

IMPORTANT SAFETY INSTRUCTIONS

Read all instructions before using this household sewing machine.

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

Keep the instructions at a suitable place close to the machine. Make sure to hand them over if the machine is given to a third party.

This appliance is intended for use by adults. The appliance can be used with adult supervision by (i) children aged from 8 to 12 years and (ii) persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given instruction concerning use of the appliance in a safe way and understand the hazards involved. Cleaning and user maintenance shall not be made by children without supervision. It is not allowed for anyone to play with the machine.Children up to 8 years are not allowed to use the machine.

WARNING - TO REDUCE THE RISK OF BURNS, FIRE, ELECTRIC SHOCK, OR INJURY TO PERSON:

- A sewing machine should never be left unattended when plugged in. The electrical socket, to which the machine is plugged in should be easily accessible. Always unplug this sewing machine from the electric outlet immediately after using and before cleaning, removing covers, lubricating or when making any other user servicing adjustments mentioned in the instruction manual.
- Do not allow to be used as a toy. Close attention is necessary when this sewing machine is used by or near children.
- Use this sewing machine only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
- 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 the sewing machine to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
- Never operate the sewing machine with any air openings blocked. Keep ventilation openings of the sewing machine and foot control free from the accumulation of lint, dust, and loose cloth.

- Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
- Always use the proper needle plate. The wrong plate can cause the needle to break.
- Do not use bent needles.
- Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
- Wear safety glasses.
- Switch the sewing machine off ("0") when making any adjustment in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, etc.
- · Never drop or insert any object into any opening.
- Do not use outdoors.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administrated.
- To disconnect, turn all controls to the off ("0") position, then remove plug from outlet.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

- The foot control is used to operate the machine. Never place other objects on the foot control.
- Do not use the machine if it is wet.
- If the LED lamp is damaged or broken, it must be replaced by the manufacturer or its service agent or a similarly qualified person, in order to avoid a hazard.

SAVE THESE INSTRUCTIONS

The machine must only be used with foot control of type:

FC-1902A(110-120V area)/ FC-2902D (220-240V area) manufactured by FANG ZHENG (VIETNAM) FOUNDER MOTOR CO., LTD

HKT7(110-120V)/HKT72C(220V-240V) manufactured by ZHEJIANG HUAXING ELECTRIC MOTOR CO., LTD. (China)

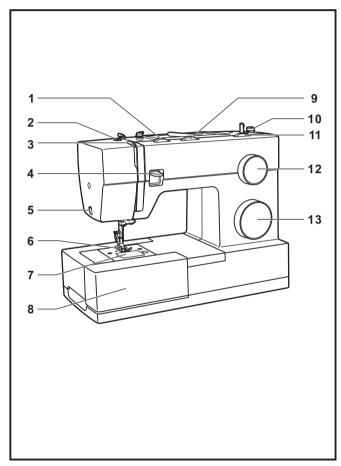
• If the cord connected with the foot control is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person, in order to avoid a hazard.

□ List of Contents

Machine Basics	
Principle Parts of the Machine	
Connecting Machine to Power Source	4
Two Step Presser Foot Lifter/ Adjusting Presser Foot Pressure	5
Accessories	6
Threading the Machine	
Winding the Bobbin	7
Inserting the Bobbin	8
Threading the Upper Thread	9
Raising the Bobbin Thread	
Thread Tension	
Sewing	
How to Choose Your Pattern	
Three Needle Position Dial	13
Stitch Width Dial & Stitch Length Dial	14
Sewing Straight Stitch	15
Reverse Sewing/ Removing the Work/ Cutting the Thread	
Blind Hem	17
Buttonholes	
Left and Right Side Balance for Buttonhole	19
Sewing on Buttons	
General Information	
Installing the Removable Extension Table	21
Attaching the Presser Foot Shank	
Needle/ Fabric/ Thread Chart	23
How To Drop Feed Dog	24
Maintenance and Troubleshooting	
Inserting & Changing Needle	25
Troubleshooting Guide	

