



Thread Tension Dial

• Correct tension

The thread tension is adjusted depending on the sewing materials, layers of fabric and sewing method.
For an ideal zigzag stitch, the bobbin thread does not show on the right side (top side) of the fabric, and the needle thread shows slightly on the wrong side (bottom side) of the fabric.

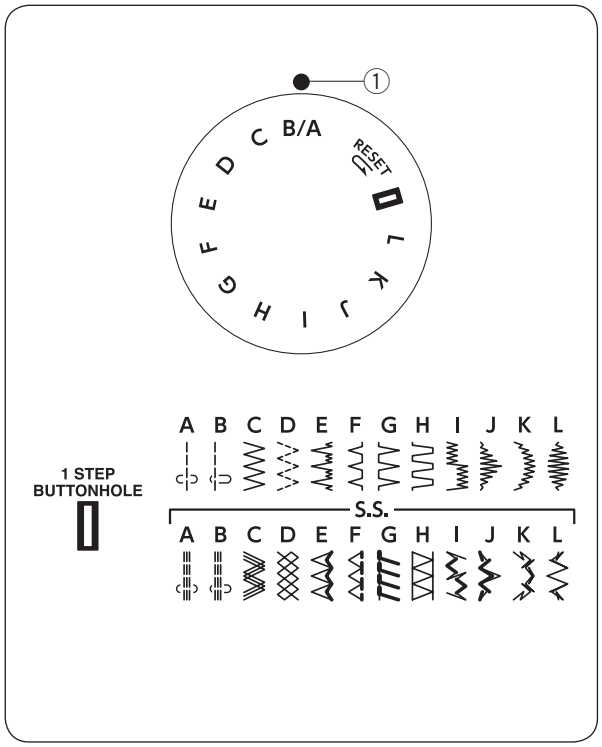
① Needle thread (Top thread)
② Bobbin thread (Bottom thread)
③ Right side (Top side) of fabric
④ Wrong side (Bottom side) of fabric
⑤ Thread tension dial
⑥ Setting mark

• Needle thread tension is too tight

When the bobbin thread (bottom thread) appears on the right side (top side) of the fabric, loosen the needle thread tension by moving the dial to a lower number.

• Needle thread tension is too loose

When the needle thread (top thread) appears on the wrong side (bottom side) of the fabric, tighten the needle thread tension by moving the dial to a higher number.



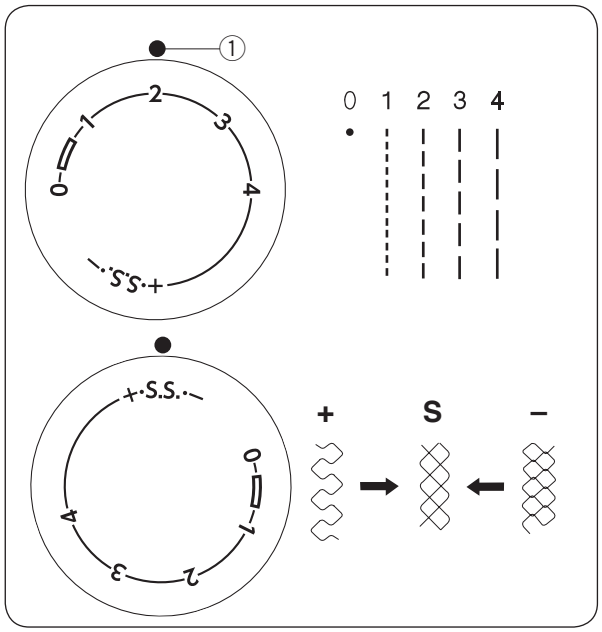
Stitch Selector Dial

Turn the stitch selector dial to set the setting mark with the symbol corresponding to the desired pattern.

① Setting mark

⚠ CAUTION

To avoid needle or fabric damage, make sure the needle is up and out of the fabric while selecting a stitch.

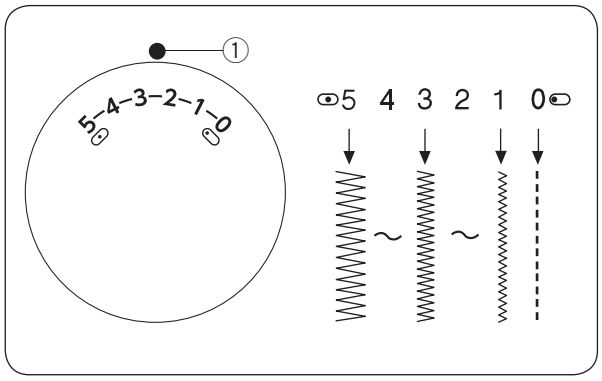


Stitch Length Dial

Turn the stitch length dial to set the setting mark with the desired stitch length.
The higher the number, the longer the stitch length.

① Setting mark

- Adjust the dial in the 0.5–4 range when you sew the zigzag stitch.
- Set the dial at “S.S.” to sew the stretch stitch patterns.
- If the stretch stitch pattern is uneven, turn the stitch length dial in the direction of “–” to compress it, or “+” to expand it.

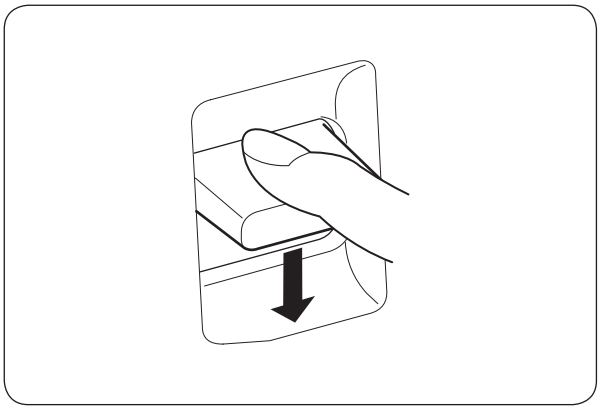


Stitch Width Dial

Turn the stitch width dial to set the desired stitch width at the setting mark.
The higher the number, the wider the stitch width

① Setting mark

NOTE:
Raise the needle above the fabric, when you turn the stitch width dial.



Reverse Stitch Button

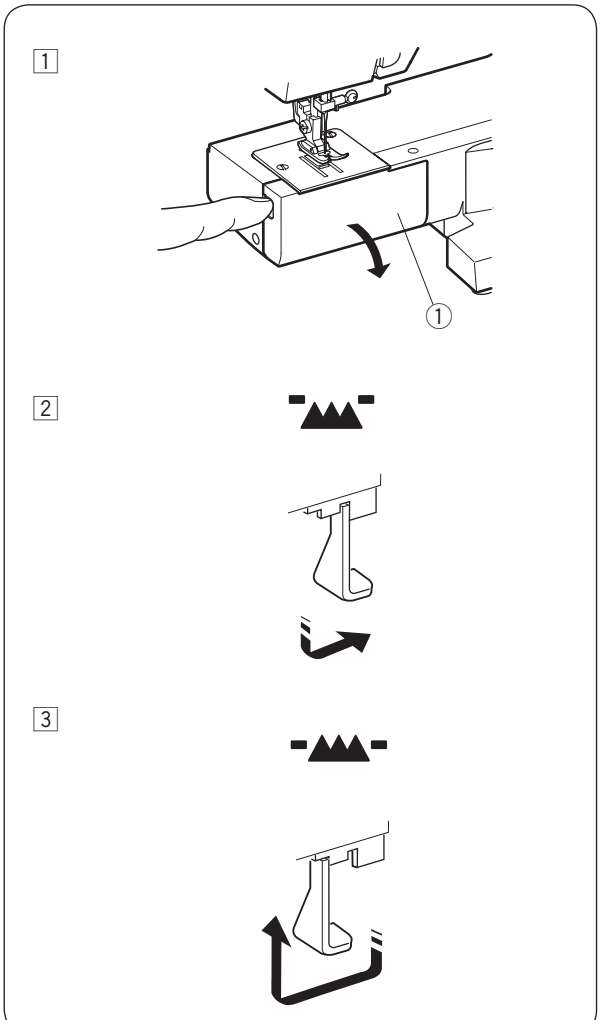
As long as you keep the reverse stitch button depressed, the machine will sew in reverse.

To Drop and Raise the Feed Dogs

Remove the extension table by pulling it to the left.

