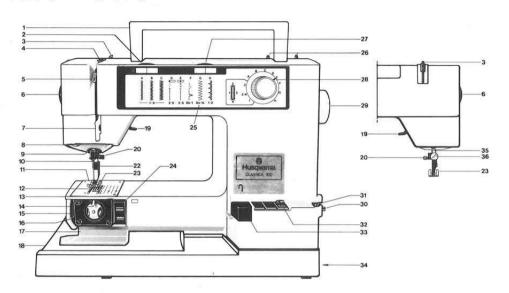


Safety regulations for domestic sewing machines in conformity with "CEE Publication No. 10, Part II, Section C, Article 7.1".

When the machine is not in use, or when servicing or adjusting mechanical parts or accessories, the machine must be disconnected from the power supply by removing the plug from the wall socket.

Use bulbs designed for the voltage indicated under the base of the machine and max. 15 W.

The machine has an interference suppressor for radio and television, complying with Directive No. 76/889 E.E.C. and C.I.S.P.R.



- 1. Handle
- 2. Thread tension dial
- 3. Thread guide
- 4. Thread tension discs
- 5. Thread take-up lever
- 6. Presser foot pressure dial
- 7. Front thread guide with thread take-up spring
- 8. Sewing light
- 9. Needle bar
- 10. Needle
- 11. Needle plate (stitch plate)

- 12. Feed dog
- 13. Free arm
- Bobbin case
  - 15. Thread cutter
  - 16. Shuttle (hook)
- 17. Door for shuttle (hook)
- 18. Base plate
- 19. Presser bar lever
- 20. Needle clamp screw
- 22. Presser bar
- 23. Presser foot
- 24. Drop feed button

- 25. Recommended stitch length
- 26. Spool pin
- 27. Stitch length dial
- 28. Stitch selector
- 29. Handwheel
- 30. Bobbin winding spindle
- 31. Thread guide for bobbin winding
- 32. Main switch
- 33. Reverse feed button
- 34. Socket for foot control
- 35. Thread cutter
- 36. Screw for edge guide

### Unpacking

Place the machine on the table and remove the plastic packing. Retain the top part which can later be used to cover the machine. Slide the accessory box with the foot control to the left from the machine.

Wipe the machine clean before you start sewing, and be especially careful with the stitch plate and the space around the needle. The machine is equipped with a number of presser feet and these are packed in two plastic bags. Regarding the placing of the accessories, please refer to page 6 under "Accessory box".

We reserve the right to change the equipment of the machine without prior notice.

## Putting the machine away

Pull the plugs out of the wall outlet and the socket of the machine. Wind the cords around your hand, starting at the foot control and push them into the control compartment.

Make sure that all accessories and the foot control are correctly placed in the box.

The bottom of the foot control should be turned toward the machine. Slide the accessory box into place. Lower the presser foot.

To replace the plastic cover, drop the handle. By raising the handle, the machine can easily be transported.

### Connecting the foot control

Remove the cord from the foot control and place the control under the table. Insert the foot control plug with the marking "UP" upward into the socket on the right-hand side of the machine.

#### Connecting to the wall outlet

The voltage (V) and frequency (Hz) are indicated under the base of the machine. Check that these values correspond to those of the electricity source before connecting the machine.

#### Free arm/Extension table

Trouser legs and sleeves can be drawn onto the free arm, making it easy to sew, mend or patch these parts.

When you need a larger working surface, attach the extension table. Fit the two studs into the holes at the rear of the free arm. Pull out the catch under the front of the table and release it in order to fix the table.

#### Main switch

The light and the machine are turned on by pressing the inner part of the main switch.

#### Reverse feed button

As long as you keep the reverse feed button depressed the machine will sew in reverse but will revert to ordinary sewing as soon as you release it. Excellent for fastening off.

#### Presser bar lever

By means of the presser bar lever at the rear of the machine, the presser foot can be raised and lowered. When raising, the presser foot will remain in the raised position, but the height can be increased by 3 mm by pushing the presser bar lever upward and holding it in this position. This is useful when you want to put garments with thick seams under the presser foot.

The presser foot should be lowered while sewing.

### Presser foot pressure

The presser foot pressure can be adjusted with the aid of a marked dial on the left side of the machine. Normal pressure is obtained by setting the dial at the white dot. The higher the number, the greater the pressure.

