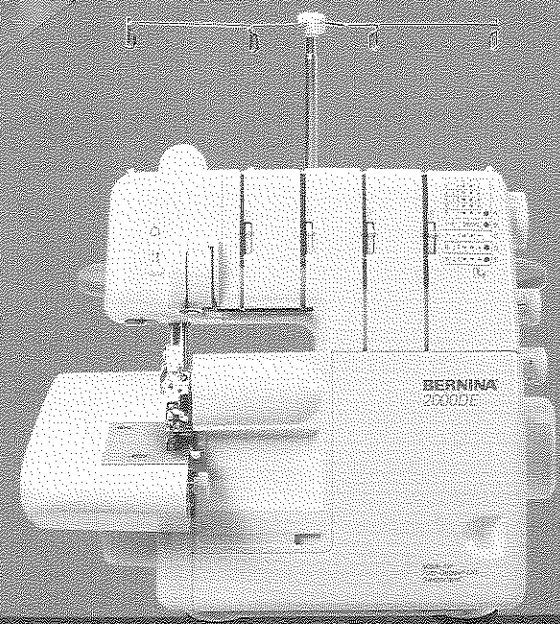


# BERNINA®



BERNINA® 2000

## IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety precautions should always be followed, including the following. Read all instructions before using this overlock sewing machine.

"This sewing machine is intended for household use only."

### DANGER

To reduce the risk of electric shock:

1. The appliance should never be left unattended when plugged in.
2. Always unplug this appliance from the electric outlet immediately after using and before cleaning.
3. Always unplug before relamping. Replace bulb with the same type rated 12 volts/5 watts.

### WARNING

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

1. Do not allow this appliance to be used as a toy. Close attention is necessary when this appliance is used by or near children.
2. Use this appliance only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.
3. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged or dropped into water. Return the appliance to the nearest authorized dealer or service center of examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air openings blocked. Keep ventilation openings of the sewing machine and foot controller free from accumulation of lint, dust and loose cloth.
5. Keep fingers away from all moving parts. Special care is required around the sewing needle and knife.
6. Always use the proper needle plate. The wrong plate can cause the needle to break.
7. Do not use bent needles.
8. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.

9. Switch the sewing machine off «0» when making any adjustments in the needle area, such as threading needle, changing needle, threading looper, or changing presser foot and the like.
10. Always unplug the machine from the electrical outlet when removing covers, lubricating or when making any other user servicing adjustments mentioned in the instruction manual.
11. Never drop or insert any object into any opening.
12. Do not use outdoors.
13. Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
14. To disconnect, turn all controls to the off «0» position, then remove plug from outlet.
15. Do not unplug by pulling on cord. To unplug, grasp the plug not the cord.
16. Connect this appliance to a properly grounded outlet only. See Grounding Instructions. (2000D USA only.)
17. Basically, the machine should be disconnected from the electricity supply when not in use.
18. If the power cord of this appliance is damaged, it must be replaced with a special cord by your nearest authorized dealer or service centre (2000 D only).

### SAVE THESE INSTRUCTIONS

### «GROUNDING INSTRUCTIONS»

(Model 2000 D, USA only)

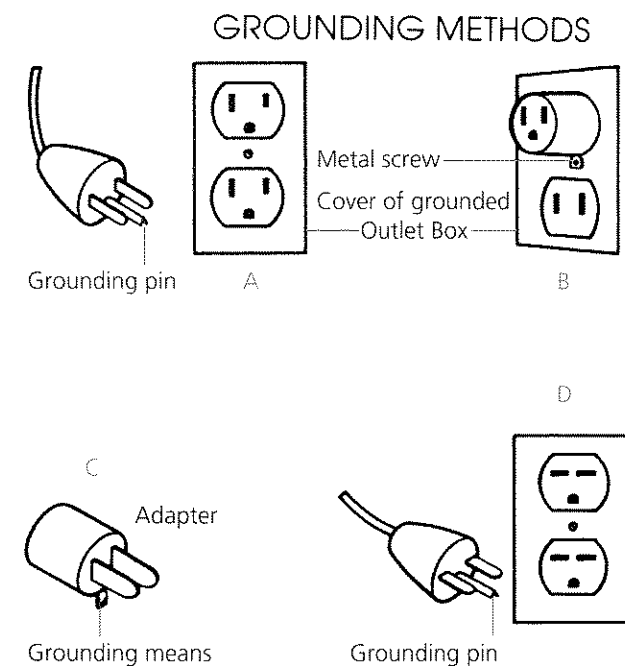
This product must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

**DANGER** – Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

## IMPORTANT SAFETY INSTRUCTIONS

Check with a qualified electrician or service-man if the grounding instructions are not completely understood or if in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This product is for use on a nominal 120 V circuit and has a grounding plug that looks like the plug illustrated in the sketch (Fig. A). A temporary adaptor which looks like the adaptor illustrated (Figs. B and C) may be used to connect this plug to a 2-pole receptacle as shown in Fig. B if a properly grounded outlet is not available. The temporary adaptor should be used only until a properly grounded outlet can be installed by a qualified electrician. The green coloured rigid ear, lug and the like, extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by the metal screw.



If this machine was purchased in a foreign country, please request an instruction manual in your own language from the national Importer or a Bernina dealer.



Dear Customer

Congratulations on the purchase of your Bernina 2000 overlocker. You are now the proud owner of an overlock sewing machine which fulfils every expectation in terms of use and quality. The Bernina 2000 is a new concept in overlocking. The unique stitch selection and automatic tension settings makes sewing easier than ever and will give you years of sewing pleasure.

Some hundred years ago, my great grandfather invented the world's first hemstitch sewing machine. This was the beginning of the BERNINA family business and I am proud to be the fourth generation member of the family to have responsibility for the company. I am delighted to welcome you to the millions of satisfied Bernina sewing machine and overlock owners around the world.

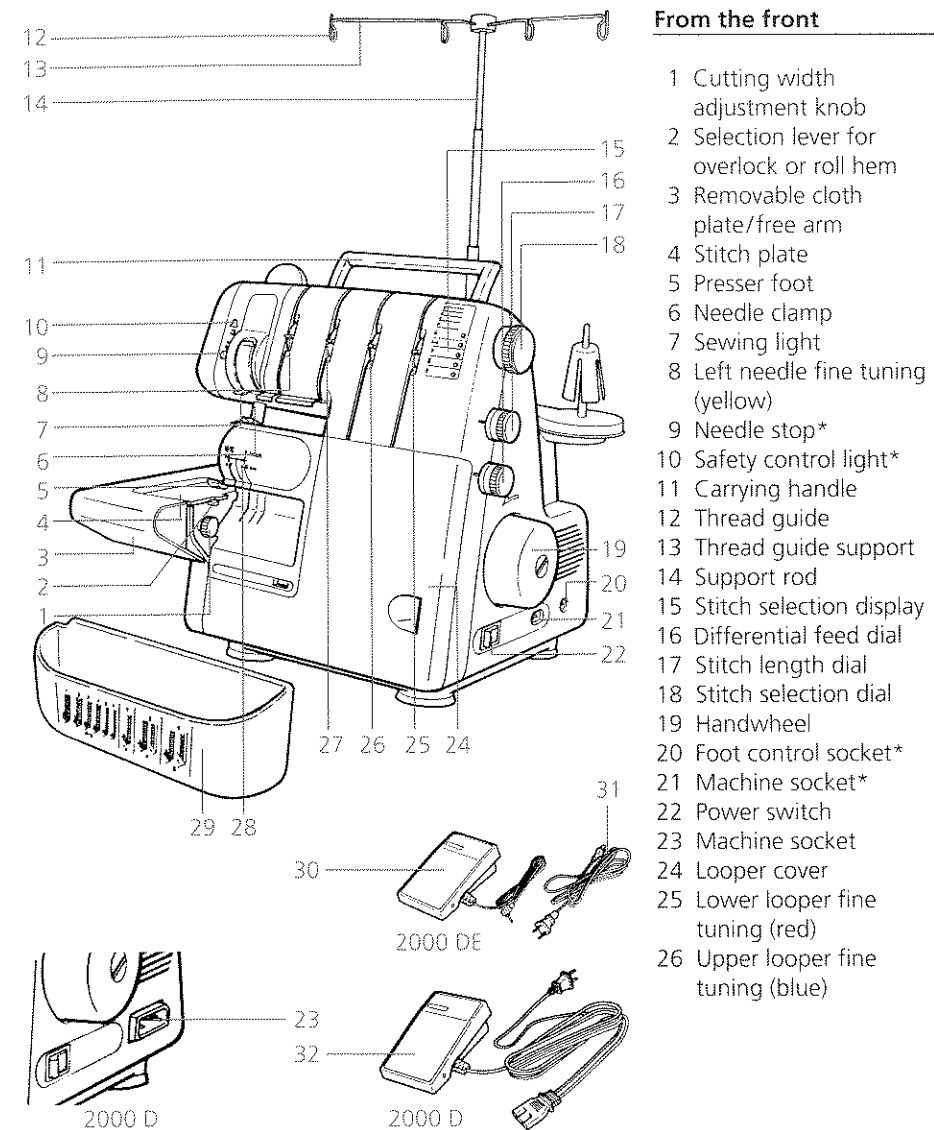
If you require any further information about your overlocker or sewing in general, please do not hesitate to contact your Bernina dealer who will be delighted to help you.

I wish you happy and successful overlocking.

*H. P. Ueltschi*

Hanspeter Ueltschi  
President  
FRITZ GEGAUF LTD.  
CH-8266 Steckborn, Switzerland

## Details of the machine



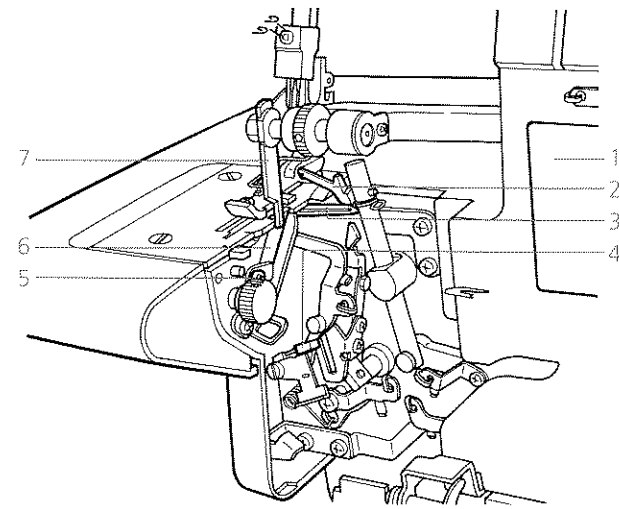
### From the front

- |  |  |
|--|--|
| 1 Cutting width adjustment knob            | 27 Right needle fine tuning (green)            |
| 2 Selection lever for overlock or roll hem | 28 Seam guide markings                         |
| 3 Removable cloth plate/free arm           | 29 Waste collector with stitch formation guide |
| 4 Stitch plate                             | 30 Foot control*                               |
| 5 Presser foot                             | 31 Power cord*                                 |
| 6 Needle clamp                             | 32 Foot control/power cord                     |
| 7 Sewing light                             |  |
| 8 Left needle fine tuning (yellow)         |  |
| 9 Needle stop*                             |  |
| 10 Safety control light*                   |  |
| 11 Carrying handle                         |  |
| 12 Thread guide                            |  |
| 13 Thread guide support                    |  |
| 14 Support rod                             |  |
| 15 Stitch selection display                |  |
| 16 Differential feed dial                  |  |
| 17 Stitch length dial                      |  |
| 18 Stitch selection dial                   |  |
| 19 Handwheel                               |  |
| 20 Foot control socket*                    |  |
| 21 Machine socket*                         |  |
| 22 Power switch                            |  |
| 23 Machine socket                          |  |
| 24 Looper cover                            |  |
| 25 Lower looper fine tuning (red)          |  |
| 26 Upper looper fine tuning (blue)         |  |

### From the back

- |                          |
|--------------------------|
| 33 Thread stand          |
| 34 Foam pad              |
| 35 Stabilizing cone      |
| 36 Spool holder pin      |
| 37 First thread guides   |
| 38 Presser foot pressure |
| 39 Presser foot lifter   |
| 40 Light switch          |

## Details of the machine

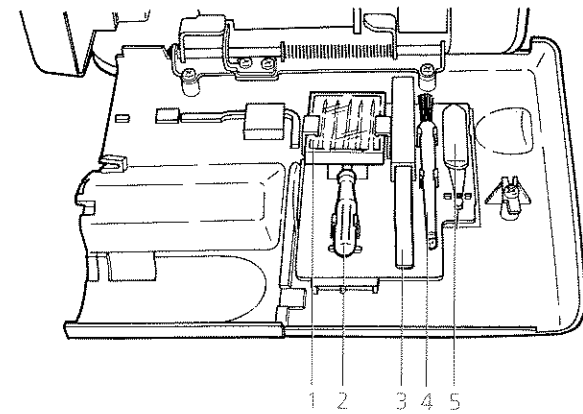


### View with looper cover open

- 1 Threading diagram
- 2 Upper looper (blue)
- 3 Lower looper (red)
- 4 Lower looper auto-threader
- 5 Lower knife setscrew
- 6 Lower knife
- 7 Upper knife

### Accessories in looper cover

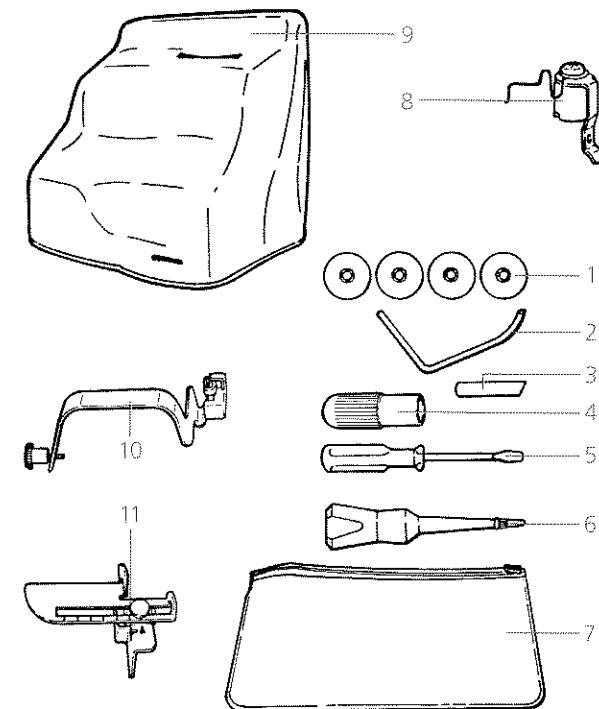
The most important accessories are neatly stored in the looper cover and always to hand.