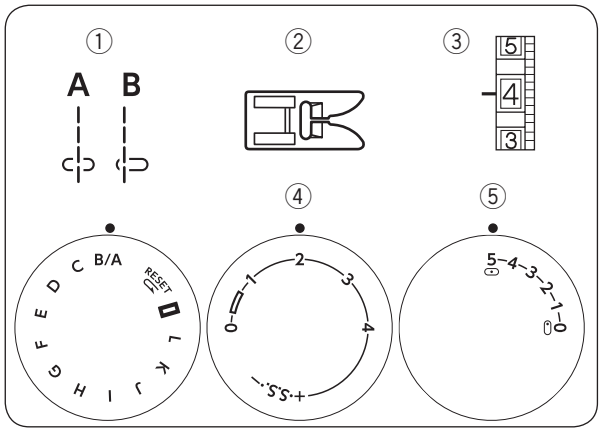
1 Open the hook cover.

① Hook cover



2 For dropping the feed dogs, press down the lever and move it to the direction of arrow as illustrated.

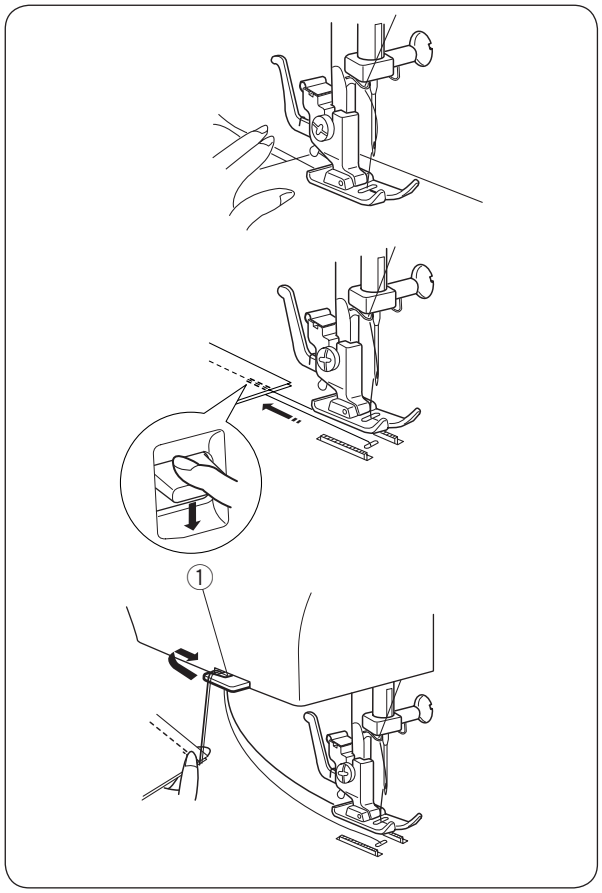
3 To raise the feed dogs, press down the lever and move it to the direction of arrow as illustrated, and turn the handwheel toward you.



BASIC SEWING

Straight Stitch Sewing

① Pattern selector: B/A
② Presser foot: Zigzag foot
③ Thread tension: 2–6
④ Stitch length: 1.5–4
⑤ Stitch width: (0) or (5)



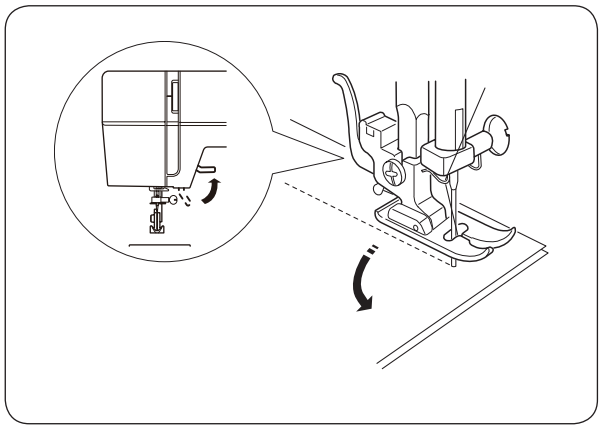
- **Starting to sew**

  Raise the presser foot and position the fabric with its edge lining up with a seam guide line on the needle plate.
  Lower the needle into the fabric.
  Lower the presser foot and smooth the threads toward the back. Depress the foot control.
  Gently guide the fabric along the guide line letting the fabric feed by itself.

NOTE:
Draw the threads to the left when sewing with the automatic buttonhole foot.
To fasten the beginning of the seam, first sew several stitches in reverse then sew forward.

- **Finishing sewing**

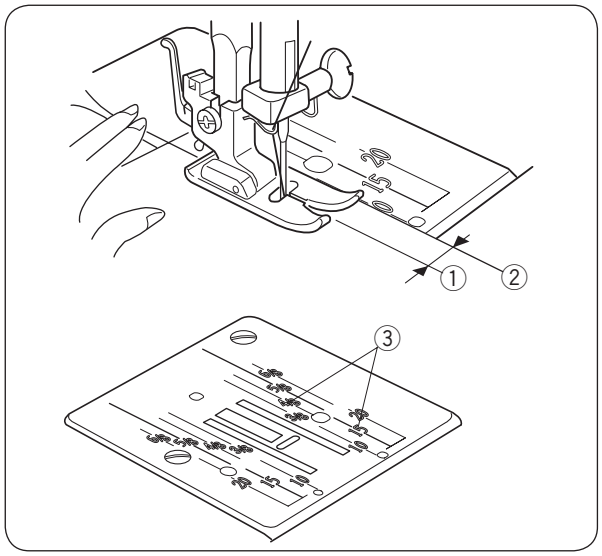
  For fastening the end of seams, press the reverse stitch lever and sew several reverse stitches.
  Raise the presser foot and remove the fabric, drawing the threads to the back.
  Cut the threads with the thread cutter ①.
  The threads are now the proper length to begin sewing the next seam.
  ① Thread cutter



Changing the Sewing Direction

⚠ CAUTION:
Do not place fingers near the presser foot when guiding fabric, or the needle clamp screw may strike and injure your fingers.

Stop the machine and turn the handwheel toward you to bring the needle down into the fabric.
Raise the presser foot.
Pivot the fabric around the needle to change sewing direction as desired. Lower the presser foot and continue sewing in the new direction.

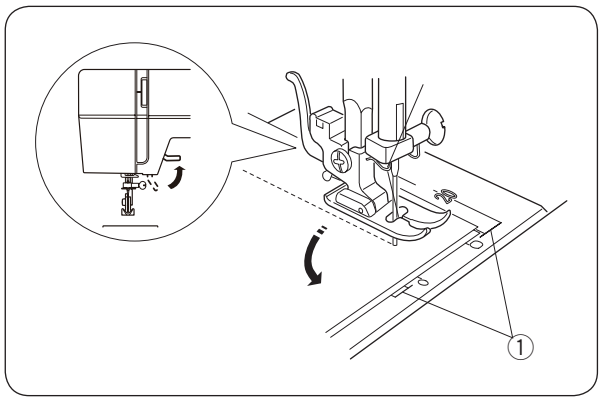


Seam Guide Lines

The numbers on the needle plate indicate the distance between the center needle position and the guideline.
The numbers in front are centimeters.
The numbers in back are fractions of an inch.

Number	10	15	20	3/8	4/8	5/8	6/8
Distance (cm)	1	1.5	2	—	—	—	—
Distance (inch)	—	—	—	3/8	1/2	5/8	3/4

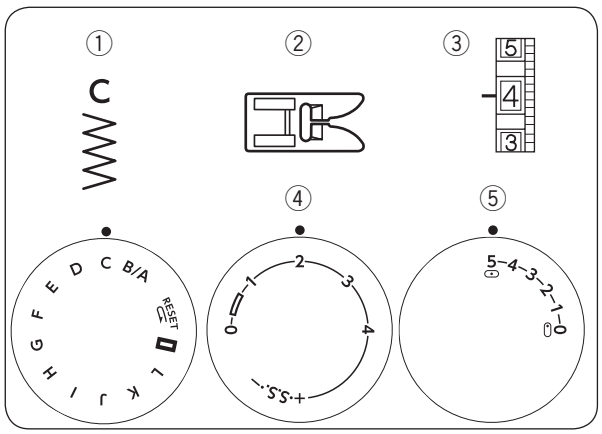
① Center needle position
② Guideline
③ Numbers



Turning a Square Corner

To turn a square corner 5/8″ (1.6 cm) from the fabric edge.
Stop stitching and lower the needle by turning the handwheel counterclockwise.
Raise the presser foot and turn the fabric to line the edge with the 5/8″ (1.6 cm) seam guide.
Lower the presser foot and begin stitching in the new direction.
Line up the fabric edge facing you with the cornering guide shown.