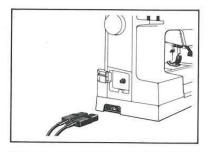
By setting the dial at the symbol the presser foot pressure is completely released. This setting should be used when free-hand sewing with the darning foot (extra accessory), i.e. darning, monogramming, machine embroidery and quilting.

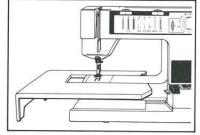
If you turn the graded dial for the presser foot pressure to the lowest number, it is possible to darn with presser foot A. Lower the feed dog and move the fabric forward, backward and sideways by hand.

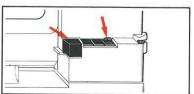
### Lowering the feed dog

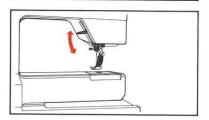
You lower the feed dog by pushing in the upper part of the push-button. In order to raise the feed dog again push in the lower part.

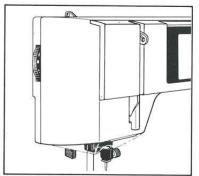
The feed dog should be lowered for a certain type of darning and when sewing on buttons. It is also easier to get thick garments under the presser foot if the teeth of the feed dog are not above the level of the stitch plate.

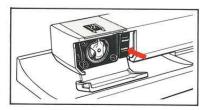












## Removing the bobbin case

Open the door in front of the shuttle by means of the small recess on the left side.

Grip the bobbin case with the thumb and index finger so that the latch is depressed and pull the bobbin case out. The bobbin will remain in the case as long as the latch is depressed. When you release the latch, the bobbin will be released.



Turn the empty bobbin until the small round mark on one side is outward.

Slide the bobbin onto the bobbin winding spindle located on the right side of the machine. Raise the presser foot and pull the thread from the thread guide on the needle clamp through the thread guide on the right of the machine to the bobbin.

Wind the thread around the bobbin a couple of times, beginning from underneath. If you are using a metal presser foot, allow the thread to go through the eye of the needle and under the presser foot. Never run the thread direct from the eye of the needle to the bobbin because you will run the risk of bending the needle. Hold the thread end and lightly depress the foot control. As soon as winding starts you can release the thread end.

### Threading the lower thread

When the bobbin winding is finished, place the bobbin in its case with the marking upward. The thread should run as shown in the figure.

Slide the thread into the slot on the edge of the bobbin case. Pull the thread in under the tension spring. Check that the bobbin rotates in the direction of the arrow (clockwise) when the thread is pulled.

The thread must be pulled in the direction of the spring, otherwise the spring will be overloaded.

#### Insertion of the bobbin case

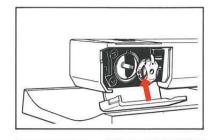
Slide the thread behind the projection of the bobbin case and to the right. Put the bobbin case into place. Press the bobbin case until it clicks to ensure that it fits properly. The thread cutter is located to the left of the bobbin case. Hold the thread end and draw the thread from underneath and up toward the thread cutter. By doing so the thread will be cut off and kept in place. Shut the door.

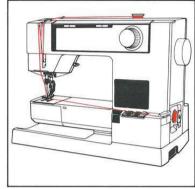
## Threading the upper thread

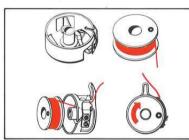
Raise the presser foot. Check that the needle is at its highest position. Place the spool of thread on the left spool pin and thread the machine for sewing.

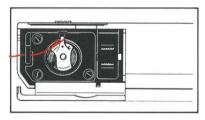
Slide the thread into thread guide 2 on the upper arm and draw it upward. Then draw the thread to the front between the tension discs 3 and down around thread guide 4. Continue threading by drawing the thread from the right into the slot on thread take-up lever 5 and draw it down to the needle, ensuring that it goes through thread guide 6.

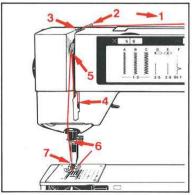
Thread the needle from the front. Due to the white color of the presser foot ankle the needle-eye is clearly seen and the threading of the needle 7, is easier. Pull the thread under the presser foot about 15 cm (6") toward the rear.