- 1 Household needles  
130/705 H  
2 x 70, 3 x 80
- 2 Small screwdriver
- 3 Tweezers
- 4 Cleaning brush/needle inserter
- 5 Needle and looper threader

### Accessories

All other accessories are stored in the accessory bag.



- 1 Spool caps
- 2 Seam/quilting guide
- 3 Spare knife
- 4 Bulb holder
- 5 Large screwdriver
- 6 Oiler
- 7 Accessory bag
- 8 Upper looper converter
- 9 Dust cover
- 10 Deco guide
- 11 Seam guide right  
(Optional accessory for 2000 D)

# Contents

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#### Note:

The model Bernina 2000 DE is micro computer controlled and equipped with LED displays. All features exclusive to the 2000 DE are marked with the symbol \*

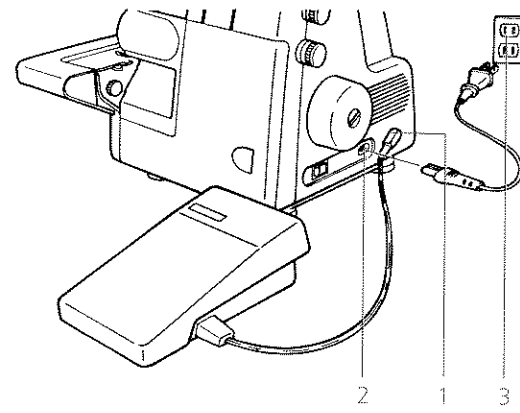
# Setting up the machine

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# Operating controls

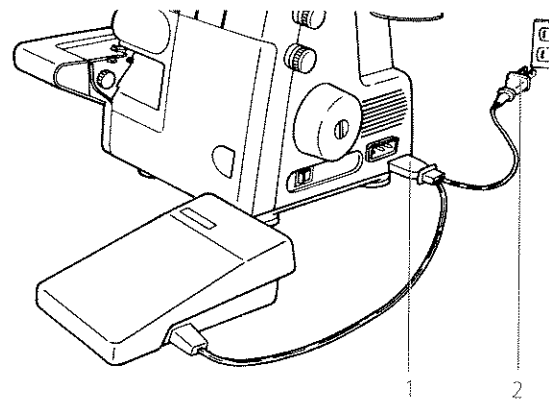
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## Setting up the machine



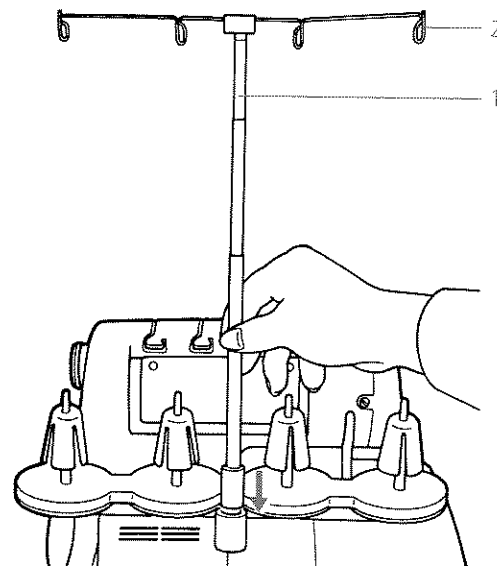
### Attaching the foot control

2000 DE: Plug the foot control into the machine socket (1) on the right side of the machine. Plug the power cord into the machine socket (2) and into the power socket (3).



2000 D: Plug foot control into machine socket (1) and then into power socket (2).

The electronic foot control allows very fine adjustment from minimum to maximum sewing speed. The sewing speed can be adjusted by increasing or decreasing the pressure on the foot control. The maximum sewing speed is between 1350 and 1500 s.p.m.

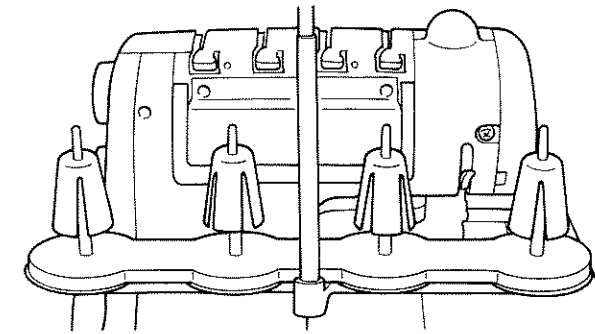


### Thread stand

Push the support rod firmly into the socket on the back of the machine.

Raise the support rod (1) fully, turning slightly until the positioning catches engage. Position the thread guide (2) on the thread stand so that it is parallel to the machine.

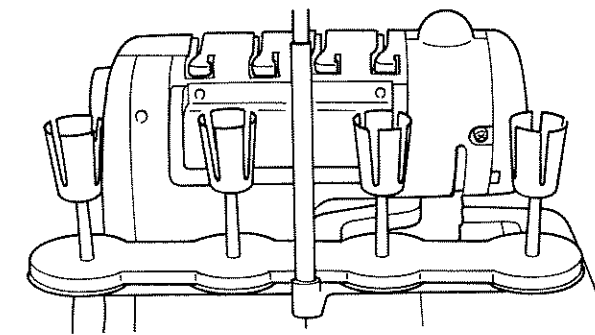
## Setting up the machine



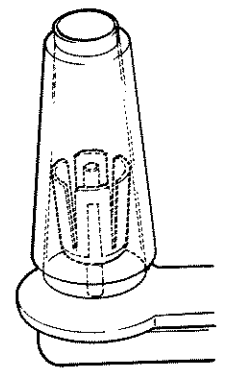
### Thread cones/spools

Cones or domestic spools in all sizes can be used on your Bernina overlocker.

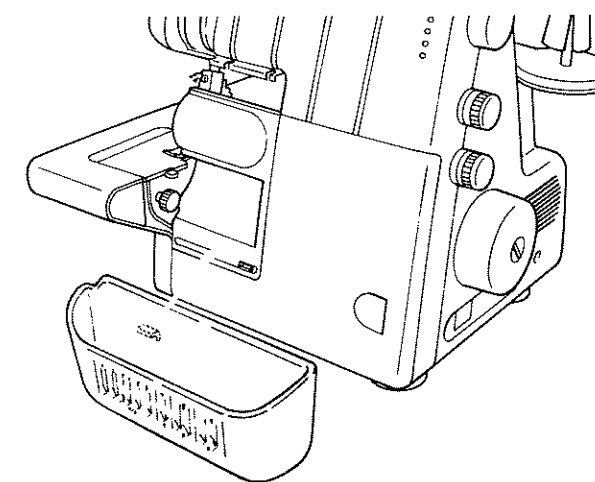
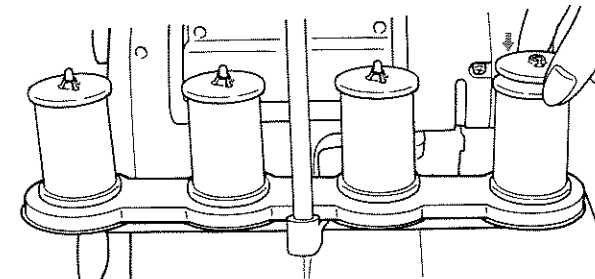
When sewing with cones, first place the stabilizing cones on the spool holder pins.



When sewing with large industrial spools, use the stabilizing cones upside down, i.e. with the wider edge at the top.



The stabilizing cones are not necessary when using household spools, but secure the spools with the spool holder caps, rounded side downwards.

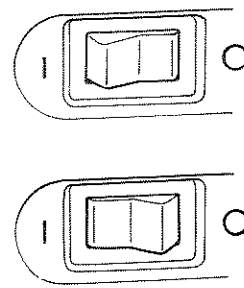


### Waste collector

Clip the waste collector into the opening on the looper cover. It catches the cut-off fabric as you sew, keeping your working area neat and tidy.

Your overlocker is now ready for sewing.

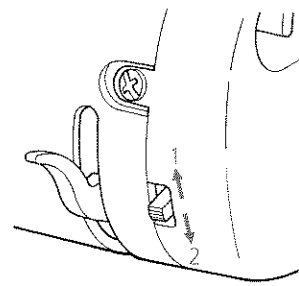
## Operating controls



### Power switch

The power switch is conveniently positioned on the handwheel side of the machine in front of the machine socket.

0 = OFF  
1 = ON



### Light switch

The light switch is placed on the rear left side of the machine, above the presser foot lifter.

1 = ON  
2 = OFF

## Electronics/safety

Your Bernina overlocker is equipped with electronic operating and safety features.

### Needle stop\*

The Needle stop is generally up, i.e. when you stop sewing, the needles will stop in their highest position, the ideal position for threading or changing the needles.

To lower the needle, press the Needle stop\* button (1). This helps when sewing in tape or elastic.

### Safety control lamp\*

If the machine has not been set up correctly, it will not sew. When the foot control is depressed, the safety control lamp will light up (2).

The control lamp lights up when the presser foot is in the raised position or when it is swung out. The lamp blinks when you press the

foot control and the presser foot is raised or the looper cover is open.

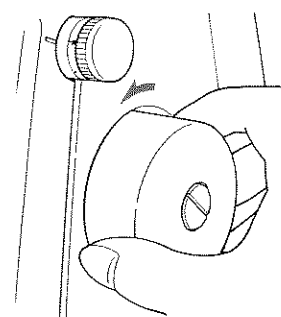
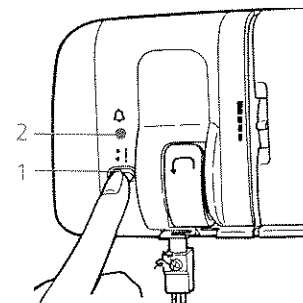
### Safety cut-out\*

If overheating should occur, the motor will cut-out for 2 seconds, after which sewing can be continued.

Note: If you turn the stitch selection dial while sewing, the control lamp will blink and the machine will stop sewing.

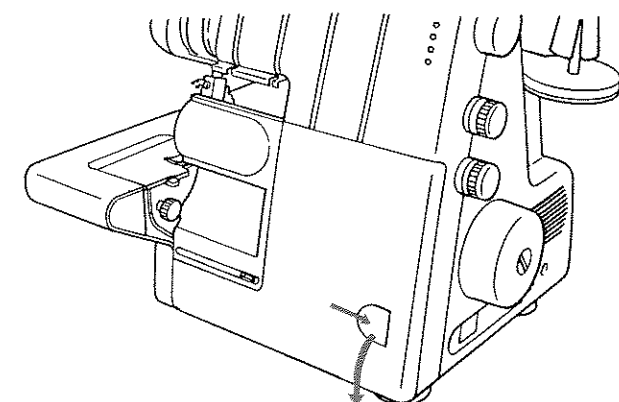
### Micro-safety switch:

When the looper cover is opened, the electricity supply to the motor is automatically cut off. The machine will not sew but the light remains on for threading etc.