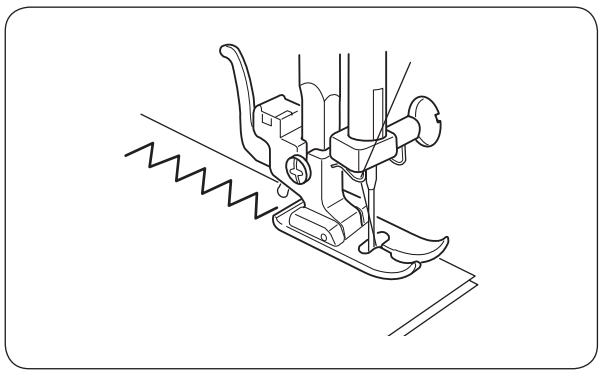
① Cornering guide



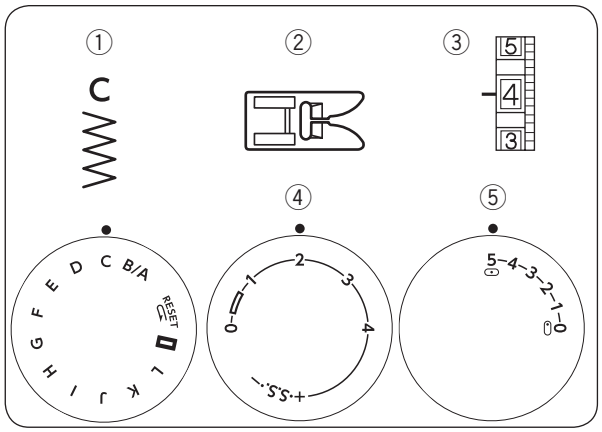
UTILITY STITCHES

Basic Zigzag

① Pattern selector: C
② Presser foot: Zigzag foot
③ Thread tension: 2–5
④ Stitch length: 0.5–4
⑤ Stitch width: 5

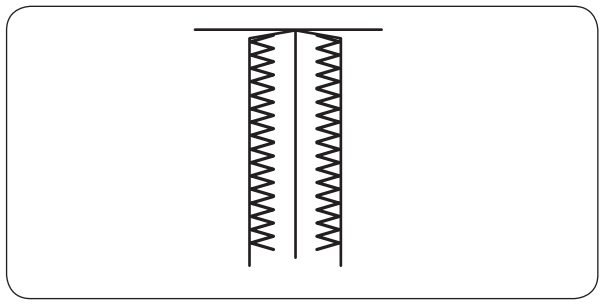


Simple zigzag stitching is widely used for overcasting, sewing on buttons etc.
Adjust the stitch length to suit your sewing needs.

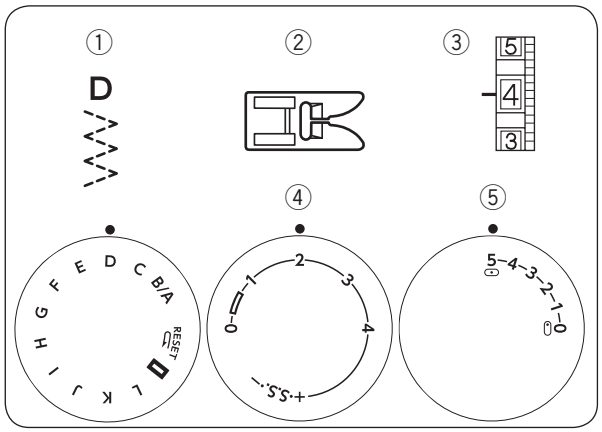


Overcasting

① Pattern selector: C
② Presser foot: Zigzag foot
③ Thread tension: 1–4
④ Stitch length: 1–2
⑤ Stitch width: 5

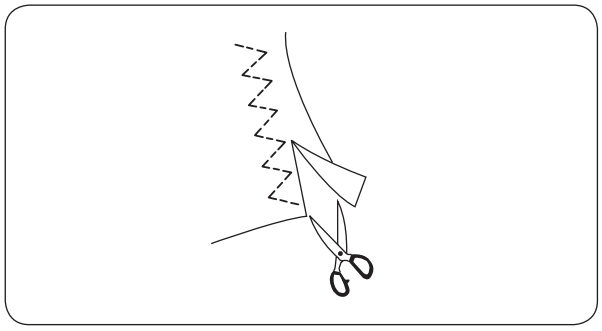


Simple zigzag stitching is used for finishing raw seam edges (overcasting) on most woven fabrics to prevent fabric from unraveling. This is the fastest way to finish an edge.
Place the fabric and sew.

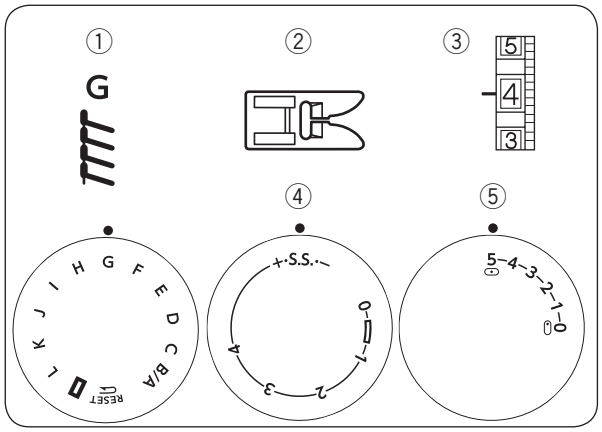


Tricot Stitch

① Pattern selector: D
② Presser foot: Zigzag foot
③ Thread tension: 1–4
④ Stitch length: 0.5–4
⑤ Stitch width: 5

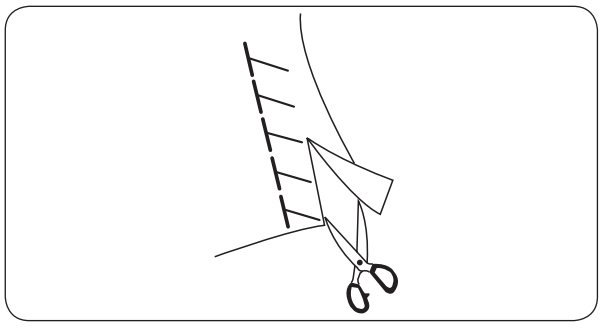


This stitch is used to finish the raw edge on synthetics and other fabrics that tend to pucker. Place your fabric to allow a 1.6 cm (5/8″) seam. Trim the seam allowance after sewing.
Be careful not to cut the stitches.

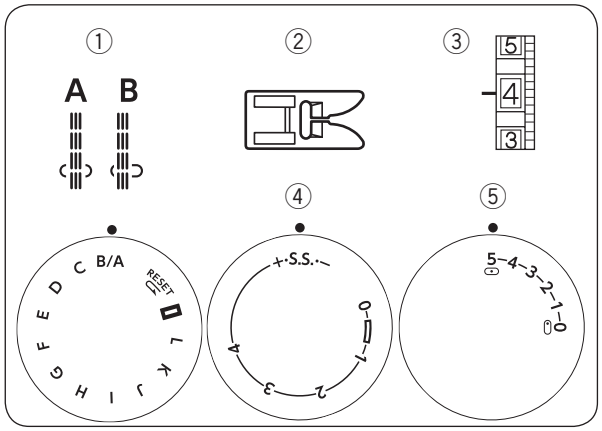


Knit Stitch

① Pattern selector: G
② Presser foot: Zigzag foot
③ Thread tension: 1–4
④ Stitch length: S.S.
⑤ Stitch width: 5

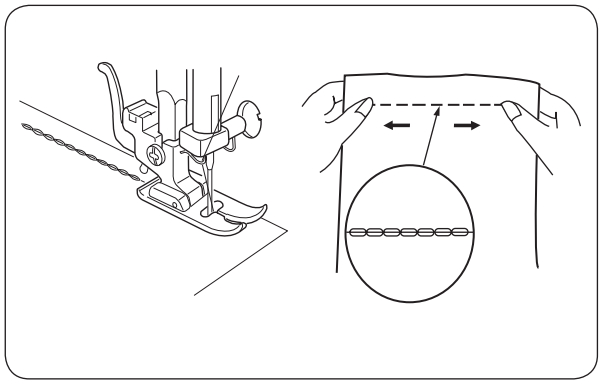


This knit stitch is ideal for sewing swimwear and stretch velour because it provides the greatest amount of elasticity and strength.
Place your fabric to allow a 1.6 cm (5/8″) seam.
Trim the seam allowance after sewing.
Be careful not to cut the stitches.