#### Thread cutter

On the back of the presser bar you will find a notch, the thread cutter, by means of which you can easily cut off the threads when you have finished sewing.



The thread tension dial is graduated from 0-10. The higher the number, the tighter the tension. Normal thread tension is obtained by setting the dial at the white line. It may be necessary to adapt the thread tension to the thickness of the thread and the type of fabric.

There is also a mark on the thread tension dial for the tension that is suitable for making buttonholes, for satin stitching, topstitching, embroidering, etc.



In order to easily understand the importance of correct thread tension, you can try different thread tensions by sewing on a scrap of fabric. Begin by using an excessively loose tension, i.e. set the tension dial near "0". The lower thread lies straight and the upper thread is drawn underneath the fabric. If, however, you set the dial at the highest number, the opposite will occur, or the seam may pucker. The thread tension is correct when the threads interlock in the middle of both layers of fabric.

Please note that even the best quality thread may vary in thickness. When sewing in fine fabrics, the knot may sometimes be visible.

#### Needle and thread

The machine is delivered with a spool of synthetic thread, which can be used for all types of fabrics and most seams. Mercerized cotton can also be used.

For buttonholes, topstitching and darning, embroidery silk is recommended.

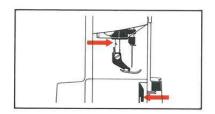
Always use needles coded 130/705H. The needle fitted in the machine is No. 80.

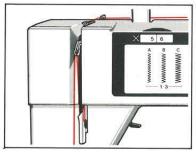
Two needles for sewing in stretch fabric and denim are specially designed for the purpose. Always use the stretch needle when sewing stretch fabrics and soft leather.

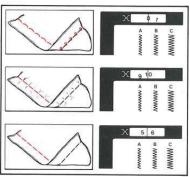
### Changing the needle

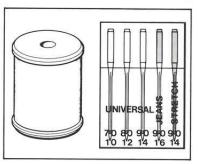
Even if the needles look alike there can be slight variations which can affect the sewing result. Be sure to use high quality needles.

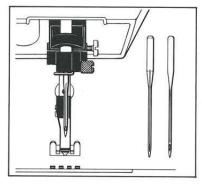
Only a completely undamaged needle will give perfect sewing results. Therefore, change the needle if you have the slightest reason to believe that it is bent or that the point is damaged. To remove the needle, loosen the screw in the needle clamp. With the flat side of the shank away from you, insert the new needle into the needle socket as far as it will go. Tighten the screw with the screwdriver.

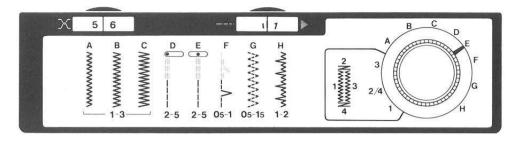












#### Stitch selection

The different stitches on the pattern scale are indicated with letters and white and orange symbols.

The stitch is set by turning the stitch selector to the letter indicating the required stitch.

You have the choice of three different zig-zag widths.

Ordinary and reinforced straight stitch can be sewn with the needle at the center or left needle position. The left needle position is suitable when sewing narrow hems and when sewing in light fabrics where the fabric is well supported in the outer edge of the needle plate slot.

## Choice of stitch length

There are figures under the stitch symbols which indicate the most suitable stitch length when sewing normal fabrics.

Set the stitch length by means of the stitch length dial to the right above the symbols.

The symbol \(\) indicates the stitch length which is best for sewing buttonholes.

Always use the recommended stitch length to start with but experiment until you arrive at the exact stitch length for the actual work you will be doing.

The stitch length of the "white" stitches can be varied between 0 and 5 mm, whereas the "orange" stitches have a fixed length. When you want to sew one of the "orange" stitches, turn the stitch length dial to the orange area — at the far left.