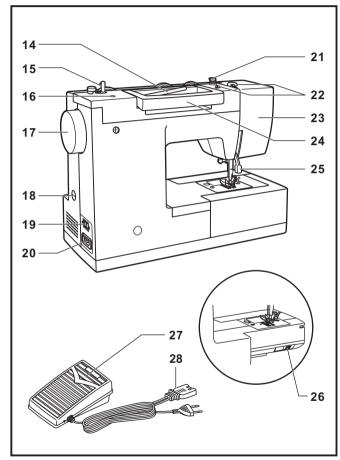
☐ Principal Parts of the Machine

- 1. Thread tension dial
- 2. Presser foot pressure adjustment
- 3. Thread take-up lever
- 4. Reverse sewing lever
- 5. Thread cutter
- 6. Presser foot
- 7. Needle plate cover
- 8. Removable extension table/ accessory storage
- 9. Three needle position dial
- 10. Bobbin stopper
- 11. Stitch width dial
- 12. Stitch length dial
- 13. Pattern selector dial



☐ Principal Parts of the Machine

- 14. Horizontal spool pin
- 15. Bobbin winding spindle
- 16. Hole for auxiliary spool pin
- 17. Handwheel
- 18. Buttonhole stitch balance adjustment slot
- 19. Power and light switch
- 20. Main plug socket
- 21. Bobbin thread guide
- 22. Upper thread guide
- 23. Face plate
- 24. Handle
- 25. Presser foot lifter
- 26. Drop feed control
- 27. Foot speed control
- 28. Power cord



□ Connecting Machine to Power Source

Connect the machine to a power source as illustrated. (1)

Attention:

Unplug power cord when machine is not in use.

Foot control

The foot control pedal regulates the sewing speed. (2)

Attention:

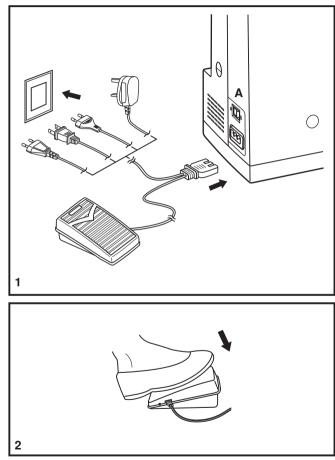
Consult a qualified electrician if in doubt of how to connect machine to power source.

Unplug power cord when machine is not in use.

The foot control must be used with the appliance by FC-1902A (110-120V area)/ FC-2902A (220-240V area)/ 4C-316Q (110-125V area).

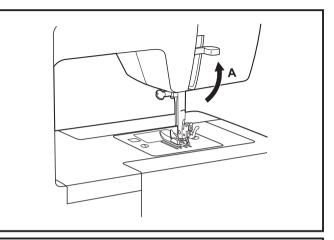
Sewing light

Press main switch (A) to "I" for power and light.



☐ Two Step Presser Foot Lifter

When sewing several layers or thick fabrics, the presser foot can be raised to a higher position for easy positioning of the work. (A)

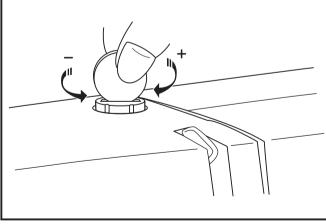


☐ Adjusting Presser Foot Pressure

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.



Accessories

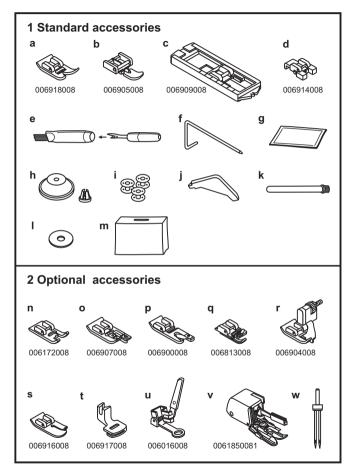
Standard accessories (1)

- a. All purpose foot
- b. Zipper foot
- c. Buttonhole foot
- d. Button sewing foot
- e. Seam ripper/ brush
- f. Edge/ quilting guide
- g. Pack of needles
- h. Spool holders
- i. Bobbin (3x)
- j. L-screwdriver
- k. Auxiliary Spool Pin
- I. Spool pin felt
- m. Soft cover

Optional accessories (2)

(These 10 accessories are not supplied with this machine; they are, however, available for purchase from your authorized retailer.)