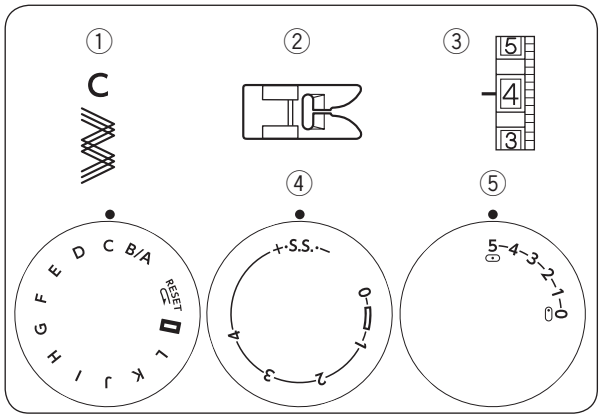
Straight Stretch Stitch

① Pattern selector: B/A
② Presser foot: Zigzag foot
③ Thread tension: 2–6
④ Stitch length: S.S.
⑤ Stitch width: (0) or (5)



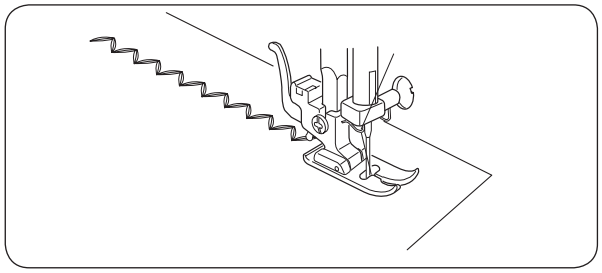
The pattern is sewn with two stitches forward and one stitch backward, forming a seam that does not rip easily.
Use it to reinforce areas such as crotch and armhole seams.
Also use it when constructing items such as backpacks for extra strength.

Carefully guide the fabric while sewing as the fabric moves back and forth.



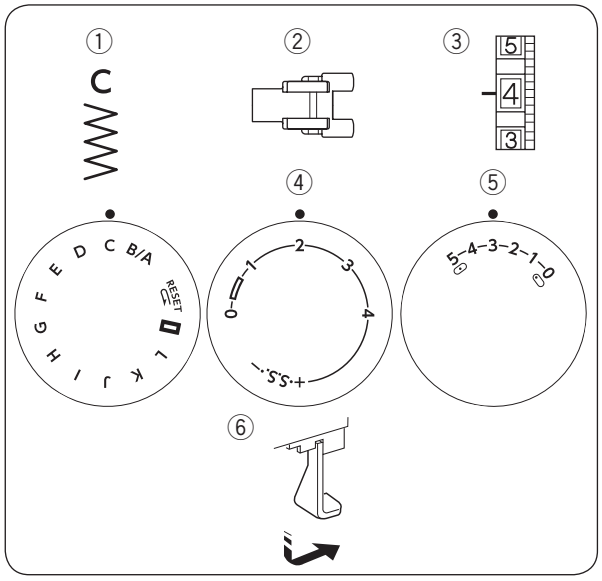
Zigzag Stretch Stitch

① Pattern selector: C
② Presser foot: Zigzag foot
③ Thread tension: 2–6
④ Stitch length: S.S.
⑤ Stitch width: 2–5



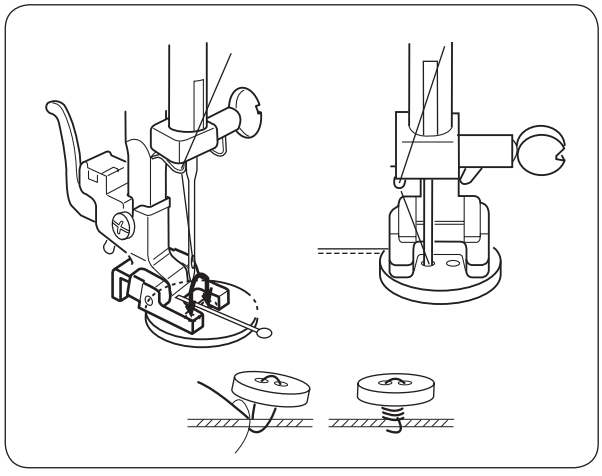
Sew on stretch fabrics in any area that you might use a zigzag stitch.

This stitch is used as a decorative topstitch as well.

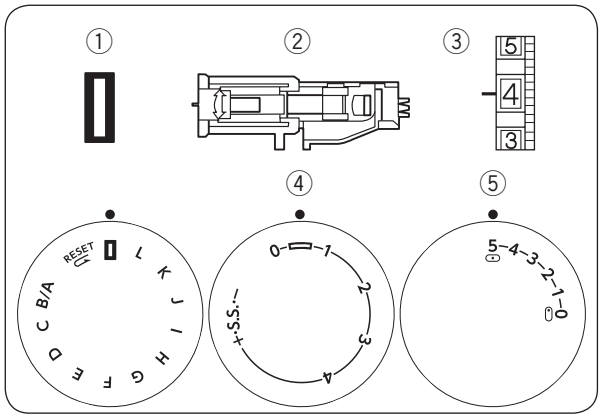


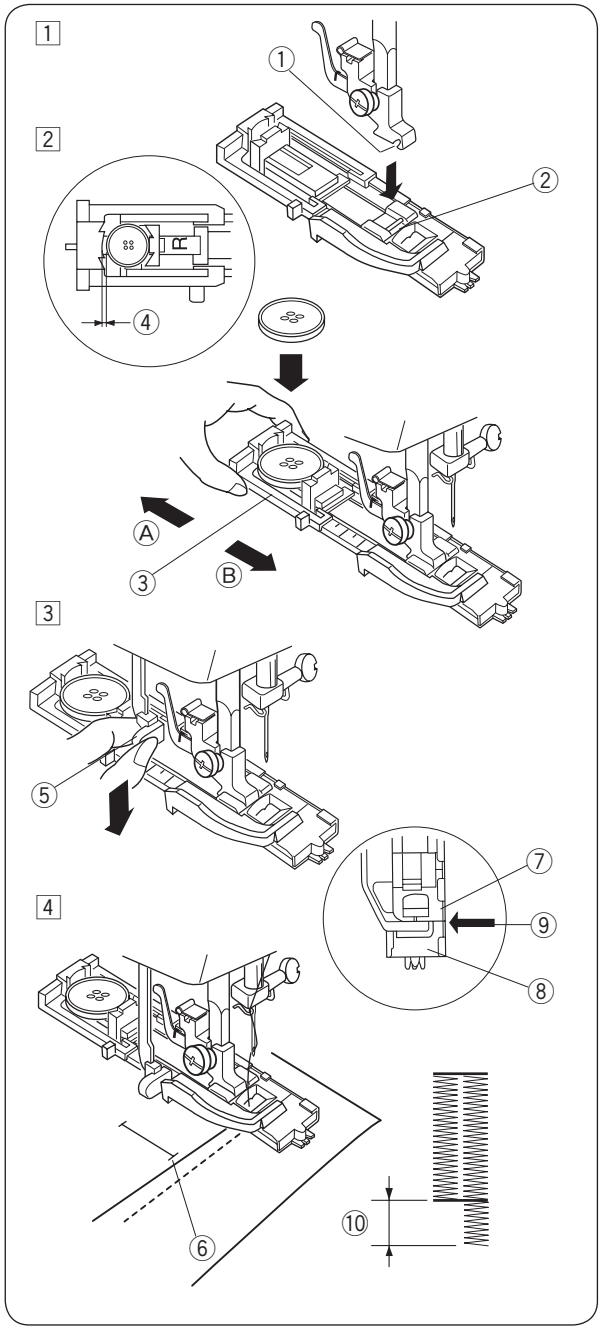
Sewing Buttons

① Pattern selector: C
② Presser foot: Button sewing foot
③ Thread tension: 2–6
④ Stitch length: Any
⑤ Stitch width: Adjust as necessary
⑥ Feed dog: Dropped



1. Drop the feed dogs. Place the button below the button sewing foot, making sure to align the holes with the in the foot. Lower the presser foot to hold the button in place.
2. Determine which zigzag width setting matches the distance between the buttonholes. The needle must go safely through each hole when sewing.
   Unthread the needle to help you determine the zigzag width.
3. Turn the handwheel, so that the needle is in its leftmost position, and then drop the needle through the left hole in the button. Thread the needle.
4. Sew about ten (10) stitches.
   To strengthen the shank, cut the threads leaving about 4.0″ (10.0 cm). Bring the needle thread down through one of the holes in the button and wind it around the shank and knot them together.