## Recommended setting of stitches

Stitch	Range of use	Stitch length	Presser foot*
Straight stitch  D   E	Joining Sewing in zippers Topstitching, tacking (basting) Gathering Use left needle position when sewing light fabrics.	2-2.5 2-2.5 4-5 3-3.5	A E A A
Zig-zag A B C	Sewing on lace, gathering, bound edging, appliqués, etc. Satin stitching Three different stitch widths.	1.5-2.5 0.3-0.5	A
Three-step zigzag	Overcasting, darning and mending of most fabrics. Ideal for sewing terry cloth.	1	Α
Reinforced straight stitch	Joining seams in stretch fabrics and for decorative topstitching. This stitch is elastic and stronger than ordinary straight stitching. Can also be sewn in the left needle position.	Orange area	A
Overcast stitch	Joining and overcasting of lightweight, woven and stretch fabrics.	0.5-1	J
Overlock stitch	For narrow, supple stretch seams in jersey, stretch velour and other knitted fabrics.	Orange area	J
Blind hem stitch	Hemming garments of woven or knitted fabrics without the stitches being visible on the right side.	1.5	D

<sup>\*</sup> The presser feet are marked with letters.

#### **Accessory box**

Store the accessories in the accessory box. By placing them as illustrated, it will be easier for you to remove and replace the box. The presser feet are marked with letters. The different feet are used for different purposes.

Presser foot A is fitted on the machine at delivery and is used for straight stitching, zig-zag and other utility stitches. This foot has notches which can be used as guides when sewing. When straight stitching with the needle in the center position, you will have a 7 mm ( $\frac{1}{4}$ ") seam allowance if you guide the fabric even with the outer edge of the foot; 4 mm ( $\frac{3}{16}$ ") at the inner edge and 2 mm ( $\frac{3}{2}$ ") at the innermost notch.

Zipper foot E can be attached to the right or to the left of the needle, making it easy to sew both sides of the zipper. Edging foot J is used for overcasting in light fabrics.



The best way to hold the fabric is to let your left hand rest lightly on the work at A and guide it forward. Hold the edge of the fabric at B with your right hand and guide the work. Do not pull the fabric—just guide it toward the presser foot and let the machine do the feeding.

When you wish to straight stitch, place the work so that the needle goes down in the center of the marking for the seam. When sewing zig-zag and other wide stitches, e.g. the overcast stitch, place the marking for the seam along the left edge of the needle plate slot.

Lower the presser foot, start the machine gently and increase the speed gradually.

When sewing fine and soft fabrics, start the seam a couple of mm (1/e") from the edge of the fabric, to prevent it from being pulled down into the needle plate slot. If you wish to extend the seam out to the very edge of the fabric, sew a few reverse stitches and then hold the threads behind the presser foot when sewing forward again.

Fasten off the seam by depressing the reverse feed button and sew a few reverse stitches.

When the seam is finished, raise the presser foot, remove the work from behind and cut off the threads leaving at least 15 cm (6") of thread.

## Straight stitching

Check that the needle is in the highest position. Turn the stitch selector to the letter E.

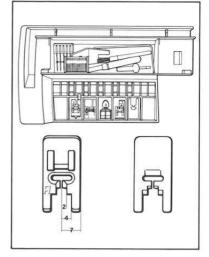
Straight stitching is used to join fabric which does not stretch and for seams which will not be subjected to great strain.

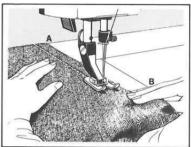
Set the stitch length dial to the recommended basic setting 2.5 but experiment until you arrive at the exact stitch length for the actual work you will be doing.

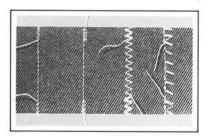
Increase the stitch length when basting and topstitching.

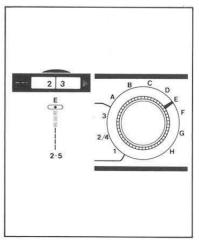
When you set the stitch length dial to the orange area you can sew reinforced straight stitch, which is used for joining seams in stretch fabrics, topstitching and for seams which are subject to considerable strain.

Both stitches are sewn with the needle in the left position when you turn the stitch selector to the letter D. This is very useful when sewing light fabrics. They will be supported better by the presser foot and the needle plate.









### Zig-zag

Check that the needle is in the highest position. You have the choice of three zig-zag widths, 1.5, 3 and 5 mm.

Turn the stitch selector to the letter indicating the required zig-zag width. Recommended stitch length 1.5–2.5.

Zig-zag is used for sewing on lace, gathering, bound edging, appliqués, etc.

Three-step zig-zag is recommended for overcasting, as it binds better and is more attractive.