- n. Satin stitch foot
- o. Overcasting foot
- p. Hemmer foot
- q. Cording foot
- r. Blind hem foot
- s. Quilting/ straight stitch foot
- t. Gathering foot
- u. Darning/ embroidery foot
- v. Even Feed foot
- w. Twin needle

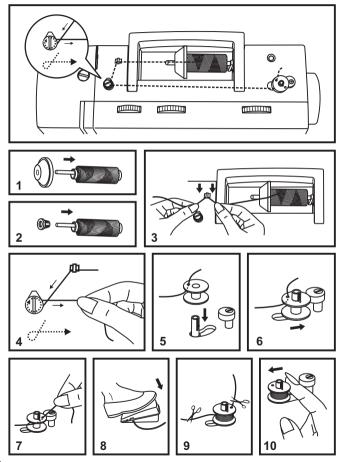


☐ Winding the Bobbin

- Place thread and corresponding spool holder on to spool pin. (1/2)
- Snap thread into thread guide. (3)
- Wind thread clockwise around bobbin winder tension discs. (4)
- Thread bobbin as illustrated and place on spindle. (5)
- Push bobbin spindle to right. (6)
- Hold thread end. (7)
- Step on foot control pedal. (8)
- Cut thread. (9)
- Push bobbin spindle to left (10) and remove.

Please Note:

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



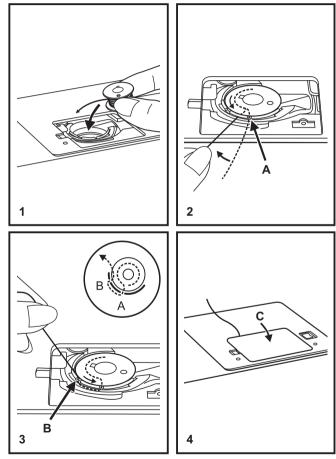
☐ Inserting the Bobbin

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

- 1. Insert the bobbin in the bobbin case with the thread running counterclockwise direction (arrow).
- 2. Pull the thread through the slit (A).
- 3. Draw the thread clockwise until it slips into the notch (B).
- 4. Pull out about 15 cm (6 inches) of thread and attach the bobbin cover plate. (C)

Attention:

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



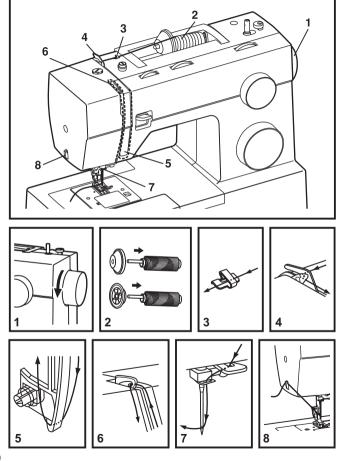
\Box Threading the Upper Thread

This is a simple operation but it is important to carry out correctly as by not doing so <u>several sewing problems could result</u>.

- Start by raising the needle to its highest point (1), and continue turning the handwheel counterclockwise until the needle just slightly begins to descend. Raise the presser foot to release the tension discs.

Note: For safety, it is strongly suggested you turn off the power before threading.

- Lift up the spool pin. Place the spool of thread on the holder with the thread coming off the spool as shown. For small thread spools, place small side of spool holder next to spool. (2)
- Draw thread from spool through the upper thread guide (3) and pulling thread through pre-tension spring as illustrated.
 (4)
- Thread tension module by leading thread down right channel and up left channel. (5) During this process it is helpful to hold the thread between the spool and thread guide.
- At the top of this movement pass thread from right to left through the slotted eye of the take-up lever and then downwards again. (6)
- Now pass the thread behind the horizontal thread guide, and then behind the thin wire needle clamp guide (7) and then down to the needle which should be threaded from front to back.
- Pull about 6-8 inches of thread to the rear beyond the needle eye. Trim thread to length with built in thread cutter. (8)



☐ Raising the Bobbin Thread

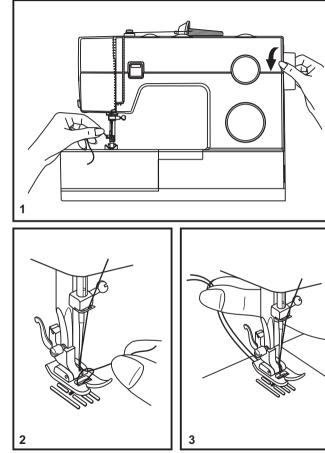
Hold the upper thread with the left hand. Turn the handwheel (1) towards you (counterclockwise) lowering, then raising needle.