Automatic Buttonhole

① Stitch pattern: [0]
② Presser foot: Automatic buttonhole foot
③ Thread tension dial: 1–5
④ Stitch length: 0.5–1
⑤ Stitch width: 5

*The size of buttonhole is automatically set by placing the button in the rear of the automatic buttonhole foot.
*The button holder of the foot takes a button size up to 1″ (2.5 cm) in diameter.
*Make a test buttonhole on an extra piece of the fabric, interfacing and seams of the actual garment.
*Use interfacing on stretch fabrics.

1 Raise the needle by turning the handwheel toward you.
Raise the presser foot lifter.
Attach the automatic buttonhole foot.
① Groove
② Pin

2 Pull the button holder to the back A, and place the button in it.
Push back the button holder toward you B as far as it will go.
③ Button holder

* If the button is extremely thick, make a test buttonhole. If it is difficult to fit the button through the test buttonhole, lengthen the buttonhole by pulling the button holder back to create a gap.
④ Gap

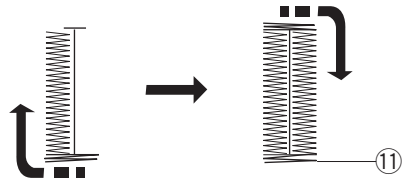
3 Pull the buttonhole lever downward as far as it will go.
⑤ Buttonhole lever

4 Insert the fabric under the foot. Turn the handwheel toward you one rotation and remove the fabric to the left to draw both threads to the left. Insert the garment under the foot, and lower the needle at the starting point. Then lower the automatic buttonhole foot.
⑥ Starting point

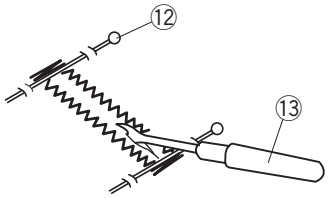
NOTE:
Make sure there is no gap between the slider and spring holder, otherwise the left and right length will be different.

⑦ Slider
⑧ Spring holder
⑨ There should be no gap.
⑩ Sewing gap

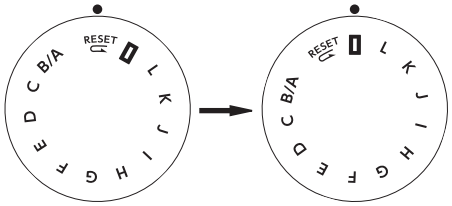
5



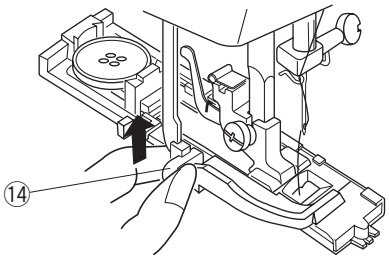
6 7



8



9



5 Depress the foot control to sew a buttonhole. The machine will sew the front bartack, left row, back bartack and right row automatically. Stop the machine at the ending point.
⑪ Ending point

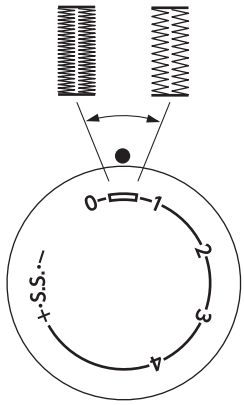
6 Raise the presser foot and cut the both needle and bobbin threads leaving 10 cm (4″) thread ends.
Draw the needle thread to wrong side of the fabric by pulling the bobbin thread.
Then, knot the threads.

7 Place a pin just before the bartack at each end to prevent cutting bartacks. Cut the opening with the seam ripper.
⑫ Pin
⑬ Seam ripper

• To repeat buttonhole sewing

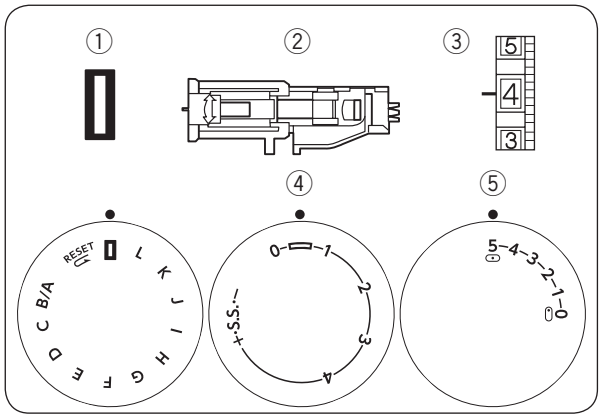
8 To repeat buttonhole sewing, turn the stitch selector to RESET, then back to ▯ again, as shown. Now, simply step on the foot control to sew an identical buttonhole.

9 When the buttonhole sewing is finished, push the buttonhole lever upward as far as it will go.
⑭ Buttonhole lever



• Adjusting buttonhole stitch density

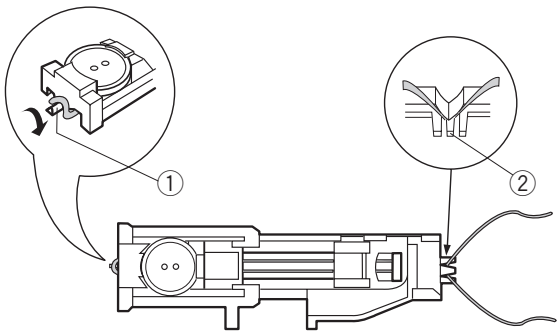
Turn the stitch length dial to the right for a coarser density.
Turn the stitch length dial to the left for a tighter density.



Corded Buttonhole

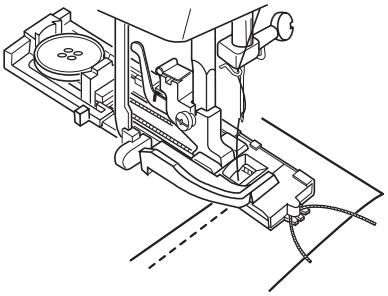
① Stitch pattern: [0]
② Presser foot: Automatic buttonhole foot
③ Thread tension dial: 1–5
④ Stitch length: 0.5–1
⑤ Stitch width: 5

1



1 With the buttonhole foot raised, hook the filler cord on the cord spur at the back of the buttonhole foot.
Bring the ends toward you under the buttonhole foot until they clear the front end.
Hook the filler cord into the forks on the front of the buttonhole foot to hold them tight.
① Spur
② Forks

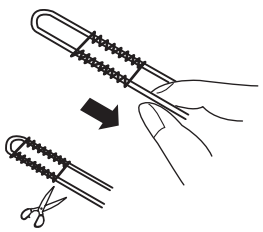
2



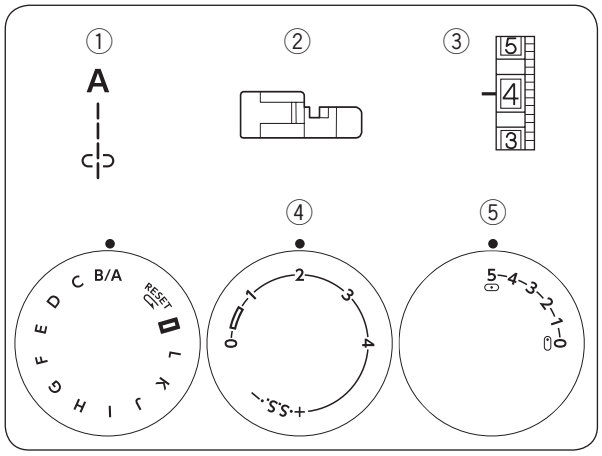
2 Lower the needle into the garment where the buttonhole will start and lower the foot.
Depress the foot control gently and sew the buttonhole.
Each side of the buttonhole and the bartacks will be sewn over the cord.