### Handwheel

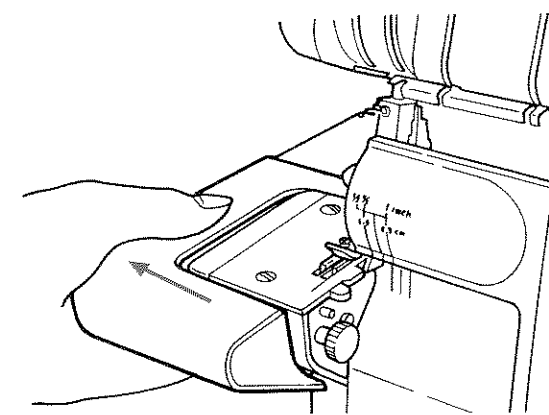
The handwheel turns forwards in the same direction as on a household machine.



### Looper cover

To open the looper cover, press to the right and tilt the cover towards you. To close the cover, push it up and press lightly to the left. The looper cover engages automatically.

## Operating controls



### Cloth plate/free-arm

The cloth plate can be removed to expose the free arm.

To remove: Pull to the left.

To attach: Press on firmly from the left until it engages.

The free arm is ideal for sewing tubular items.

Examples: Sewing on ribbing, trouser hems, cuffs, or neatening.

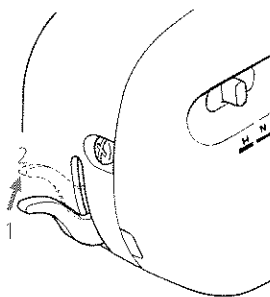
### Two-step presser foot lifter

It is positioned on the rear of the machine above the presser foot.

To raise the presser foot, lift the presser foot lever until it engages (1).

It can be raised again to maximum height and held in this position to provide more space between presser foot and stitch plate for bulky items. (2).

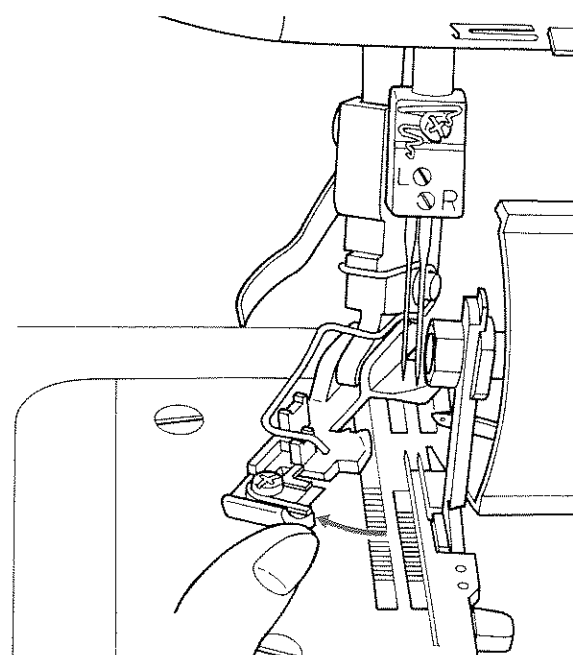
Note: When the presser foot is in the raised position, all the tension are released. This makes it easier to thread the machine.



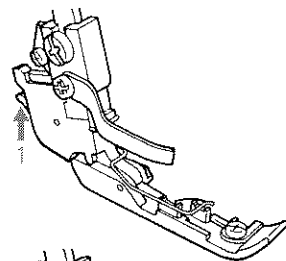
### The swing-out presser foot

- Raise the needles (Needle stop\*).
- Raise the presser foot and swing out.

The swing-out foot (exclusive to Bernina) permits easy access for threading needles or loopers. It is also easier to change the needles and insert band or elastic into the guide on the foot.

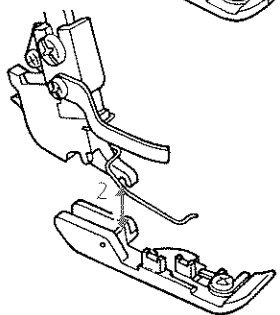


**Changing the presser foot**



- Raise the needles (Needle stop\*)
- Raise the presser foot.

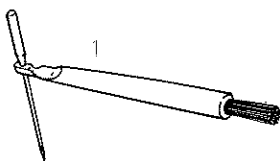
Press the catch (1) to release the presser foot from the clamp. Remove the presser foot to the left.



To attach the foot, place it under the shaft. The groove in the shaft should line up exactly with the presser foot pin (2). Lower the shank and the presser foot will engage automatically.

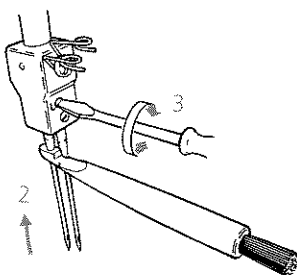
**Inserting needles**

Needles can be inserted quickly and easily with the practical needle inserter.



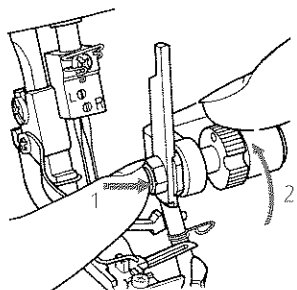
- Raise the needles (Needle stop\*)
- Raise the presser foot and swing out.

Using the small screwdriver, loosen the needle setscrews and remove the needles. Place right needle, flat sides towards the back, into the hole of the needle inserter (1) and insert the needle as far as possible into the needle clamp (2).



Tighten the right needle setscrew lightly and then insert the left needle in the same way and tighten both setscrews firmly (3).

**Raising the upper knife**



- Raise the needles (Needle stop\*)
- Open the looper cover.

Press the upper knife holder (1) to the right. Turn the knob (2) clockwise until the knife locks.

# Needles and thread

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## Needles and threads

### Needles and machine

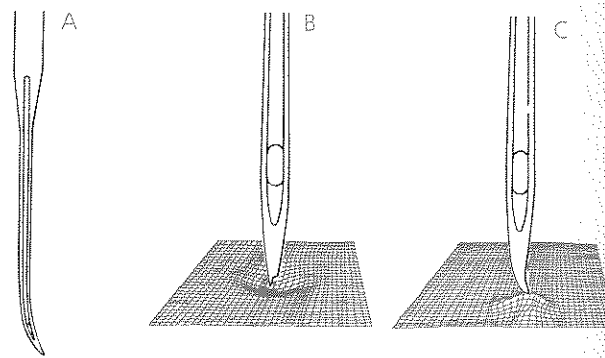
Your Bernina overlocker is equipped with needle system 130/705 H (household needles).

*These should be purchased when replacement needles are required.*

### Needle and fabric

Needles must be in perfect condition. Problems can occur if needles:

- A are bent
- B are damaged or blunt
- C have hooked points



### Needle and thread

The needle size used depends on the thread. The needle should suit the thread.

When sewing the thread is fed through the long groove in the needle. If the needle is too fine, the thread does not fit into the groove and stitches will be skipped.

Use needles no. 70–90 on your Bernina overlocker.

### Thread/decorative threads

Sewing and overlock threads are being manufactured in increasing numbers in a wide variety of types, weights and combination fibres. It is worth investing in good quality threads for perfect sewing results.

Decorative threads specially made for overlockers are also becoming widely available. We recommend following the basic guidelines when using special threads on your overlocker:

- Purchase threads which are exclusively produced for overlocking on cones or spools.
- When using normal spools, use the spool caps (in accessory bag).
- Only use decorative threads in the loopers. Thread must move easily and without resistance through the thread guides and looper eye so take this into account when purchasing thread.
- The thicker the thread, the longer the stitch length.
- The thicker the thread, the looser the tensions.
- Sew slowly when using decorative threads. Pull the thread chain gently backwards when starting to sew.
- Always test sew when using decorative threads.
- Use the deco-guide when sewing thick or decorative threads. (see P. 39)

### Thread, needle, application table

Thread	Needles	Where	Application
All purpose overlock thread 120/2 (polyester)	70–90	Needle and loopers	For all overlock work
Spun polyester 120/2	–	Loopers only	Neatening edges
Woolly nylon	–	Loopers only	Soft seams in knits, rolled hems
Polyester sewing thread	80–90	Needles and loopers	Seams in all fabrics
Embroidery/darning thread	70–80	Needles and loopers	Neatening edges, rolled hems

## Overlock stitches and stitch selection

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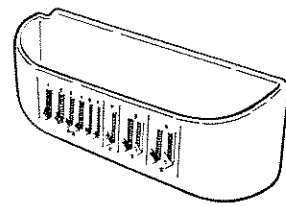
## Threading

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3 thread narrow seam	26
3 thread super stretch	
2 thread overlock	
2 thread roll hem	26
3 thread flatlock	26
2 thread flatlock	26
3 thread roll hem	26

## Overlock stitches and stitch selection



### Bernina 2000 stitches

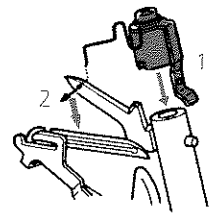
The Bernina 2000 sews 9 different stitches. Basically, the stitches are formed with two looper threads.

Examples:  
4 thread overlock with integrated safety seam  
3 thread overlock/flatlock/roll hem/narrow seam

A further choice of stitches can be sewn with one looper using the upper looper converter.

Examples:  
3 thread super stretch  
2 thread overlock/flatlock/roll hem

### Upper looper converter



Use the converter for one-looper stitches.

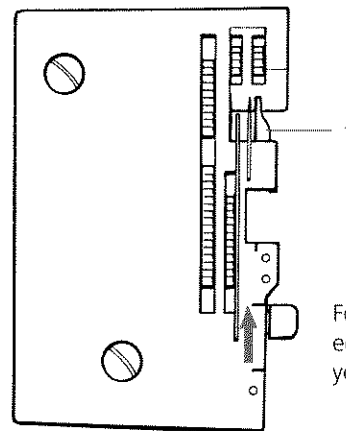
Lower the needles (Needle stop\*)  
Open the looper cover

Attach the converter (accessory bag) to the upper looper arm (1). Insert the wire hook into the upper looper eye from back to front (2). The upper looper has now been converted, i.e. it no longer carries thread but it diverts the lower looper thread so that loops are formed round the edge of the fabric.

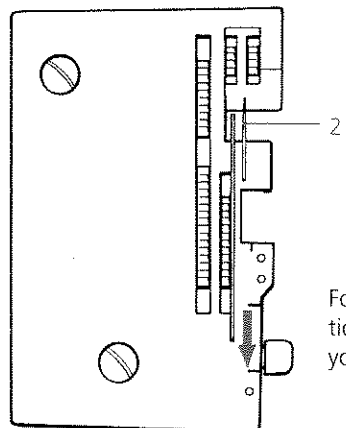
### Stitch selection lever/roll hem

Rolled hems can be sewn automatically. When the selection lever is pulled forward, the wide overlock stitch finger (1) is retracted to expose the roll hem pin (2). The fabric edge is rolled round the pin while sewing to produce a fine and decorative edge finish.

– Raise the needles (Needle stop\*).

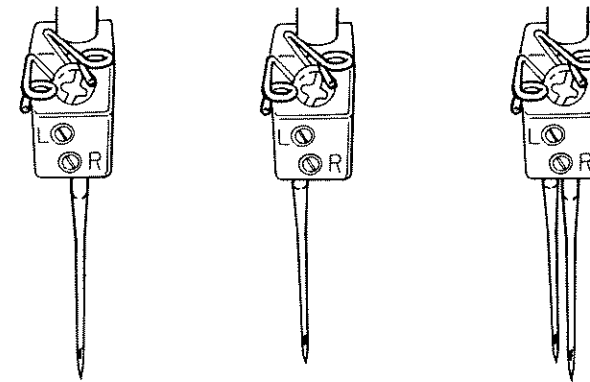


For overlock, push the selection lever back away from you.



For roll hem, pull the selection lever forwards towards you.

## Overlock stitches and stitch selection



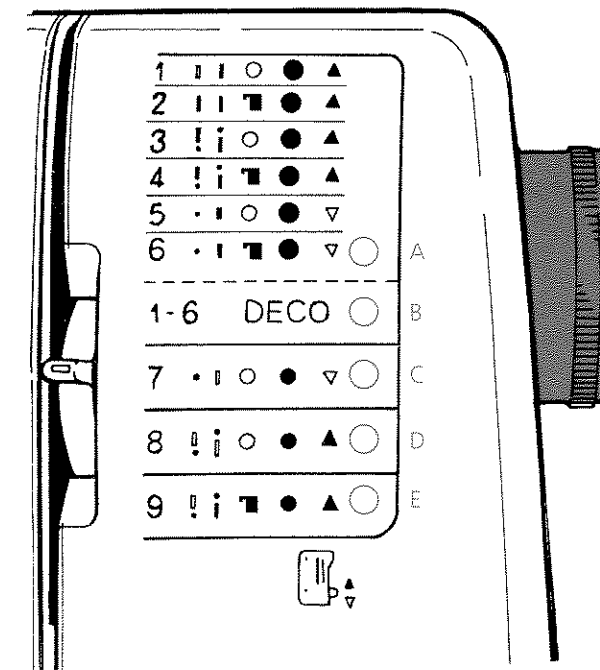
### Overlock stitch width

The width of the stitch is determined by the needle used.