Note:

If it is difficult to raise the bobbin thread, check to make sure the thread is not trapped by the hinged cover or the Removable Extension Table.

Gently pull on the upper thread to bring the bobbin thread up through the needle plate hole. (2)

Lay both threads to the back under the presser foot. (3)



Thread Tension

Upper thread tension

Basic thread tension setting: "4". (1)

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

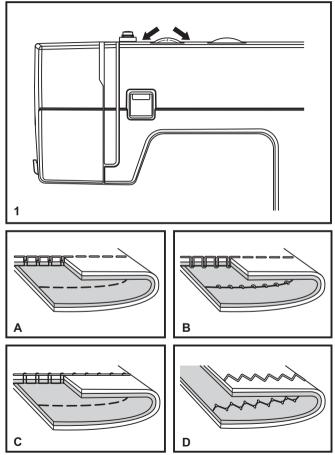
- To reduce the tension, turn the dial to the next number down.
- A. Normal thread tension for straight stitch sewing.
- B. Thread tension too loose for straight stitch sewing. Turn dial to higher number.
- C. Thread tension too tight for straight stitch sewing. Turn dial to lower number.
- D. Normal thread tension for zig zag and decorative sewing. Correct thread tension is when a small amount of the upper thread appears on the bottom side of fabric.

Lower thread tension

The bobbin tension has been set correctly at the factory, so you do not need to adjust it.

Please note:

- Proper tension setting is important for strong seams.
- There is no single tension setting appropriate for all stitch functions, thread or fabric.
- A balanced tension (identical stitches both top and bottom) is usually only desirable for straight stitch construction sewing.
- 90% of all sewing will be between "3" and "5".
- For zig zag and decorative sewing stitch functions, thread tension should generally be less than for straight stitch sewing.
- For all decorative sewing you will always obtain a nicer stitch and less fabric puckering when the upper thread appears on the bottom side of your fabric.

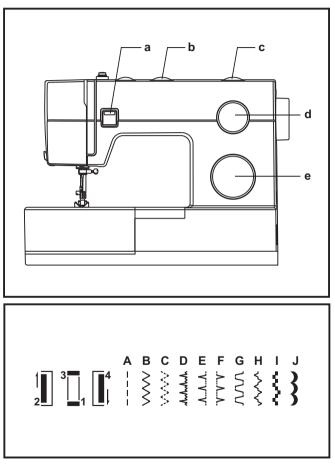


☐ How to Choose Your Pattern

The diagram on this page display the stitch patterns available on the machine.

Turn the Pattern Selector Dial (e) to select the desired pattern. Use the Stitch Length Dial (d) to adjust the stitch length as desired for the project. Use the Stitch Width Dial (c) to adjust the width of the stitch as desired.

The Pattern Selector Dial may be turned in either direction.



- a. Reverse Sewing Lever
- b. Three Needle Position Dial
- c. Stitch Width Dial
- d. Stitch Length Dial
- e. Pattern Selector Dial

☐ 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. For twin needle stitching, needle position is middle.

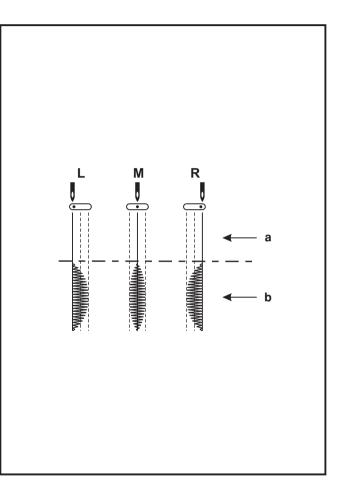
a. Straight

b. Zig-zag

L. Left Needle Position

M. Middle Needle Position

R. Right Needle Position



Function of stitch width dial

The maximum zigzag stitch width for zigzag stitching is 6mm; however, the width can be reduced on any patterns. The width increases as you move zigzag dial from "0" - "6". (1)

Function of stitch length dial while zig-zag stitching

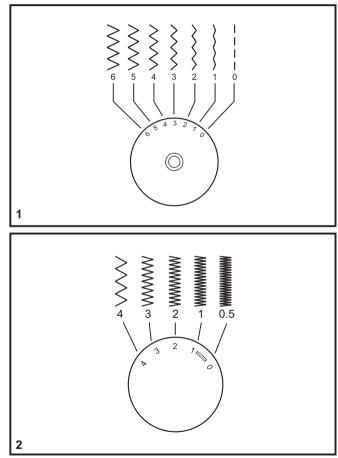
Set the Pattern Selector Dial to zig-zag.