## Three-step zig-zag

Check that the needle is in the highest position. Turn the stitch selector to the letter G. Recommended stitch length 1.

Three-step zig-zag is suitable for overcasting most fabrics, especially stretch, lightweight or loosely woven fabrics. It has many advantages compared to ordinary zig-zag. It is more elastic and will not pucker the edge of the fabric. It is ideal for sewing terry cloth and is also used for darning and mending.

#### Overlock and overcast stitch

Check that the needle is in the highest position. Turn the stitch selector to the letter F.

Set the stitch length dial to the orange area if you want to sew the overlock stitch.

Both stitches can be used for joining and overcasting woven and elastic fabrics.

The overcast stitch is recommended for lightweight fabrics and the overlock for jersey, velour, stretch terry cloth and other knitted fabrics.

Join and overcast directly on the edge where a 5 mm (3/16") seam is allowed, or cut out the garment with a wider seam allowance, sew the seam and then trim close to the stitching.

### Blindstitching

Blindstitching is used for hemming skirts made of woven and knitted fabrics without the stitches being visible on the right side.

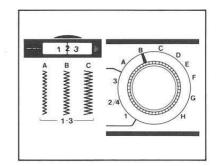
Check that the needle is in the highest position. Set the stitch selector at the letter H. Recommended stitch length 1.5.

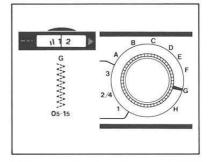
The thicker and softer the fabric, the less visible the stitches will be. When sewing lightweight woven fabrics, it is unavoidable that a small stitch will show on the right side.

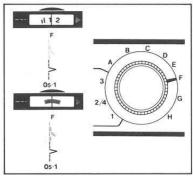
Fold the fabric as illustrated. As fabrics vary in thickness the presser foot D can be shifted sideways so that the edge guide 1 underneath may be set according to the thickness of the fabric.

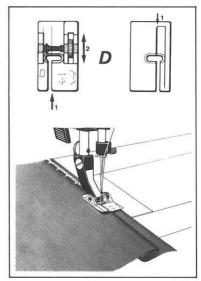
Be sure that the folded edge follows the edge guide 1 underneath the presser foot.

Sew a few inches and check that the large zig-zag stitches catch just one thread of the folded edge. If the stitches fail to reach the fold, turn the red roller slightly toward +. If they are too far in on the fabric fold, turn the roller toward -.









#### **Buttonholes**

When sewing buttonholes, change to the buttonhole foot C. This foot has graduated markings to help you make the buttonholes the same length. Decrease the upper thread tension by turning the thread tension dial to the buttonhole symbol.

Set the stitch selector and stitch length dial at the buttonhole symbol. The finer thread you use, the more attractive and even the buttonhole will be. Make a mark on the fabric where you wish to begin the buttonhole.

Always test sew a buttonhole and adjust the stitch length setting. Insert the fabric under the presser foot, remembering that the machine will begin to sew in reverse.

Set the stitch selector to 1.

The machine sews the first column in reverse. Stop when you reach the correct column length.



Turn to 2-4

Now the machine will form the bar tack. Sew three or four stitches.

By means of a screw on top of the machine, under the handle, the tightness of the columns can be adjusted. If the left column is tighter than the right one, tighten the

screw slightly. If the right column is tighter than the left

#### Corded buttonholes

one, loosen the screw slightly.

A small cord can be used to sew buttonholes in elastic material, in order to keep the shape better. Attach the cord around the projection at the heel of the buttonhole foot as shown in the illustration and sew the buttonhole in the normal way.

In heavy garments you can sew reinforced buttonholes by sewing the columns twice and the bar tacks the second time.

### Cutting the buttonhole

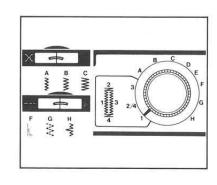
Pierce the fabric at a right angle until the curved blade edge reaches down to the buttonhole.

With the knife more or less parallel to the fabric, push forward, taking care not to cut the columns of the buttonhole. The small red bead serves as a guide. Cut the buttonhole to the middle and then repeat the cut from the other direction.