Stitches with the right needle:  
3–5 mm (overlock)  
1.5 mm (roll hem)

Stitches with the left or right and left needles:  
5–7 mm (overlock)

Note: Remove the unthreaded needle and thread.



### Stitch display/stitch selection dial

The Bernina 2000 is equipped with a unique stitch selection function. The basic settings for nine different overlock stitches are distributed over five sewing positions. The position desired can be selected by simply turning the stitch selection dial. The position selected is displayed by LED\* lamps or marked green.

### Sewing position/stitch display

All the stitches illustrated on the waste collector can be selected with the stitch selection dial. The automatic tension settings for Positions A, C, D and E are for normal sewing or overlock thread.

Position B stitches are the same as position A but with automatic tension settings for woolly nylon in the loopers.

### Stitch display

The stitch display provides all the information you need about stitches and threading.

Symbols:

- ▲ Move stitch selection lever to «overlock»
- ▽ Move stitch selection lever to «roll hem»
- Attach the upper looper converter (upper looper is not threaded)

Yellow line = thread the left needle

Green line = thread the right needle

Blue dot = thread the upper looper

Red dot = thread the lower looper

Small black dot = remove needle

# Threading

## General threading instructions

Thread the machine carefully and in the correct sequence.

*Tip:* When threading for the first time, use coloured threads to match the threading codes, i.e. blue, red, green and yellow, so that when you have test sewn,

you can see exactly how the stitch is formed.

Your Bernina overlocker is equipped with practical threading aids.

– Stitch display with threading information

– Coloured threading diagram

– Colour coded threading path

– Lay-in thread guides

– Threading accessories in the looper cover

## Preparation

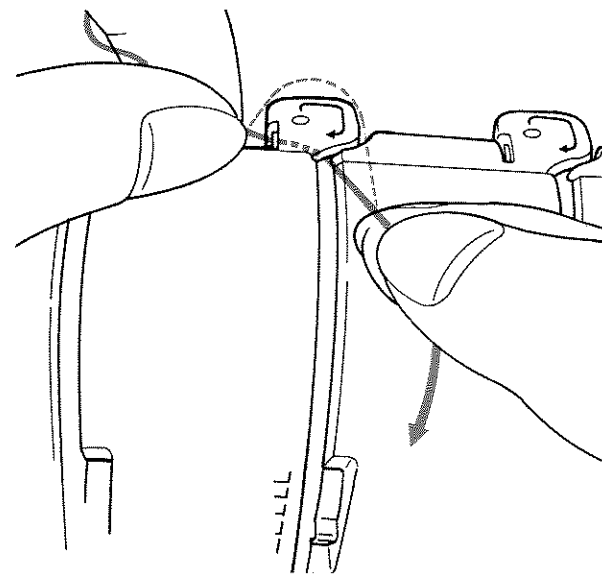
– Raise the support rod fully.

– Raise the needles (Needle stop\*).

– Raise the presser foot. The tensions release automatically.

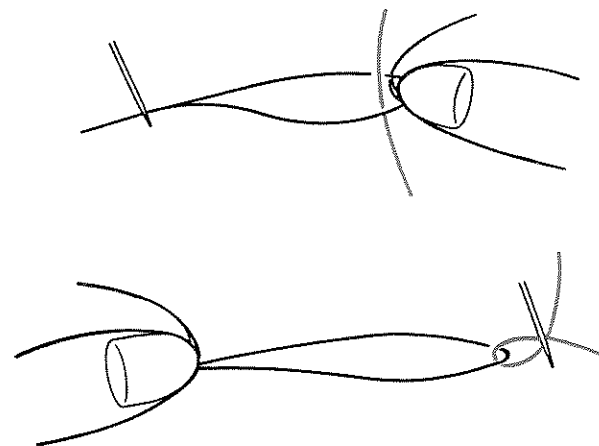
– Open the looper cover.

– Raise the upper knife.



## First thread guide on the machine

The guides on the top of the machine are colour coded and simple to thread. Hold the thread with both hands and slip it into the appropriate guide from back to front in the direction of the arrow and pull gently.



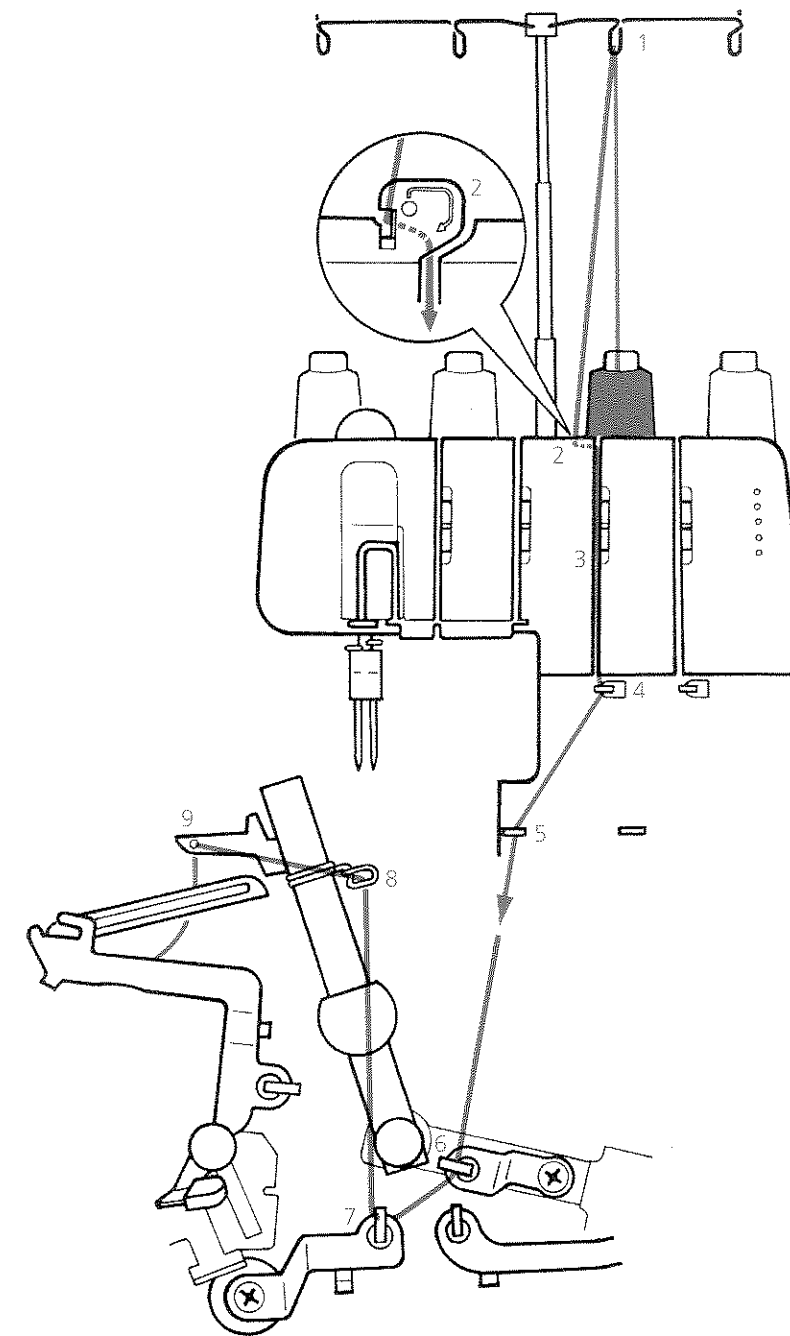
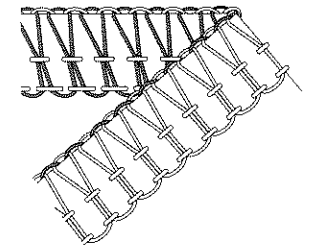
## Needle/looper threader

Insert the thread into the threader. Push the rigid end of the threader through the needle or looper eye and pull it completely through.

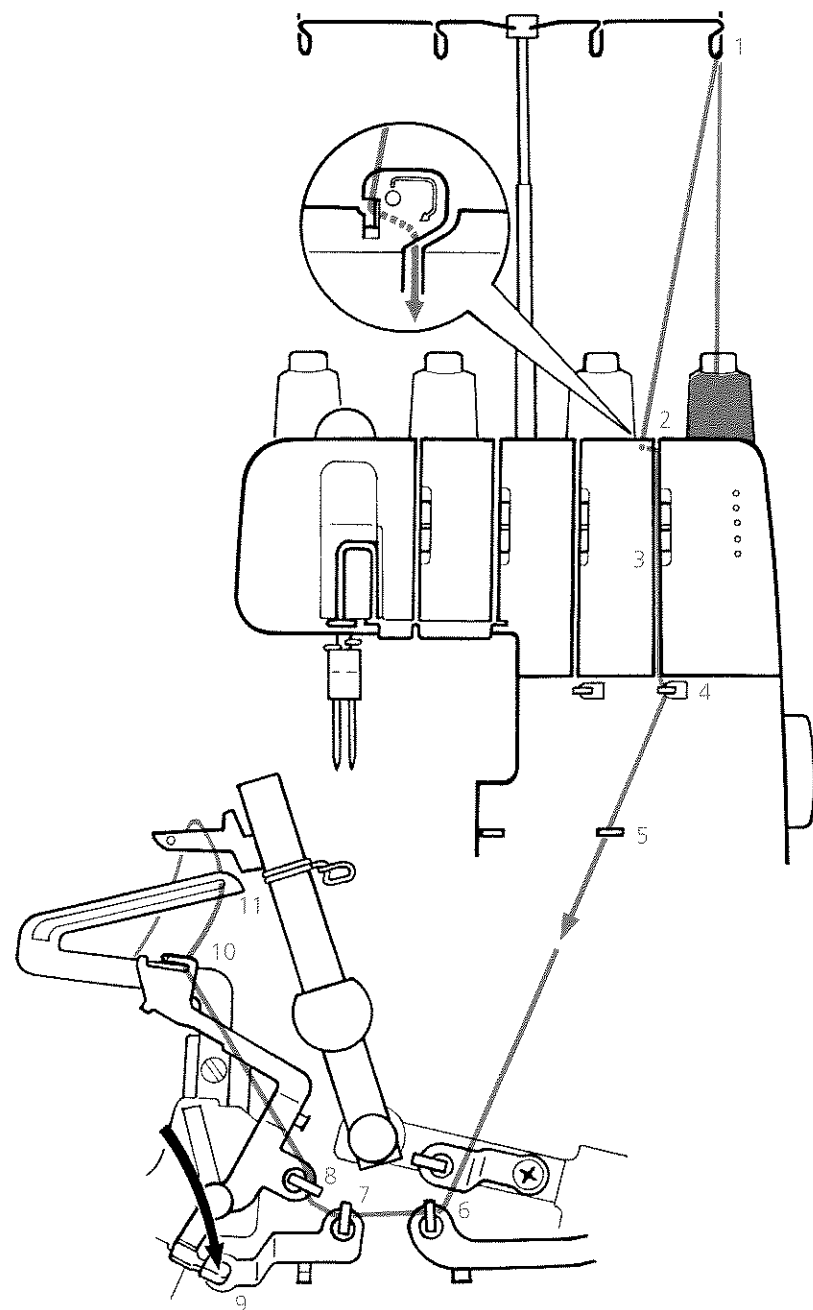
# Threading

## 1. Upper looper (blue)

Place the spool on the spool holder pin underneath the blue thread guide.

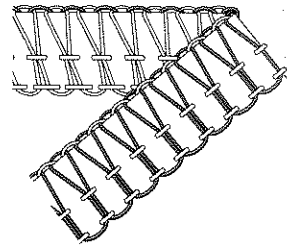


- 1 Bring the thread up from the spool and lay it from back to front in the blue guide.
- 2 Thread the first machine guide.
- 3 Slip the thread through the groove.
- 4, 5, 6, 7, 8 Thread the guides.
- 9 Swing-out the presser foot. Thread the looper eye. Swing the presser foot back and lay the thread underneath it.