The density of zig-zag stitches increase as the setting of stitch length dial approaches "0".

Standard zigzag stitches are usually achieved at "3" or below. (2) Dense zig-zag stitches are called satin stitches. (2)

Function of stitch length dial for when straight stitching

For straight stitch sewing, turn the Pattern Selector Dial to the straight stitch setting. Turn the Stitch Length Dial, and the length of the individual stitches will decrease as the dial approached "0". The length of the individual stitches will increase as the dial approaches "4". Generally speaking, use a longer stitch length when sewing heavier weight fabrics or when using a thicker needle or thread. Use a shorter stitch length when sewing lighter weight fabrics or when using a finer needle or thread.

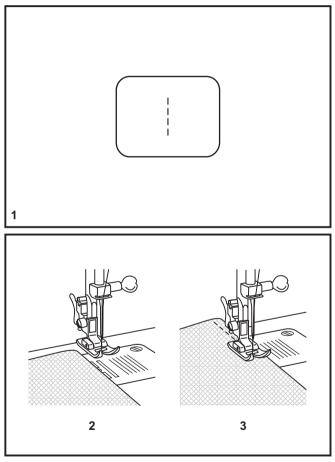


☐ Sewing Straight Stitch

To begin sewing, set the machine for straight stitch. (1)

Place the fabric under the presser foot with the fabric edge lined up with the desired seam guide line on the needle plate. (2)

Lower the presser foot lifter, and then step on the foot controller to start sewing. (3)

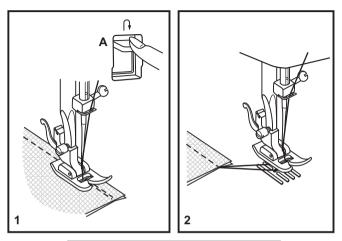


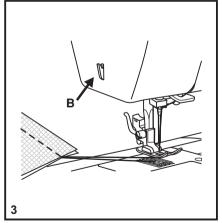
☐ Reverse Sewing

To secure the beginning and the end of a seam, press down the reverse sewing lever (A). Sew a few reverse stitches. Release the lever and the machine will sew forward again. (1)

Removing the Work

Turn the handwheel toward you (counterclockwise) to bring the thread take up lever to its highest position, raise the presser foot and remove work behind the needle and presser foot. (2)





Cutting the Thread

Pull the threads under and behind the presser foot. Guide the threads to the side of the face plate and into thread cutter (B). Pull threads down to cut. (3)

Blind Hem

For hems on curtains, trousers, skirts, etc.

- MMM Blind hem for stretch fabrics.
- .A..A.. Blind hem for firm fabrics.

Set the Stitch Length Dial with the range shown on the diagram at the right. Blind hems, however, are normally sewn with a longer stitch length setting. Set the Stitch Width Dial at a setting appropriate for the weight/type of fabric being sewn, within the range shown in the diagram on the right of the page. Generally, a narrower stitch is used for lighter weight fabrics, and a wider stitch is used for heavier weight fabrics. Sew a test first to make sure the machine settings are appropriate for the fabric.

Blind Hem:

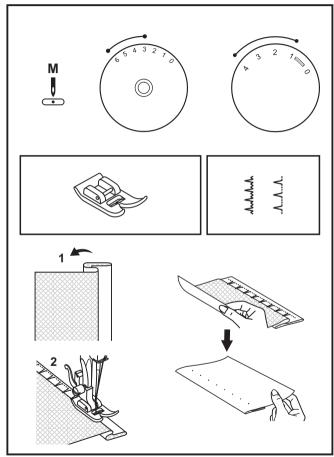
Turn up the hem to the desired width and press. Fold back (as shown in Fig. 1) against the right side of the fabric with the top edge of the hem extending about 7 mm (1/4") to the right side of the folded fabric.