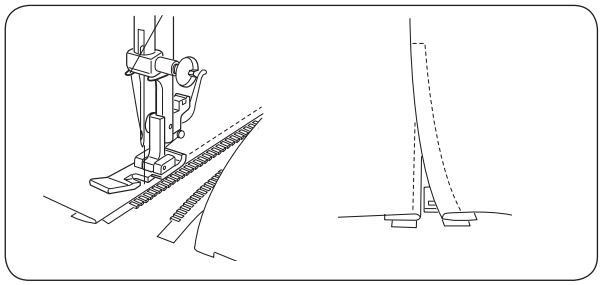
* The sewing steps are the same as the automatic buttonhole sewing.

3



3 Remove the fabric from the machine and cut the sewing threads.
Pull the left end of the filler cord to tighten it.
Thread the end through a darning needle, draw to the bottom side of the fabric and cut.

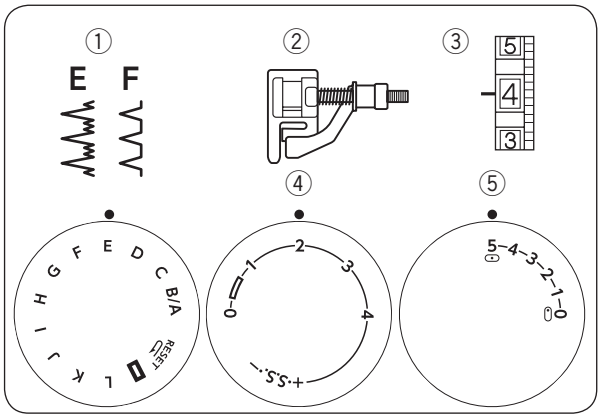




Zipper Application

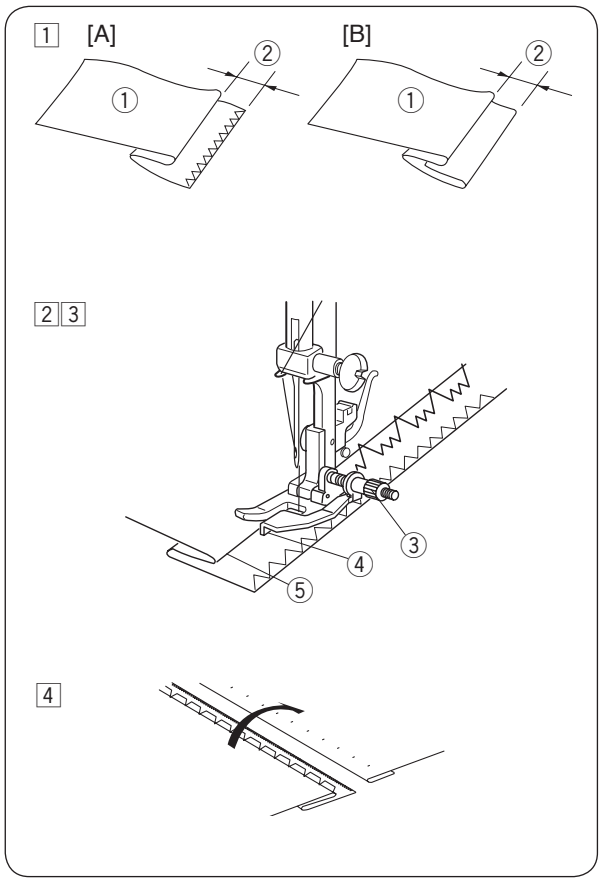
① Pattern selector: A
② Presser foot: Zipper foot
③ Thread tension: 2–6
④ Stitch length: 1.5–4
⑤ Stitch width: 5

Pin or baste zipper tape to fabric and place it under the foot.
Smooth the threads toward the back and lower the foot.
To sew the left side of the zipper, guide the zipper teeth along the edge of the foot and stitch through the garment and zipper tape.
Turn the fabric and sew the other side of the zipper in the same way as you did the left side.



Blind Stitch Hemming

① Pattern selector: E or F
② Presser foot: Blind hem foot
③ Thread tension: 2–4
④ Stitch length: 1–3
⑤ Stitch width: 5

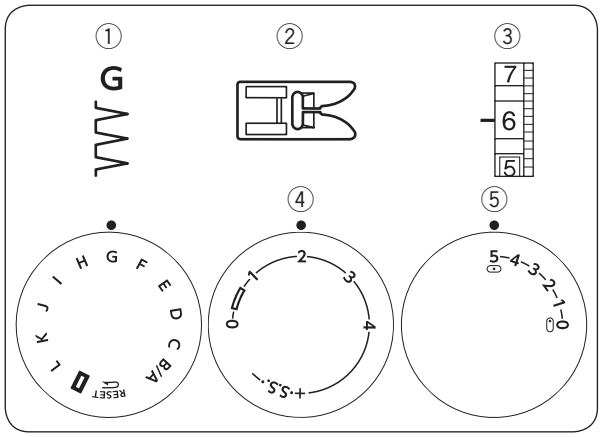


1 On heavyweight fabrics that ravel, the raw edge should be overcast first. Then fold the hem, as illustrated, leaving 1/4″ (0.7 cm) of the hem edge showing.
① Wrong side of the fabric
② 1/4″ (0.7 cm)
[A] Heavy weight fabrics
[B] Fine or medium weight fabrics

2 Position the fabric, so that the needle at its leftmost position just pierces the edge of the fold.

3 Turn the guide screw to adjust the guide aligning with the folded edge.
Sew along the folded edge guiding the fabric so the needle catches the folded edge.
③ Guide screw
④ Guide
⑤ Folded edge

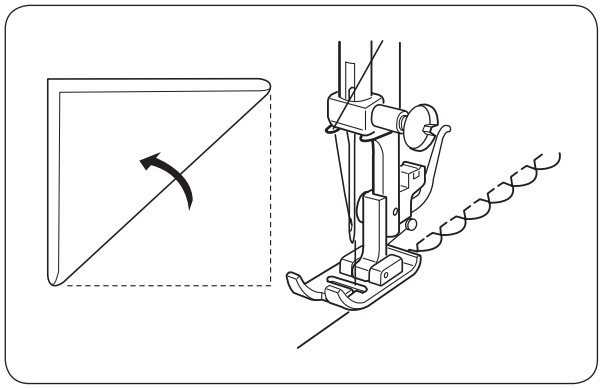
4 After hemming is completed, press together both sides of the finished hem. The top side of the fabric should show only the blind stitches.



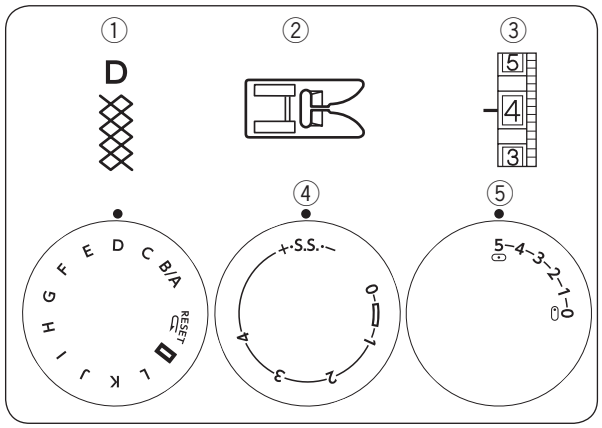
DECORATIVE STITCHING

Shell Stitch

① Pattern selector: G
② Presser foot: Zigzag foot
③ Thread tension: 6 – 8
④ Stitch length: 2 – 3
⑤ Stitch width: 5

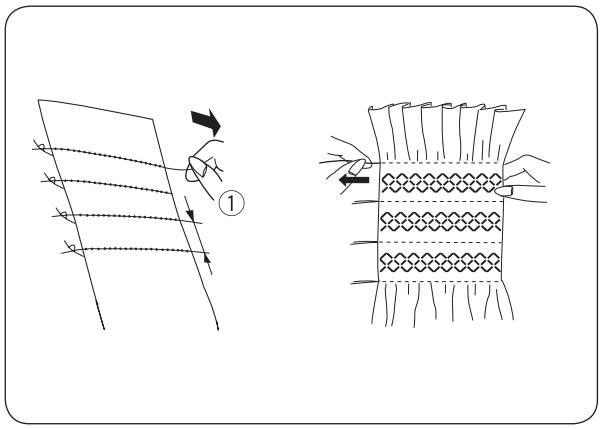


Use a lightweight fabric such as tricot. Fold the fabric and stitch on the bias. You may need to increase the needle thread tension slightly. Allow the needle to just clear the folded edge of the fabric at zigzag stitches.
If you sew rows of shell stitches, space the rows at least 5/8″ (1.5 cm) apart. You can also sew shell stitches on knits or soft silky woven fabrics in any direction.