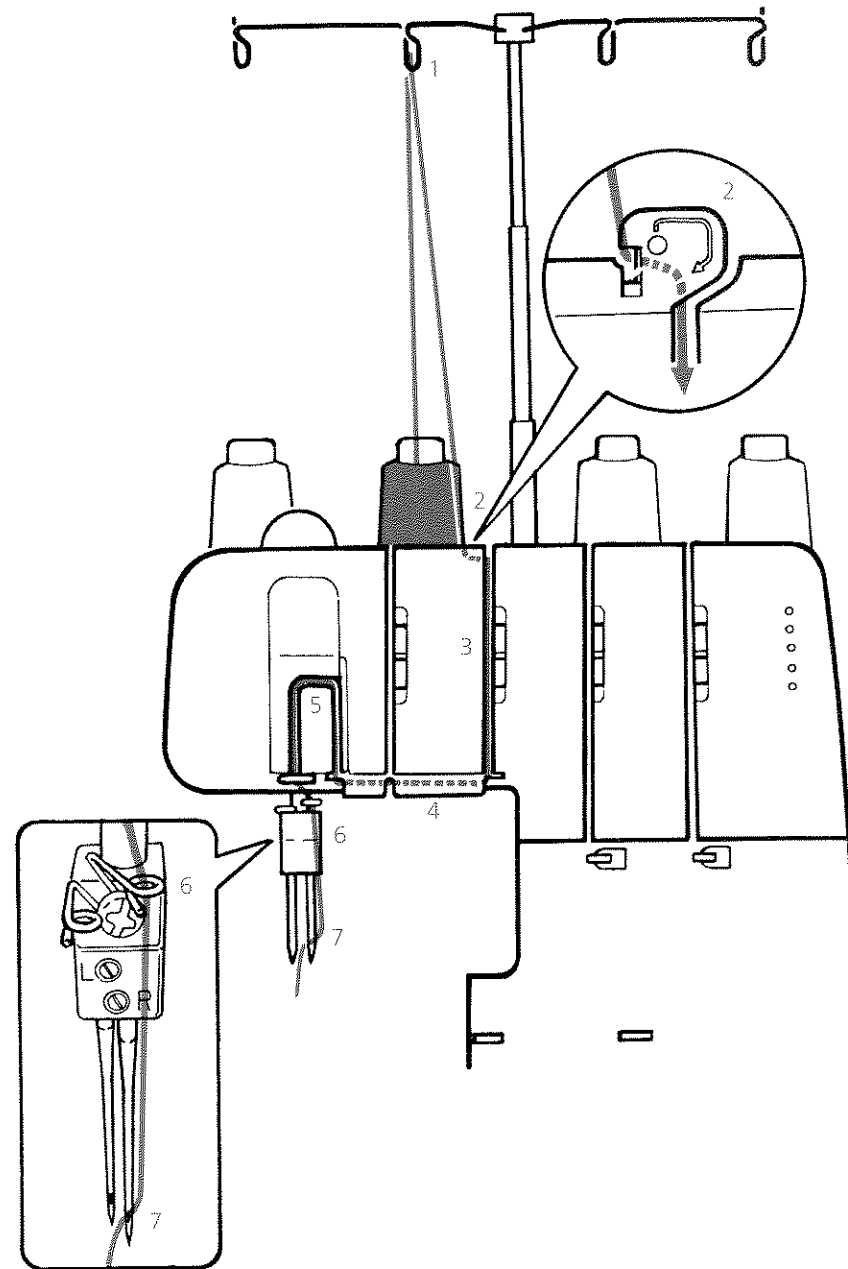
## 2. Lower looper (red)

Place the spool on the spool holder pin underneath the red thread guide.



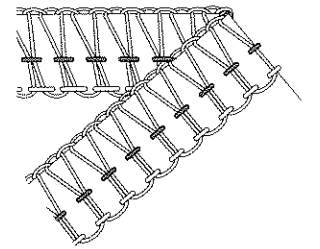
- 1 Bring the thread up from spool and lay it from back to front in the red guide.
- 2 Thread the first machine guide.
- 3 Slip the thread through the groove.
- 4, 5, 6, 7, 8 Thread the guides.
- 9 Press the lever on the auto threader down.
- 10 Thread the guide and then the slit on the threader. Holding the thread loosely with the left hand, turn the handwheel until the upper and lower loopers just cross. The auto threader will automatically return to its normal position.
- 12 Thread the lower looper eye. Take the thread over the upper looper and lay it under the presser foot.

*Tip:*  
When sewing with the upper looper converter, take the lower looper thread over the point of the upper looper to the left of the wire and lay it under the presser foot.



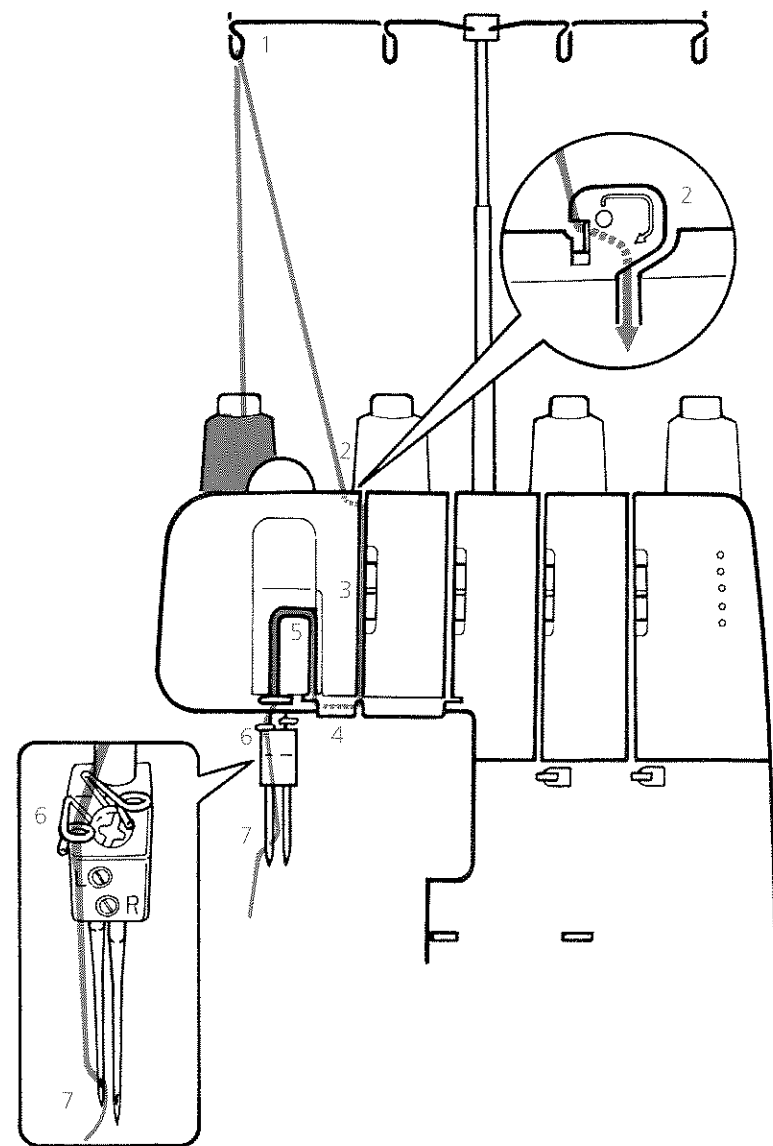
## 3. Right needle (green)

Place the spool on the spool holder pin underneath the green thread guide.



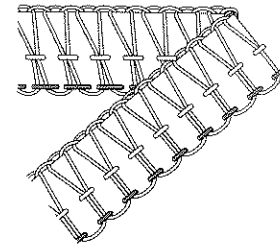
- 1 Bring the thread up from spool and lay it from back to front in the green guide.
- 2 Thread the first machine guide.
- 3 Slip the thread through the groove.
- 4, 5 Take the thread under the thread guide plate and through the take-up.
- 6 Thread the guide on the needle clamp.
- 7 Swing the presser foot out. Thread the needle from front to back. Swing the presser foot back and lay the thread under it.

## Threading



### 4. Left needle (yellow)

Raise the presser foot. Place the spool on the spool holder pin underneath the yellow thread guide.



- 1 Bring the thread up from the spool and lay it from back to front in the yellow guide.
- 2 Thread the first thread guide.
- 3 Slip the thread through the groove.
- 4 Take the thread under the thread guide plate and through the take-up.
- 5 Thread the guide on the needle clamp.
- 6 Swing the presser foot out. Thread the needle from front to back. Swing the presser foot back and lay the thread under it.

### After threading

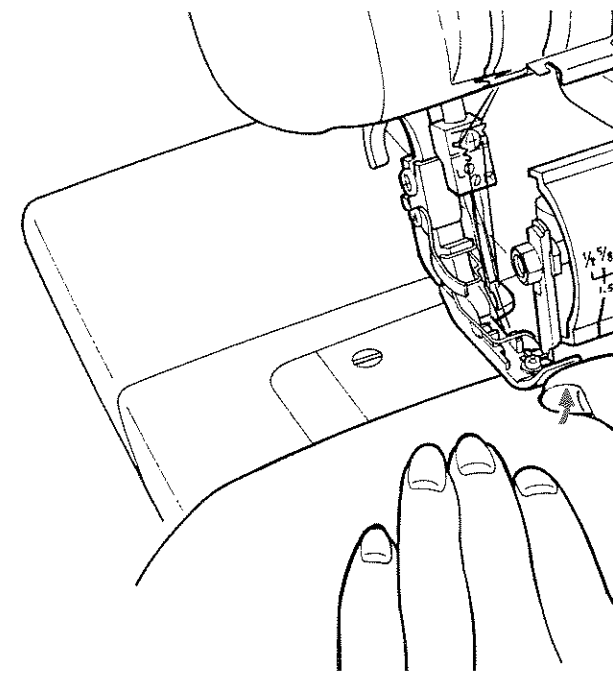
When threading is finished, lower the presser foot, lower the upper knife and close the looper cover.

**Note:** If the lower looper has to be rethreaded, cut off both needle threads and remove surplus thread from below. First thread the looper and then rethread the needles.

**Tip:** If spools are empty or you want to change the thread, it is not necessary to rethread the machine. Simply cut off the threads above the cones or spools, replace them and knot new thread on to the existing thread. Cut the threads off at the needles. Raise the presser foot, pull the threads through and rethread the needles and lower the presser foot. Select the stitch of your choice and test sew.

## Sewing test and fine tuning

After threading, turn the stitch selection dial to the desired position and make a sewing test.



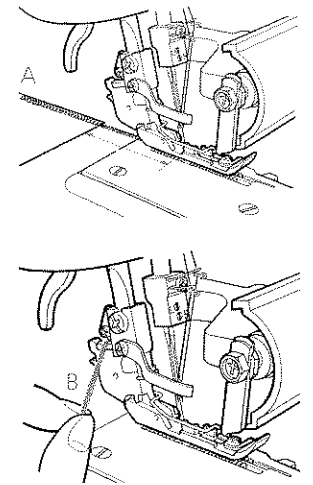
### Starting to sew / Thread cutter

Raise the tip of the presser foot with your thumb and position the fabric just under the foot. Let go of the foot and start to sew. The fabric will be taken up automatically.

At the end of the seam, continue sewing a 5–6 cm (2–2 1/2") long thread chain (A).

Holding the fabric in your left hand, pull the thread chain over the thread cutter on the presser foot shank (B).

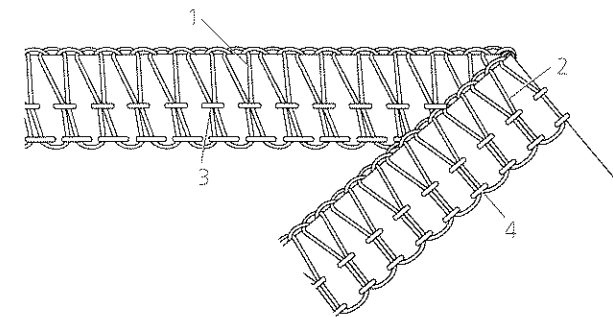
**Tip:** When sewing with the upper looper converter, first turn the handwheel a few times to form a thread chain.



### Fine tuning

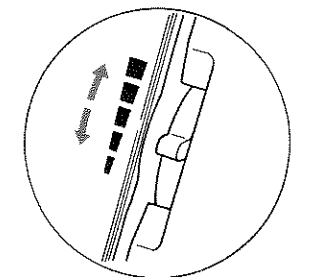
Compare your sewing test with the stitch formations on the waste collector or on the threading diagram inside the looper cover.

Stitch formations which are not perfect can be corrected with the fine tuning.



Example: 4 thread overlock

- 1 Upper looper thread (blue)
- 2 Lower looper thread (red)
- 3 Right needle thread (green)
- 4 Left needle thread (yellow)

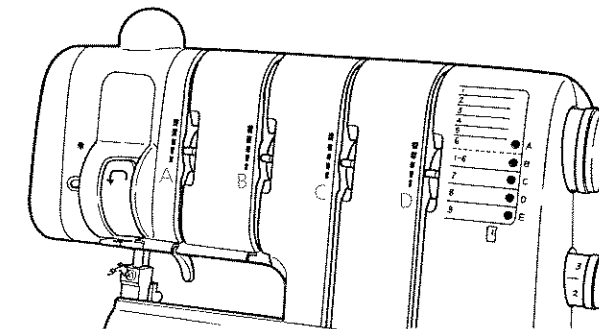


The upper looper thread lies on the upper side of the fabric and the lower looper thread lies on the underside of the fabric. The loops formed by both threads meet exactly on the edge of the fabric.

To increase the tension, move the fine tuning lever up. To reduce the tension, move the lever down.

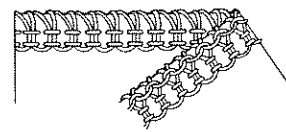
The right needle forms a stretchy safety seam in the centre of the stitch. The left needle thread anchors both looper threads.