Start to sew slowly on the fold, making sure the needle touches slightly the folded top to catch one or two fabric threads. (2)

Unfold the fabric when hemming is completed and press.

Note:

To make blind hem sewing even easier, use a blind hem foot, available from your SINGER retailer. (See page 6 for part number)



Buttonholes

Prepare

- 1. Take off the all purpose foot and attach the buttonhole foot.
- 2. Measure diameter and thickness of button and add 0.3 cm (1/8") for bar tacks to obtain correct buttonhole length; mark buttonhole length on fabric (a).
- Place fabric under the foot, so that marking on the buttonhole foot aligns with starting marking on fabric. Lower the foot, so that the buttonhole center line marked on the fabric aligns with the center of the buttonhole foot (b).

Adjust the Stitch Length Dial in the " """""" " to set stitch density. Set the stitch width at "6". The width however may need to be adjusted according to the project, sew a test first to determine this.

Note:

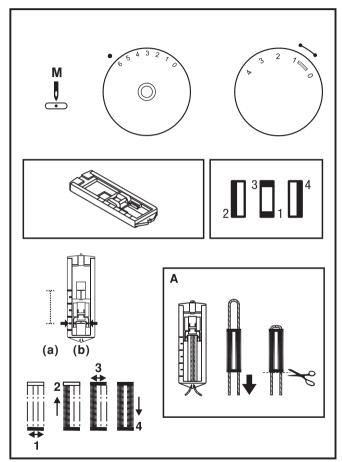
Density varies according to the fabric.

Always test sew a buttonhole on the fabric you are using to sew the buttonhole.

Follow the 4-step sequence changing from one step to another with the Pattern Selector Dial. When moving from step to step through the buttonhole process, be sure that the needle is raised before turning the Pattern Selector Dial to the next step. Take care not to sew too many stitches in steps 1 and 3. Use seam ripper and cut buttonhole open from both ends towards the middle.

Tips:

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



Left and Right Side Balance for Buttonhole

Stitch density on right and left sides of buttonhole can be adjusted by buttonhole balance control dial.

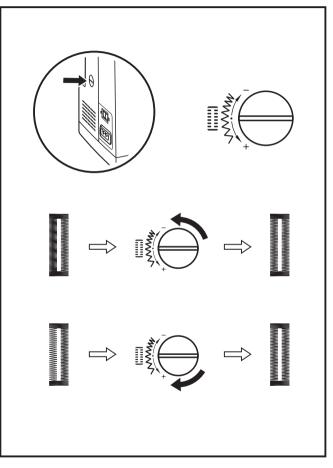
This dial should usually be in a neutral position (between "+" and "-")

If the stitches on the left side of buttonhole are too close together, turn the dial to the left (+).

* Turning dial to the left opens left side.

If the stitches on the left side of the buttonhole are too open, turn the dial to the right (-).

* Turning dial to right closes left side.



☐ Sewing on Buttons

Move the drop feed control to right side to lower the feed dogs. $\left(1\right)$

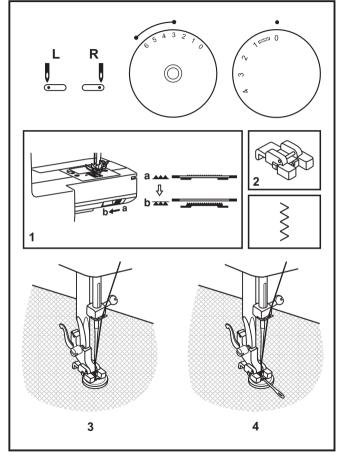
Change the all purpose foot to the button sewing foot. (2) Set the stitch length to "0".

Place the button and fabric under the Button Sewing foot, as illustrated in (3).

Set the machine for zig-zag stitch, then set the width to number "3" - "6". Turn the handwheel to check that the needle goes cleanly into the left and right holes of the button. Adjust the stitch width, as needed, according to the distance between the holes of the button. Slowly sew on the button with about 10 stitches.

Raise the needle out of the fabric. Set the machine for straight stitch again, then sew a few securing stitches to finish.

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 the work forward and then sew through the back two holes.