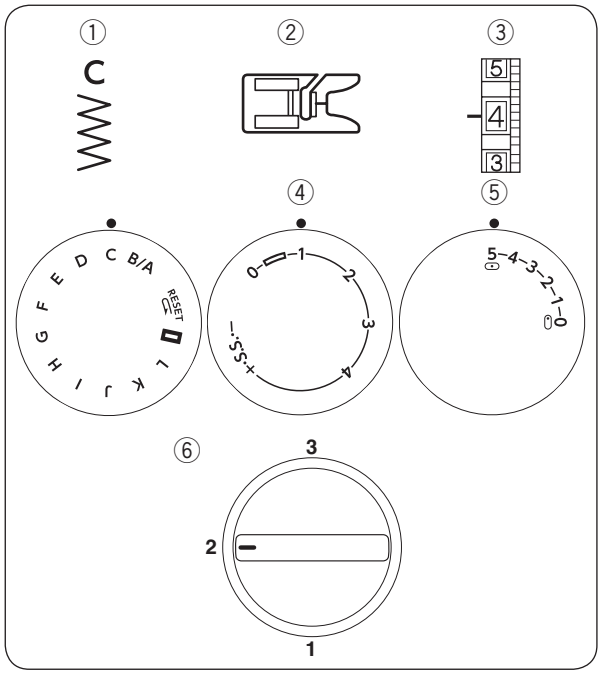


Smocking

① Pattern selector: D
② Presser foot: Zigzag foot
③ Thread tension: 1–4
④ Stitch length: S.S.
⑤ Stitch width: 5

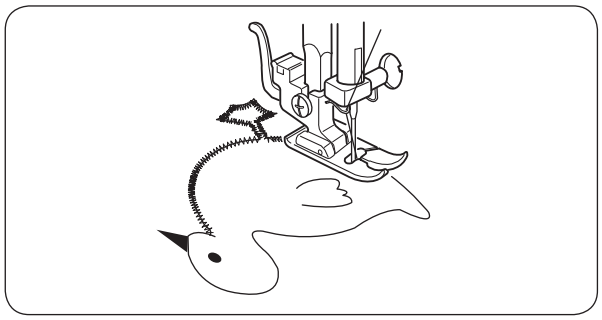


With the stitch length at “4”, sew straight stitching lines 1 cm (3/8″) apart, across the area to be smocked.
Knot the threads along one edge. Pull the bobbin threads and distribute the gathers evenly.
Secure the threads at the other end.
Sew the decorative stitch between the gathering stitches.
Pull out the gathering stitches.
① 3/8″ (1 cm)

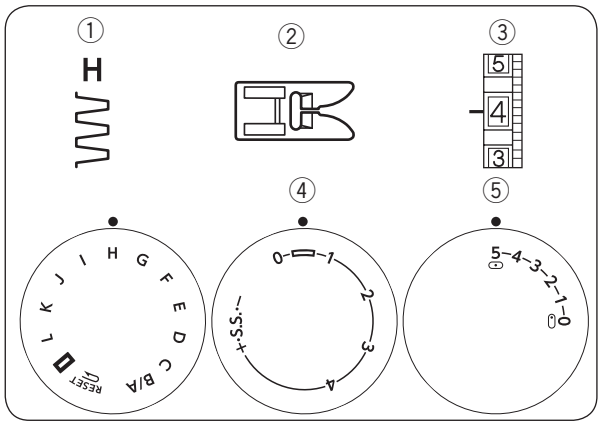


Applique

① Pattern selector: C
② Presser foot: Satin stitch foot
③ Thread tension: 1–4
④ Stitch length: 0.5-1
⑤ Stitch width: 5
⑥ Presser foot pressure: 2

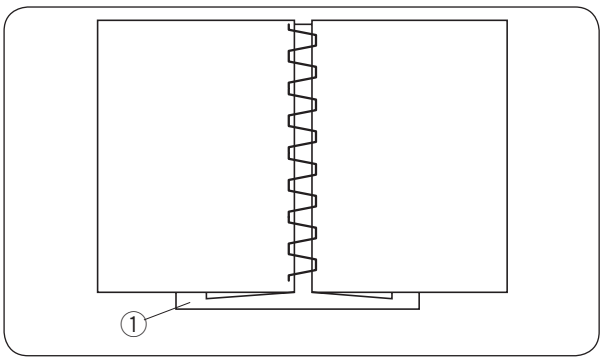


Baste (or fuse with iron-on fabric joiner) applique pieces on the fabric.
Stitch around the applique making sure the needle falls along the outer edge of the applique.
When sewing corners, lower the needle down into the fabric.
Raise the presser foot and pivot the fabric to the right or left.



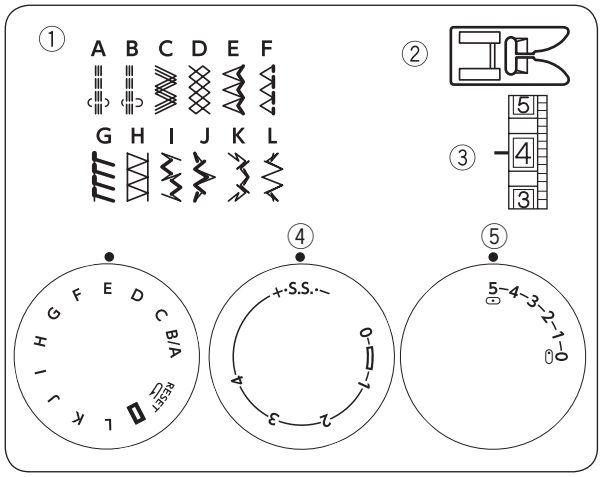
Fagoting

① Pattern selector: H
② Presser foot: Zigzag foot
③ Thread tension: 3–6
④ Stitch length: 0.5–1
⑤ Stitch width: 3–5



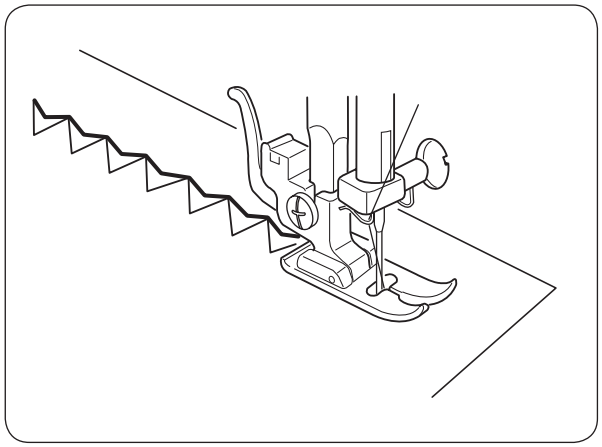
Use this stitch to join two pieces of fabric to create an open work appearance, and add design interest.
Fold under each fabric edge 1/2″ (1.3 cm) and press.
Pin the two edges to a piece of paper or tearaway backing 1/8″ (0.3 cm) apart.
① Paper

Sew slowly, guiding the fabric so the needle catches the folded edge on each side.
Tear away the backing after sewing is finished.