- A Left needle fine tuning (yellow)
- B Right needle fine tuning (green)
- C Upper looper fine tuning (blue)
- D Lower looper fine tuning (red)

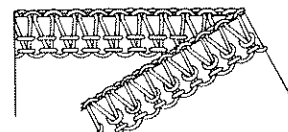


## Sewing test and fine tuning

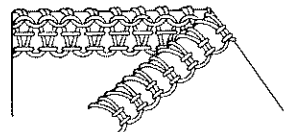
### Fine tuning for 3/4 thread overlock and 3 thread narrow seam:



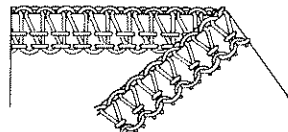
The loops are formed on the underside:  
Increase the upper looper thread tension (blue).  
Reduce the lower looper thread tension (red).



The right needle thread forms loops on the underside:  
Increase the right needle tension (green).

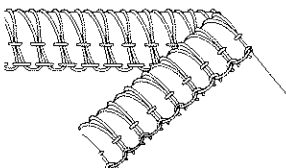


The loops are formed on the upper side:  
Increase the lower looper thread tension (red).  
Reduce the upper looper thread tension (blue).



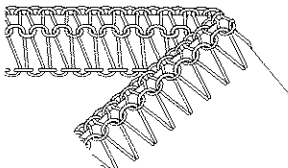
The left needle thread forms loops on the underside:  
Increase the left needle thread tension (yellow).

### Fine tuning for 3 thread super stretch 2 thread wrapped overlock 2 thread roll hem



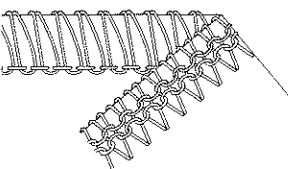
The left needle forms loops on the underside.  
Increase the left needle thread tension (yellow).  
Reduce the lower looper thread tension (red).

*Tip:* The elasticity of the 3 thread super stretch stitch can be increased by reducing the right and/or left needle thread tensions.



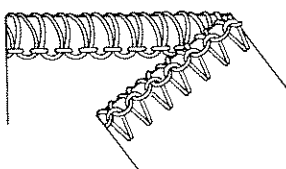
### Fine tuning for 3 thread flatlock

The loops are formed on the upperside:  
Reduce the upper looper thread tension (blue).  
Increase the needle (yellow or green) or lower looper tension (red).

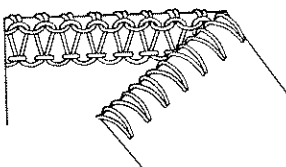


The loops are formed on the underside.  
Increase the lower looper thread (red) or upper looper tension (blue).  
Reduce the needle tension (yellow or green).

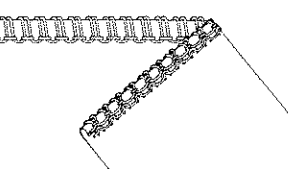
### Fine tuning for 2 thread flatlock



The loops are formed on the underside:  
Increase the lower looper thread tension (red).  
Reduce the needle thread tension (yellow or green).



The loops are formed on the upperside:  
Reduce the lower looper thread tension (red).  
Increase the needle thread tension (yellow or green).



### Fine tuning for 3 thread roll hem:

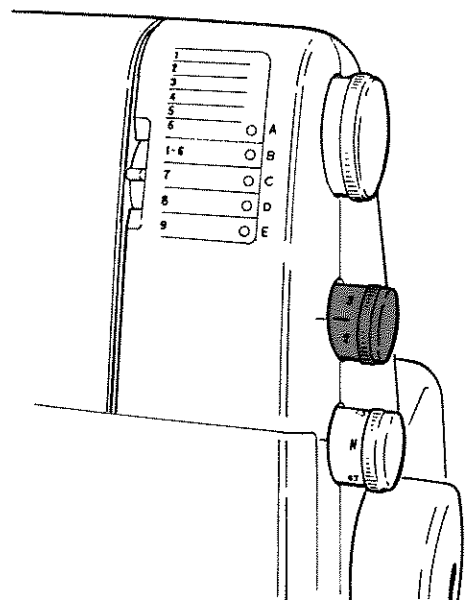
The loops do not meet at the line of the needle thread on the underside:

Increase the lower looper (red) or needle thread (green) tension.  
Reduce the upper looper thread tension (blue).

# Adjustments and settings

Stitch length	28
Cutting width	28
Differential feed	29
Presser foot pressure	30

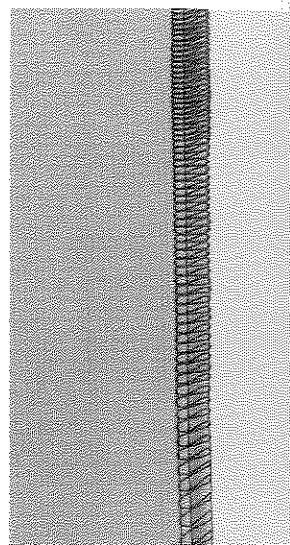
## Adjustments and settings



### Stitch length

Every stitch equals one complete feed-dog movement. The extent of this movement is determined by the selected stitch length.

The stitch length is infinitely variable from 1–4 mm and can be adjusted while sewing. Simply turn the stitch length dial in the direction desired. Most overlock work is done with a basic stitch length setting of 2.5 mm (marking on the dial).

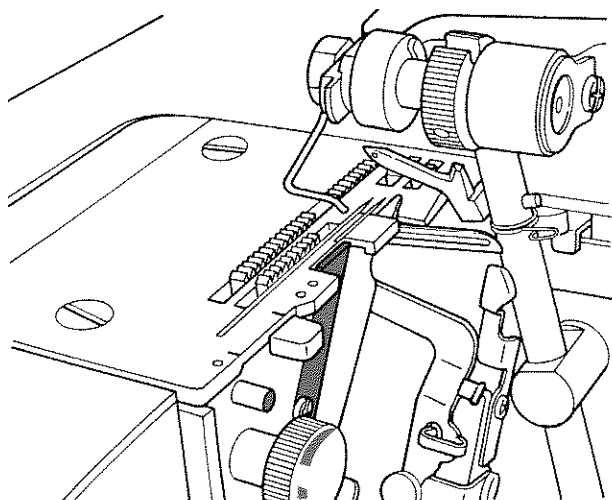


### Cutting width

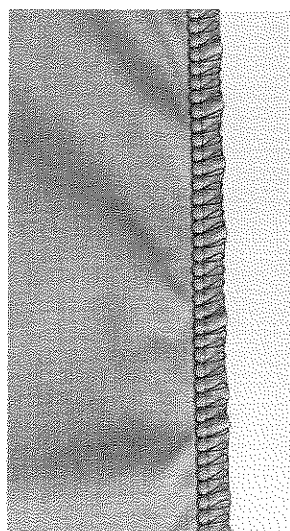
The cutting width is determined by the distance between the knife and the right or left needle.

*Raise the upper knife.*

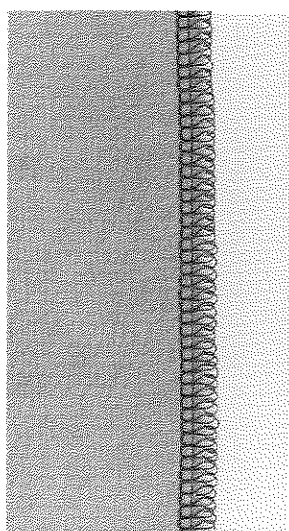
Turn the cutting width dial in the desired direction. Lower the upper knife. It adjusts itself automatically to the position of the lower knife.



Position of knife:	1	2	3
Right needle:	3 mm	4 mm	5 mm
Left needle:	5 mm	6 mm	7 mm



Reduce the cutting width if the edges of fine fabrics curl when being sewn. Turn the cutting width dial to a lower number.

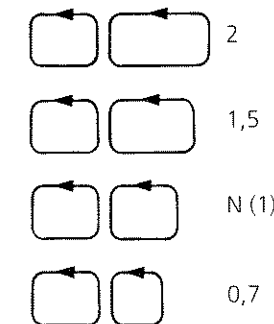
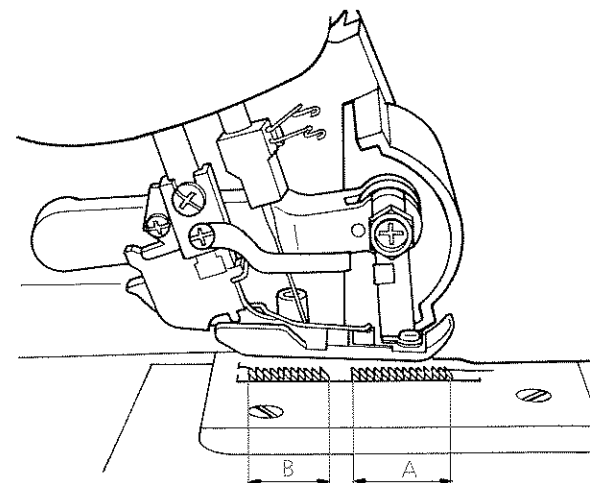


Increase the cutting width if the loops formed on the fabric edge are too loose. Turn the cutting width dial to a higher number.

## Adjustments and settings

### Differential feed

There are two feed dogs on your Bernina overlocker – one front (A) and one rear (B). The two feed dogs move independently and their distance of travel can differ.



### Pushing effect

The most common use for the differential feed is to prevent wavering or fluting in knits or puckers in fine woven fabrics.

The distance travelled by the front feed dog is greater than that of the rear feed dog (examples 1.5 and 2). The front feed dog pushes the amount of fabric which the rear feed dog can take up unstretched (knit) or unpuckered (fine wovens) behind the needle.

### Stretching effect

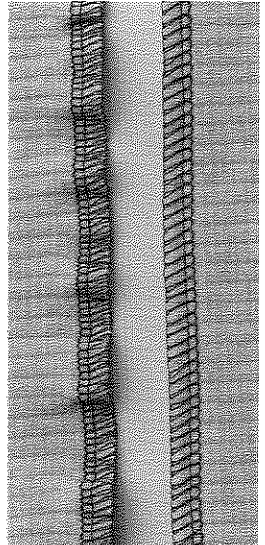
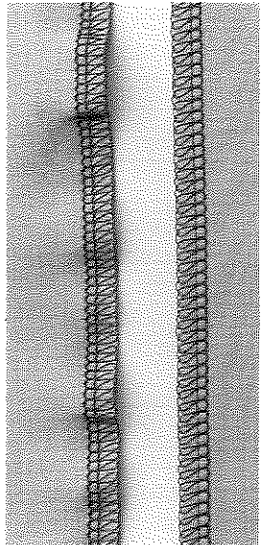
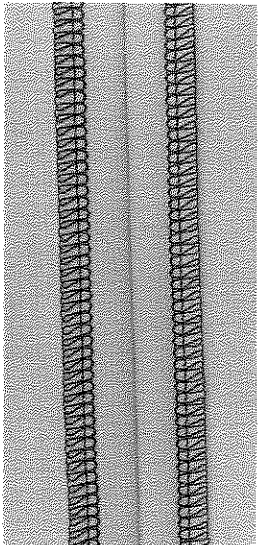
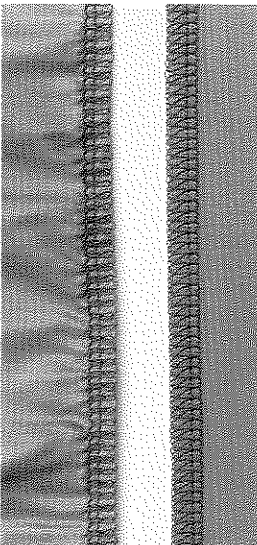
The opposite effect can be produced to prevent fine nylon jerseys or closely woven fabrics from puckering.

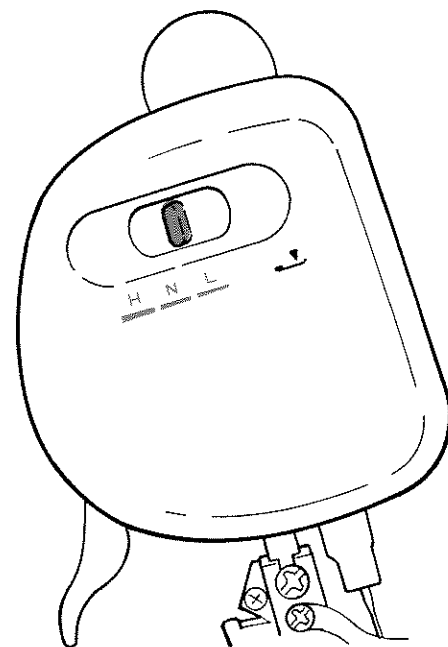
The distance travelled by the rear feed dog is greater than that of the front feed dog (example 0.7). The front feed dog holds the fabric back causing a stretching effect so that the rear feed dog can take up the fabric behind the needle without gathering.