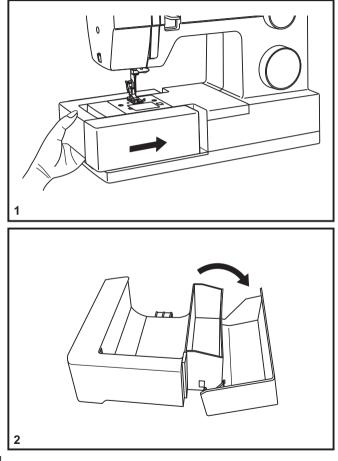
☐ Installing the Removable Extension Table

Hold the removable extension table horizontally, and push it in the direction of the arrow. (1)

To remove the extension table, pull it toward the left.

The inside of the removable extension table can be utilized as an accessory box.

To open, flip cover down as shown. (2)



☐ Attaching the Presser Foot Shank

Raise the presser bar (a) with the presser foot lifter. Attach the presser foot shank (b) as illustrated. (1)

Attaching the presser foot

Lower the presser foot shank (b) using the presser foot lifter, until the cut-out (c) is directly above the pin (d). (2) The presser foot (f) will engage automatically.

Removing the presser foot

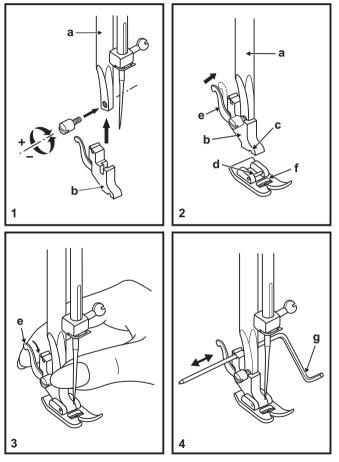
Raise the presser foot using the presser foot lifter. (3) Raise the lever (e) and the foot disengages.

Attaching the edge/ quilting guide

Attach the edge/ quilting guide (g) in the slot as illustrated. Adjust as needed for hems, pleats, quilting, etc. (4)

Attention:

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



NEEDLE, FABRIC, THREAD SELECTION GUIDE

NEEDLE SIZE	FABRICS	THREAD
9-11 (70-80)	Lightweight fabrics-thin cottons, voile, silk, muslin, interlocks, cotton knits, tricots, jerseys, crepes, woven polyester, shirt & blouse fabrics.	Light-duty thread in cotton, nylon, polyester or cotton wrapped polyester.
11-14 (80-90)	Medium weight fabrics-cotton, satin, kettlecloth, sailcloth, double knits, lightweight woolens.	Most threads sold are medium size and suitable for these fabrics and needle sizes.
14 (90)	Medium weight fabrics-cotton duck, woolen, heavier knits, terrycloth, denims.	Use polyester threads on synthetic materials and cotton on natural woven fabrics for best
16 (100)	Heavyweight fabrics-canvas, woolens, outdoor tent and quilted fabrics, denims, upholstery material (light to medium).	Always use the same thread on top and bottom.
18 (110)	Heavy woolen, overcoat fabrics, upholstery fabrics, some leathers and vinyls.	Heavy duty thread, carpet thread.

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

NEEDLE, FABRIC SELECTION

NEEDLES	EXPLANATION	TYPE OF FABRIC
SINGER [®] 2020	Standard sharp needles. Sizes range thin to large. 9 (70) to 18 (110).	Natural woven fabrics-wool, cotton, silk, etc. Not recommended for double knits.
SINGER [®] 2045	Semi-ball point needle, scarfed. 9 (70) to 18 (110).	Natural and synthetic woven fabrics, polyester blends. Knits-polyesters, interlocks, tricot, single and double knits. Also sweater knits, Lycra [®] , swimsuit fabric, elastic.
SINGER [®] 2032	Leather needles. 12 (80) to 18 (110).	Leather, vinyl, upholstery. (Leaves smaller hole than standard large needle.)

Note :

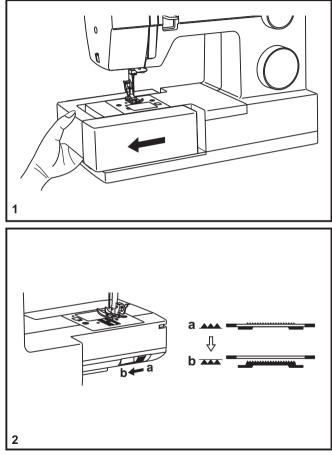
1. For best sewing results always use genuine SINGER[®] needles.