## Sewing on buttons

Lower the feed dog. Remove the presser foot, put the button in place and lower the presser bar. Set the stitch selector at the widest or intermediate zig-zag. Turn the handwheel toward you and test carefully that the needle enters the first hole and then the other hole. Sew five or six stitches. Move to the other holes and repeat. Set the needle to straight stitch in the left needle position and fasten the threads with a few stitches.

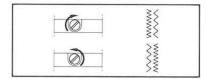
When a "shank" is required, use the button reed as illustrated.

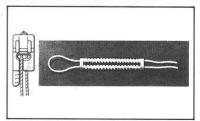


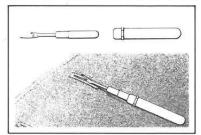
Turn to 3.

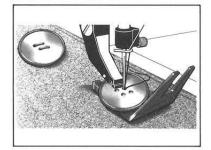
Sew the other column the same length as the first one.

Turn back to 2-4. The machine will form the final bar tack. Sew three or four stitches. Turn to 1 and lock the threads in the first column.









### Changing the light bulb

The lamp is located to the left of the needle. First remove the lamp guard. By inserting the small screwdriver in the recess at the left edge an applying slight downward leverage, you can slide the guard down to the stitch plate.

To remove, press the light bulb upward, turn a quarter turn in the direction of the arrow. To insert the new light bulb, push it upward and turn it a quarter turn in the opposite direction.

The wattage of the bulb is indicated on the rear of the machine.

#### Care of the machine

If you want to clean the machine, remove the presser foot and lower the feed dog. There is a recess in the free arm to the right above the hook cover. Push the stitch plate straight up and backward at the same time until it loosens. Clean between the teeth of the feed dog with the brush you will find in the accessory box.

When replacing the stitch plate, insert it from behind into the recess in the arm. Ease the front edge up onto the small pin and continue to push it forward until it snaps into place.

#### **Belts**

Belt adjustment is not required.

# Why haven't I got the results I expected?

#### Always start by checking the needle

An important part which needs to be changed from time to time is the needle. Always start with a new needle as soon as you discover that a seam is not what you expected. Check that it is correctly inserted.

#### Unattractive stitches

The thread tension is not correct. See page 4.

The machine may be incorrectly threaded. The correct threading is shown on page 3.

If the machine skips stitches, change to a stretch needle.

Wrong upper thread. It should be of the same thickness as the lower thread.

Bobbin wrongly inserted in the bobbin case. See page 3.

#### The needle breaks

You may have helped the machine to feed by pulling the fabric. The needle can easily strike against the needle plate and break.

#### The upper thread breaks

Check the thread spool to see that it has not caught in any way.

The needle eye may have sharp edges which cut the thread. If so, change the needle. See page 4.

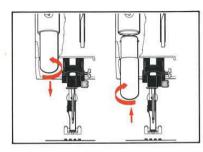
Use a stretch needle for stretch fabrics and soft leather.

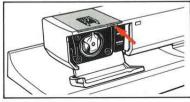
The upper thread is incorrectly threaded. See page 3.

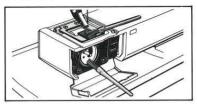
The upper thread may have too much tension. Refer to thread tension, page 4.

The thread is knotted.

The hole in the needle plate may be chipped and have sharp edges. Replace the needle plate.







#### Lower thread breaks

The bobbin case is incorrectly inserted. See page 3.

The lower thread may be incorrectly threaded. See page 3.

The bobbin is overwound.

#### Uneven thread tension

This may be due to poor quality thread.

#### Irregular bobbin winding

The bobbin is not placed correctly. See page 3.

The machine is not correctly threaded for bobbin winding. See page 3.

#### The fabric puckers

The upper thread tension is too tight. See page 4. for correct thread tension.

#### The machine does not feed the fabric

The stitch length is too short. Turn the stitch length dial to a higher number.

The feed dog may be lowered. Raise it by pressing the lower part of the feed dog button. See page 2.

The presser foot pressure is disengaged. See page 2.

The feed dog is full of dust and dirt. Clean with the

## brush. See instructions above. Machine runs sluggishly

Dirt or lint has fastened under the needle plate. Loosen the needle plate and brush clean between the teeth of the feed dog.

See instructions above.

Dirt or lint has fastened in the hook. Remove the bobbin case and clean with the brush. See instructions above.