## Adjustments and settings

### Adjusting the differential feed

Simply turn the dial in the direction desired for step-free adjustments while sewing. Always test sew.

Setting	2	1,5	N	0,7
Effect	Pushing effect, no fluting	Pushing effect, no fluting	Normal feed	Stretching effect, no puckering
Fabric	Thick or loose knits, hand knitted articles	Fine to medium weight knits, e.g. sweatshirt, velours, interlock	Most woven fabrics	Nylon jerseys, closely woven fabrics e.g. Charmeuse, linings, satin, poplin.
				



### Presser foot pressure

The presser foot pressure ensures perfect fabric feed. It is factory adjusted for normal sewing work.

Adjusting the presser foot pressure:

Push the lever in the direction desired.

N = Normal pressure: Basic setting for most normal work.

H = High pressure: For thick or stiff fabrics such as denim, tweed, linen and for sewing on elastic.

L = Low pressure: For light-weight or sheer fabrics such as chiffon, georgette, batiste, linings.

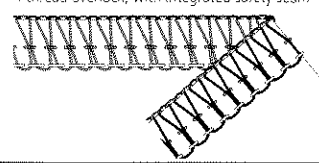

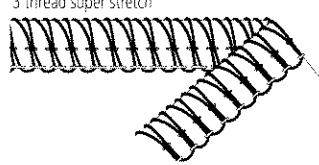

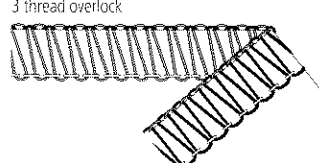

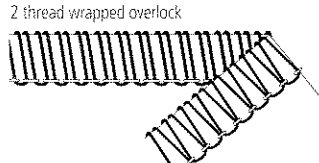

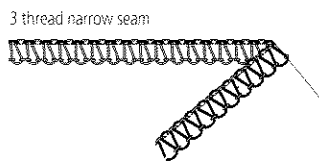

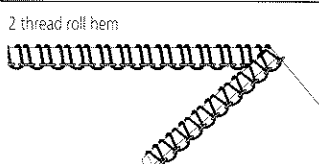

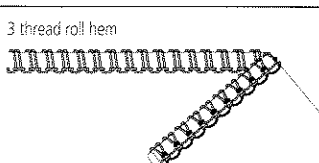

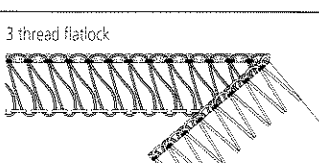

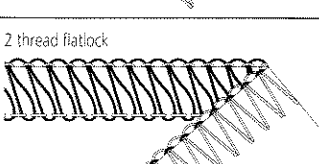


Note: Seams in knitted fabrics will wave if the presser foot pressure is too high. Always set to «N» when sewing knit.

## Stitch chart

4 thread overlock with integrated safety seams	32
3 thread super stretch	32
3 thread overlock	32
2 thread overlock	32
3 thread narrow seam	32
2 thread roll hem	32
3 thread roll hem	32
3 thread flatlock	32
2 thread flatlock	32






## Stitch chart

NO.	Stitch	Symbols	Stitch width	Pos.	Recommended threads	Basic settings
1	4 thread overlock, with integrated safety seam 		5-7 mm, right and left needles	A	Upper/lower looper, right/left needle: all-purpose overlock thread, polyester thread	Stitch length: 2, 5 Cutting width: 2 Differential: N-2 (knits), N-0,7 (wovens)
2	3 thread super stretch 		5-7 mm, right and left needles	A	Lower looper, right/left needles: all-purpose overlock thread, polyester thread	Stitch length: 2, 5 Cutting width: 2 Differential: N-2 (always)
3	3 thread overlock 		3-5 mm, right needle 5-7 mm, left needle	A	Upper/lower loopers and needle: all-purpose overlock thread, polyester thread, embroidery or darning thread	Stitch length: 2,5 Cutting width: 2 Differential: N-1,5 (knits), N-0,7 (wovens)
4	2 thread wrapped overlock 		3-5 mm, right needle 5-7 mm, left needle	B	Upper looper: woolly nylon or similar decorative thread Needle: all-purpose overlock thread, polyester thread	Stitch length: 1-2 Cutting width: 1-2 Differential: 0,7-1,5
5	3 thread narrow seam 		1,5 mm, right needle	A	Upper/lower looper/needle: all-purpose overlock thread, polyester thread, rayon thread	Stitch length: 1,5-2 Cutting width: 1-1,5 Differential: N-0,7
6	2 thread roll hem 		1,5 mm, right needle	A	Lower looper/needle: all-purpose overlock thread, polyester thread, embroidery or darning thread, rayon thread	Stitch length: 1-1,8 Cutting width: 1-1,5 Differential: N-0,7
7	3 thread roll hem 		1,5 mm, right needle	B	Lower looper: Woolly nylon Needle: all-purpose overlock thread	
8	3 thread flatlock 		3-5 mm, right needle 5-7 mm, left needle	C	Upper/lower looper: all-purpose overlock thread, polyester thread, embroidery or darning thread, rayon thread Needle: all-purpose overlock thread, embroidery or darning thread, rayon thread	Stitch length: 1-1,8 Cutting width: 1-1,5 Differential: N-0,7
9	2 thread flatlock 		3-5 mm, right needle 5-7 mm, left needle	D	Upper looper: all-purpose overlock thread, polyester thread, woolly nylon or similar decorative thread, glossy embroidery thread Lower looper, needle: all-purpose overlock thread, polyester thread	Stitch length: min. 2,5 Cutting width: 2 Differential: N
				E	Lower looper: all-purpose overlock thread, polyester thread, woolly nylon or similar decorative thread, glossy embroidery thread Needle: all-purpose overlock thread, polyester thread	Stitch length: min. 2,5 Cutting width: 2 Differential: N


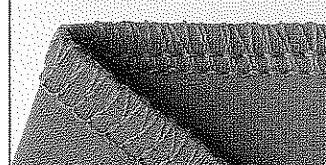
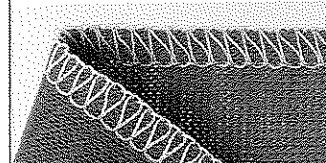
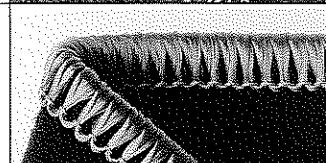

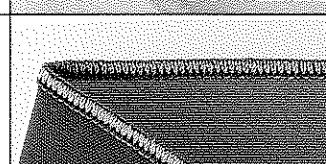
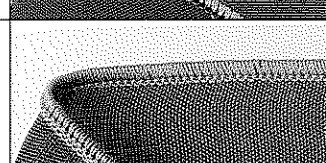
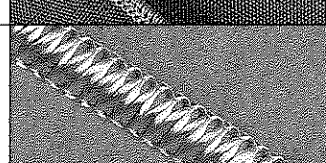

### Symbols

### Symbols

## Stitch chart

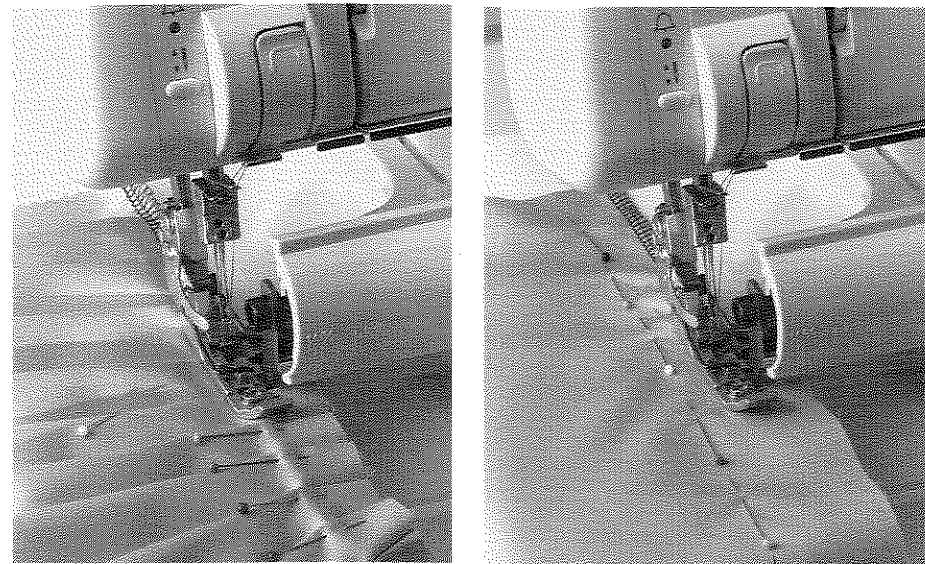
Applications	Suggestions for use	Examples
<ul style="list-style-type: none"> <li>Durable stretch seams in jersey and knits in cotton, wool, synthetic and blended fibres and for machine and hand knits.</li> <li>Ideal for seams in fine to medium weight cotton, viscose, satin or synthetic fibres, e.g. batiste, crepe-de-chine, poplin, satin, etc.</li> </ul>	Sweatshirts, running suits, jersey fashion, knitted garments. Children's clothes, light outer wear, home dec.	
<ul style="list-style-type: none"> <li>Very elastic seams in stretchy fabrics such as Lycra.</li> </ul>	Swimwear, gymwear, sportswear.	
<ul style="list-style-type: none"> <li>Neatening edges of seam allowances, hems and facings.</li> <li>Suitable for all types of fabric.</li> <li>Stretchy seams in fine knits.</li> <li>Soft seams in fine knits.</li> <li>Decorative and quickly sewn edging (hems, collars, revers) or decorative seams in heavier woven fabrics (wool, chintz), fluffy or fur type fabrics (polar fleece) or firm knits (sweatshirt).</li> </ul>	Neatening: Clothing, home dec. Seams: T-shirts, baby and children's clothing. Clothing: Coats, jackets, pullovers, etc. Home dec: Table cloths and mats, napkins, cushions, curtains.	
<ul style="list-style-type: none"> <li>Neatening edges of seam allowances, hems and facings.</li> <li>Suitable for all types of fabric.</li> <li>Decorative and quickly sewn edging (seams, collars, revers) or decorative finish on firm wovens (wool, chintz), fluffy or fur type fabrics (polar fleece) or firm knits (sweatshirt).</li> </ul>	Clothing and home dec. Clothing: Coats, jackets, pullovers, etc. Home dec: Table cloths, mats, napkins, cushions, curtains, etc.	
<ul style="list-style-type: none"> <li>Narrow seams in the finest of silks, cotton or synthetic jersey. Particularly suitable for lingerie or lace inserts and fine pintucks.</li> </ul>	Lingerie, underwear, light outerwear, e.g. blouses, summer dresses. Heirloom sewing.	
<ul style="list-style-type: none"> <li>Edge finish on sheer and lightweight woven fabrics or jersey. Suitable for pintucks or lace insertion.</li> </ul>	Lingerie, underwear, scarves, handkerchieves. Light outer wear, evening wear, home dec. Heirloom sewing.	
<ul style="list-style-type: none"> <li>Quickly sewn delicate and fine edging for all fine or sheer fabrics (hems, frills, flounces).</li> </ul>	Lingerie, underwear, scarves, light outerwear, evening wear, home dec. Heirloom sewing.	
<ul style="list-style-type: none"> <li>Flat decorative seams in woven fabrics. Suitable for patchwork.</li> </ul>	Home dec: cushions, bedspreads. Clothing: jackets, coats, pullovers.	
<ul style="list-style-type: none"> <li>Decorative and flexible flat seam. Suitable for knits or woven fabrics. Ideal for patchwork.</li> </ul>	Clothing: sportswear, gymwear, swimwear, polar fleece, pullovers, jackets, coats. Home dec: cushions, bed covers etc.	

Note: The basic settings for position A, C, D and E are suitable for normal sewing thread.

The stitches on position B are the same as position A but the basic settings are suitable for woolly nylon or similar fine decorative threads in the loopers.

# Practical sewing

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**Pins**

If you pin your work together, remove them while sewing before they get near the knife. Or pin parallel to and about 2 cm (1") from the fabric edge.

*Tip:* Use pins with coloured heads which are easier to see in thicker, soft fabrics.