2. Replace needle often (approximately every other garment) and/ or at first thread breakage or skipped stitches.

How To Drop Feed Dog

For ordinary sewing, keep the feed dog up, for freehand embroidery, sewing on buttons and darning, drop the feed dog.

To raise (a) and lower (b) feed dog. (2)



☐ Inserting & Changing Needles

Change the needle regularly, especially if it is showing signs of wear and causing problems. For best sewing results always use SINGER[®] Brand Needles.

Insert the needle as illustrated as follows:

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

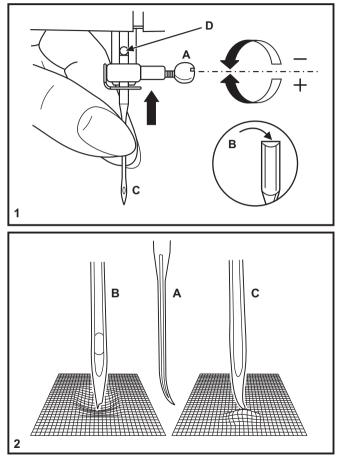
Attention:

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

Needles must be in perfect condition. (2)

Problems can occur with:

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



□ Troubleshooting Guide

Problem	Cause	Correction
Upper thread breaks	 The machine is not threaded correctly. The thread tension is too tight. The thread is too thick for the needle. The needle is not inserted correctly. The thread is wound around the spool holder pin. The needle is damaged. 	 Rethread the machine. Reduce the thread tension. (lower number) Select a larger needle. Remove and reinsert the needle. (flat side towards the back) Remove the reel and wind thread onto reel. Replace the needle.
Lower thread breaks	 The bobbin case is not inserted correctly. The bobbin case is threaded wrong. The lower thread tension is too tight. 	 Remove and reinsert the bobbin case and pull on the thread. The thread should pull easily. Check both bobbin and bobbin case. Loosen lower thread tension as described.
Skipped stitches	 The needle is not inserted correctly. The needle is damaged. The wrong size needle has been used. The foot is not attached correctly. 	 Remove and reinsert needle. (flat side towards the back) Insert a new needle. Choose a needle to suit the thread and fabric. Check and attach correctly.
Needle breaks	 The needle is damaged. The needle is not correctly inserted. Wrong needle size for the fabric. The wrong foot is attached. 	 Insert a new needle. Insert the needle correctly. (flat side towards the back) Choose a needle to suit the thread and fabric. Select the correct foot.
Loose stitches	 The machine is not correctly threaded. The bobbin case is not correctly threaded. Needle/ fabric/ thread combination is wrong. Thread tension wrong. 	 Check the threading. Thread the bobbin case as illustrated. The needle size must suit the fabric and thread. Correct the thread tension.
Seams gather or pucker	 The needle is too thick for the fabric. The stitch length is adjusted wrong. The thread tension is too tight. 	 Select a finer needle. Readjust the stitch length. Loosen the thread tension.
Uneven stitches, uneven feed	 Poor quality thread. The bobbin case is threaded wrong. Fabric has been pulled. 	 Select a better quality thread. Remove bobbin case, thread and insert correctly. Do not pull on the fabric while sewing, let the feed dogs pull the fabric under the foot.
The machine is noisy	 Lint or oil have collected on the hook or needle bar. The needle is damaged. 	 Clean the hook and feed dog as described. 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.

We reserve the right to change the machine equipment and the assortment of accessories without prior notice, or make modifications to the performance or design. Such modifications, however, will always be to the benefit of the user and the product.

INTELLECTUAL PROPERTY

SINGER, and the Cameo "S" Design, are exclusive trademarks of The Singer Company Limited S.à.r.I. or its Affiliates.



Please note that on disposal, this product must be safely recycled in accordance with relevant National legislation relating to electrical/ electronic products. Do not dispose of electrical appliances as unsorted muncipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. When replacing old appliances with new ones, the retailer may be legally obligated to take back your old appliance for disposal free of charge.

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

IMPORTER TO THE UK: **VSM UK** Ravensbank House, Ravensbank Drive North Moons Moat, Redditch. B98 9NA, United Kingdom MANUFACTURER VSM Group AB Soldattorpsgatan 3, SE-55474 Jönköping, SWEDEN