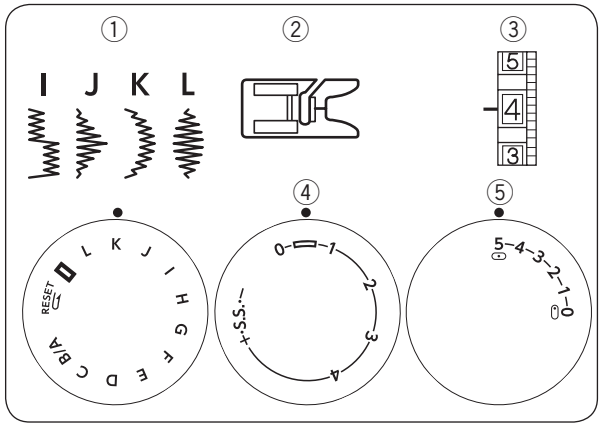


Stretch Stitch Patterns

① Pattern selector: A–L
② Presser foot: Zigzag foot
③ Thread tension: 1–4
④ Stitch length: S.S.
⑤ Stitch width: 5

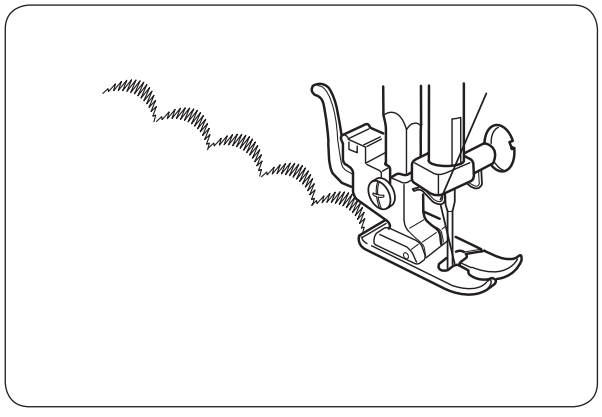


If forward and reverse feeds become unbalanced due to the type of fabric, adjust the balance by turning the stitch length dial as follows:
If patterns are compressed, turn the dial toward "+".
If patterns are drawn, turn the dial toward "–".
(See page 13)

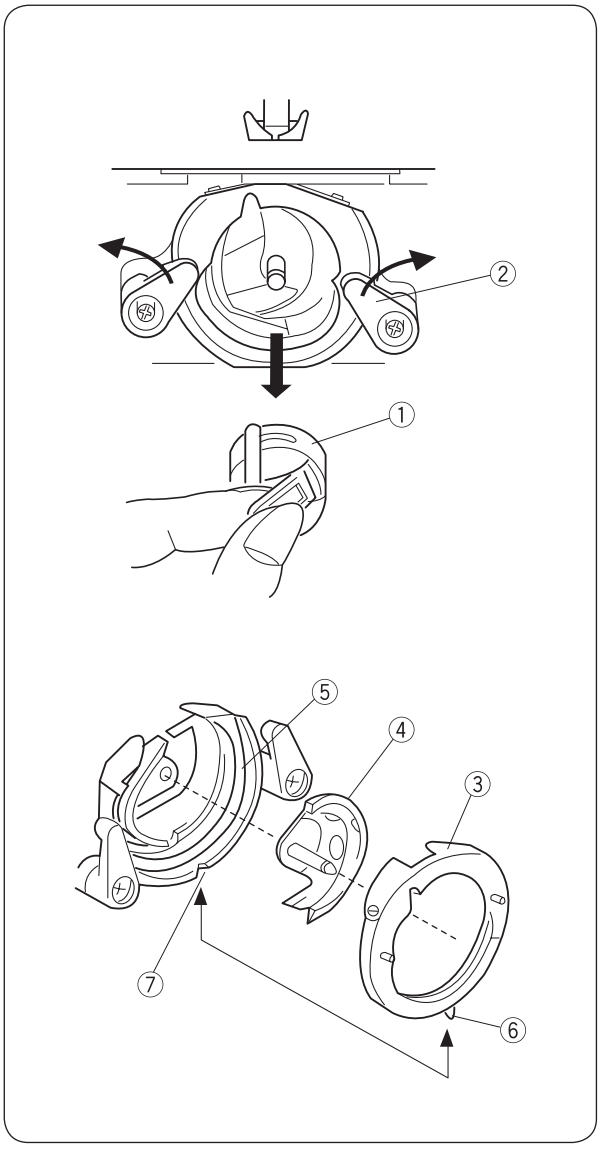


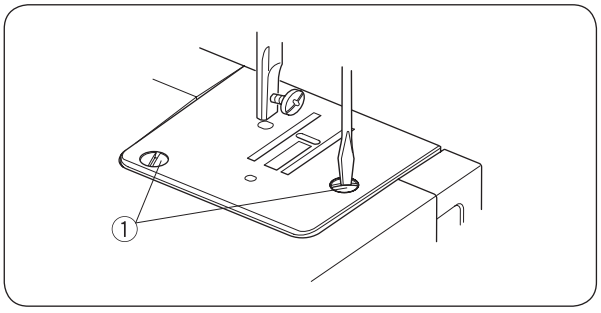
Decorative Satin Stitch Patterns

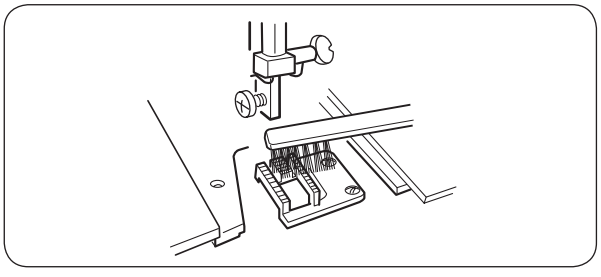
① Pattern selector: I–L
② Presser foot: Satin stitch foot
③ Thread tension: 1–4
④ Stitch length: 0.5–1
⑤ Stitch width: 5



Satin stitches are used as decorative stitches on table linen etc.
Test sew if you reduce the stitch length to ensure smooth feed of the fabric.







CARE OF YOUR MACHINE

Cleaning the Bobbin Case and the Shuttle Race

⚠ WARNING:
- Turn the power switch off and/or unplug the machine before dismantle or cleaning the machine.
- Do not dismantle the machine other than as explained in this section.

⚠ CAUTION:
Do not store the machine in a high-humidity area, near a heat radiator, or in direct sunlight.

Dismantling Shuttle Race Unit

Raise the needle to its highest position and open the hook cover.
Open the hinged latch of bobbin case and take it out of the machine.
Open the shuttle race ring holders and remove the shuttle race ring.
Remove the shuttle.
*Clean the shuttle race with a brush and a soft dry cloth.

① Bobbin case
② Shuttle race ring holder
③ Shuttle race ring
④ Shuttle
⑤ Shuttle race

Assembling Shuttle Race Unit

Hold the shuttle by the center pin and fit it carefully back into the shuttle race, forming a perfect circle with the shuttle driver.
Attach the shuttle race ring making sure the bottom pin fits into the notch.
Lock the shuttle race ring by turning the holders back into position. Insert the bobbin case.

⑥ Pin
⑦ Notch

Cleaning the Feed Dog

⚠ CAUTION:
Turn off the power switch and/or unplug the machine before cleaning the feed dog.

Remove the needle and the presser foot.
Remove the needle plate setscrew and remove the needle plate.

① Setscrew

With a brush, clean out any dust and lint clogging the feed dog teeth.
Reset the needle plate.

Troubleshooting

Condition	Cause	Reference
The needle thread breaks.	1. The needle thread is not threaded properly. 2. The needle thread tension is too tight. 3. The needle is bent or blunt. 4. The needle is incorrectly inserted. 5. The needle thread and the bobbin thread are not set properly under the presser foot at the beginning of sewing. 6. The fabric is not drawn to the rear when the sewing has finished. 7. The thread is either too heavy or too fine for the needle.	Page 11 Page 12 Page 8 Page 8 Page 12 Page 15 Page 8
The bobbin thread breaks.	1. The bobbin thread is not threaded properly in the bobbin case and shuttle. 2. Lint has collected in the shuttle area. 3. The bobbin is damaged and does not turn smoothly.	Pages 9, 10 Page 28 Replace the bobbin.
The needle breaks.	1. The needle is incorrectly inserted. 2. The needle is bent or blunt. 3. The needle clamp screw is loose. 4. The needle thread tension is too tight. 5. The fabric is not drawn to the rear when the sewing has finished. 6. The needle is too fine for the fabric being sewn.	Page 8 Page 8 Page 8 Page 12 Page 15 Page 8
Skipped stitches.	1. The needle is incorrectly inserted. 2. The needle is bent or blunt. 2. The needle and/or threads are not suitable for the work being sewn. 3. A blue tip needle is not being used for sewing stretch, very fine fabrics and synthetics. 4. The needle thread is not threaded properly. 5. The wrong needle is being used.	Page 8 Page 8 Page 8 Page 8 Page 11 Change the needle.
Seam puckering	1. The needle thread tension is too tight. 2. The needle thread is not threaded properly. 3. The needle is too heavy for the fabric being sewn. 4. The stitch length is too long for the fabric.	Page 12 Page 11 Page 8 Make stitch shorter.
The fabric is not feeding smoothly.	1. The feed dog is packed with lint. 2. The stitches are too fine.	Page 28 Make stitch longer.
The machine does not work.	1. The machine is not plugged in. 2. A thread is caught in the shuttle race. 3. The clutch is disengaged.	Page 5 Page 28 Page 10
Noisy operation	1. There is thread caught in the shuttle race. 2. Lint has built up in the shuttle or the shuttle race.	Page 28 Page 28

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