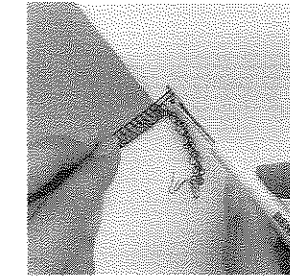
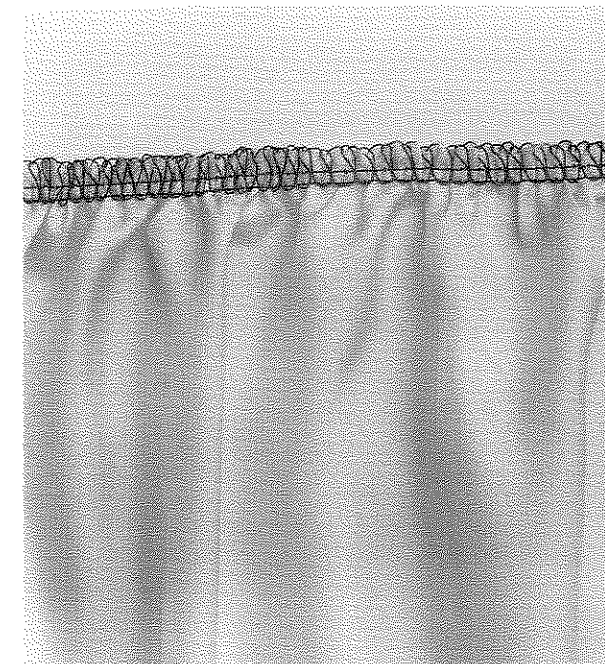
**Gathering**

Use the differential feed to gather a single layer of fabric before sewing it to a garment. For example, sleeve heads and lower edges, yokes, lace edging or frills.

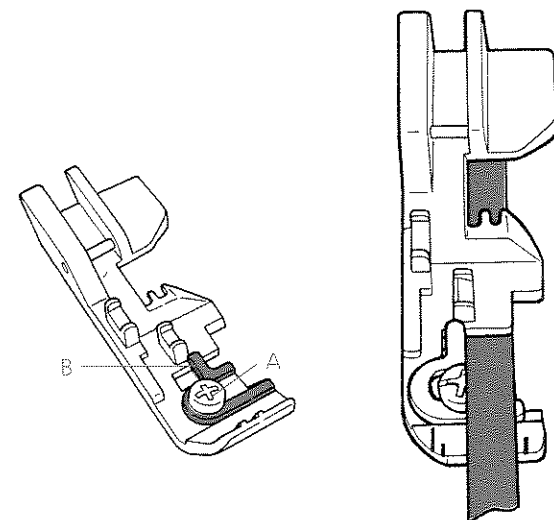
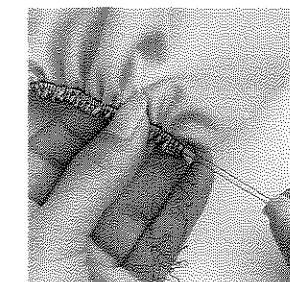
Settings:

- Stitch: 4 thread overlock  
Position A/B
- Differential feed: 2
- Stitch length: 3-4
- Cutting width: 2

Note: A tighter gather can be obtained by increasing the needle tensions.



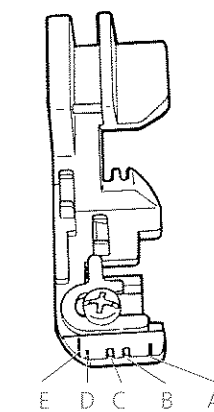
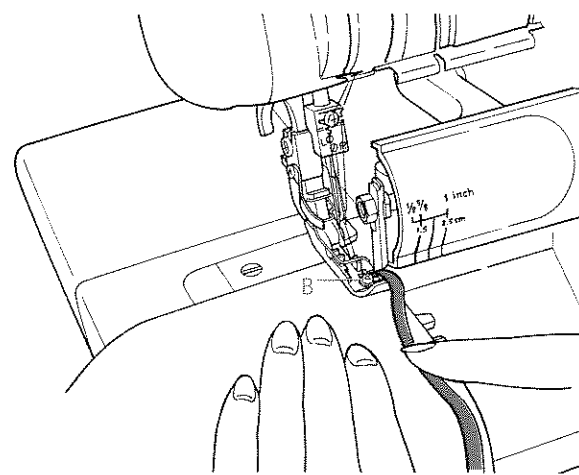
*Tip:* After sewing, loosen the needle threads from the thread chain with a pin or the Bernina seam ripper and pull the threads gently to gather fine fabrics.



**Tape guide**

The standard presser foot is equipped with a guide for sewing on tape to strengthen or stabilise shoulder or side seams in garments made from knits or stretch fabrics. The guide is also ideal for sewing on narrow elastic for lingerie, swim and gymwear.

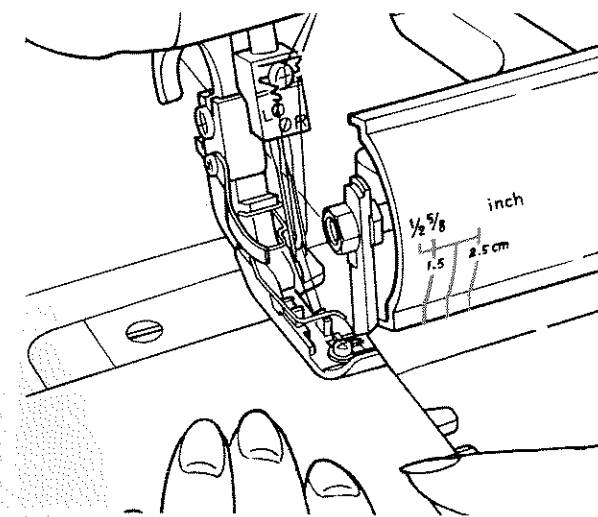
- Raise the needles (Needle stop\*).
- Raise and swing the presser foot out.
- Place the tape under the foot, slip it into the guide from the right and pull through slightly.
- Swing the presser foot back and lower it.
- Sew a few stitches on the tape.
- If necessary, loosen the setscrew (A) and adjust the tape guide to suit the width of the tape (B).
- Retighten the setscrew.
- Raise the tip of the presser foot, place work underneath the tape/elastic and sew.



**Presser foot markings**

The markings on the presser foot help to guide the fabric.

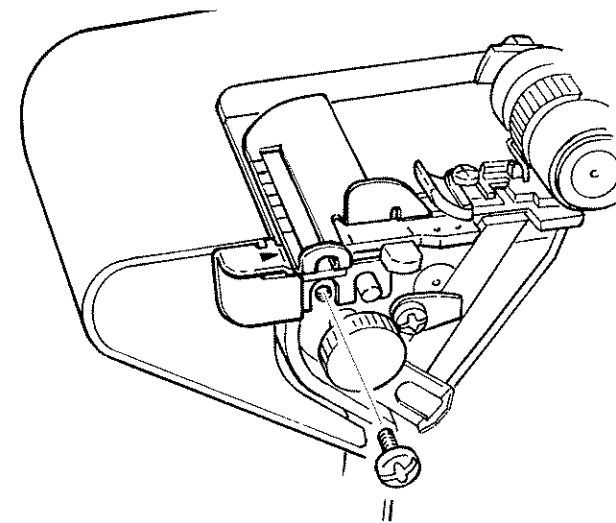
- A Cutting line (cutting width 2)
- B Right needle insertion
- C Left needle insertion
- D 0.75 cm distance from cutting line (A) (cutting width 2)
- E 1 cm distance from cutting line (A) (cutting width 2)



**Seam allowance markings**

The seam allowance markings on the looper cover allow you to guide the fabric easily and perfectly according to the chosen or given seam allowance.

The measurements are taken from the point of needle insertion.

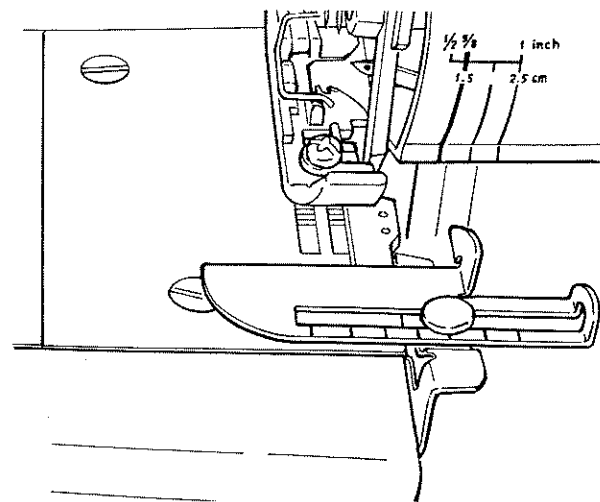


**Seam guide right\***

Loosen the screw. Position the attachment (accessory bag) over the screw and retighten the screw.

2000 D: The seam guide is available as an optional accessory.

Note: Push the guide fully to the left to open the looper cover.



Pull out the adjustable guide to the right until it is in line with the desired marking on the looper cover. Feed the fabric edge along the guide and an even amount of fabric will be cut off.

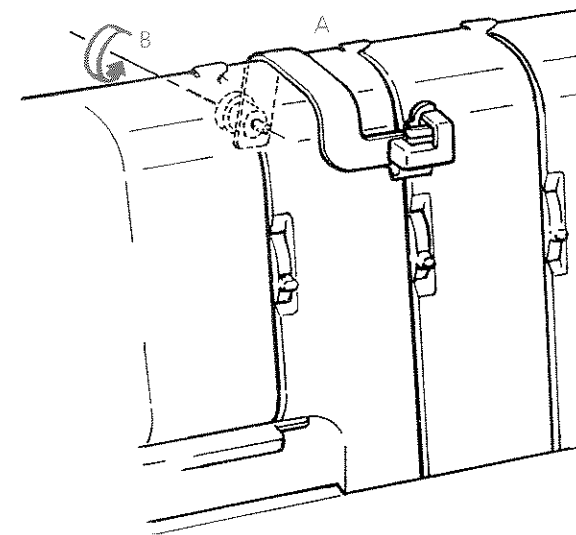
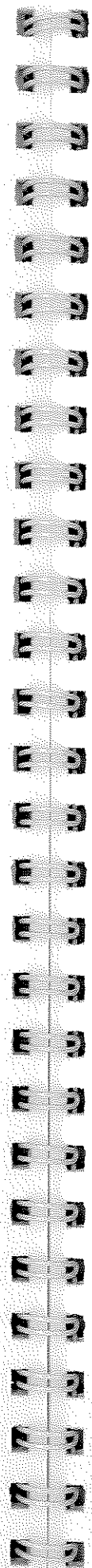
To sew without cutting, push the guide to the left to line up with the cutting line on the presser foot.

**Seam guide left**

The seam guide is a practical standard accessory (accessory bag). Simply insert into the space provided on the presser foot shaft and adjust to the desired seam width.

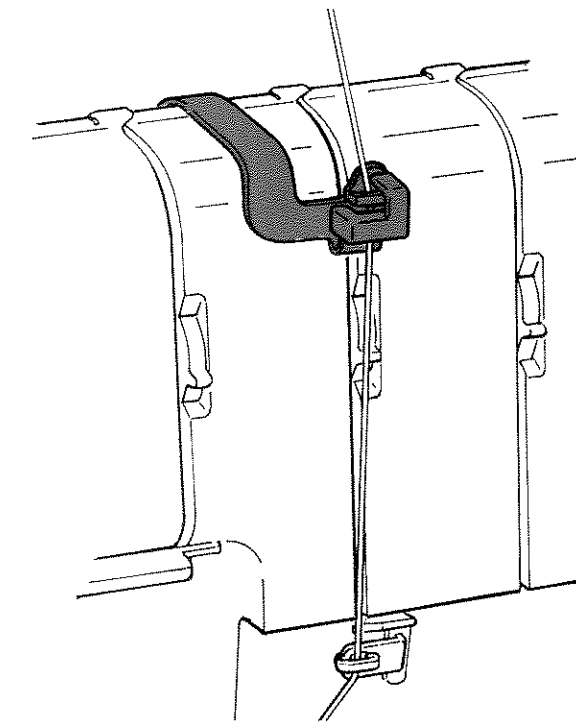
The seam guide is an ideal aid for sewing hems. Just guide the folded edge along the seam guide for a perfectly even finish.

It is also ideal for cutting fabric strips, e.g. for bias binding and for patchwork. Always remove all threads and needles when cutting only.



**Deco guide**

The deco guide is a standard accessory particularly designed for sewing wide seams and edges with decorative threads (see section Threads/Decorative thread P 16). Position the guide over the top of the machine over one of the thread slits (A) and tighten screw (B).



Take the thread through the deco guide without threading the first machine guide or tension slit.

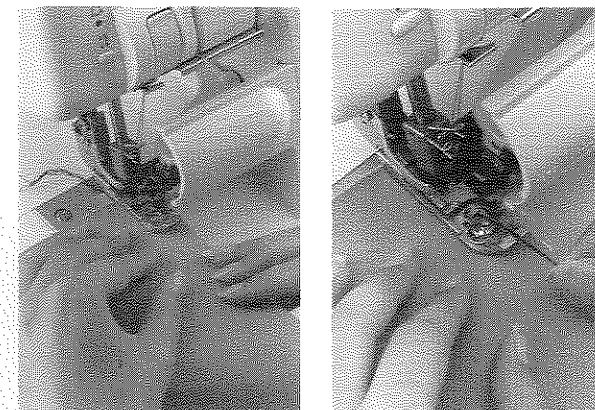
3/4 thread overlock with medium to heavy weight thread: position the guide over the upper looper tension.

2 thread overlock with heavy thread: position the guide over the lower looper tension.

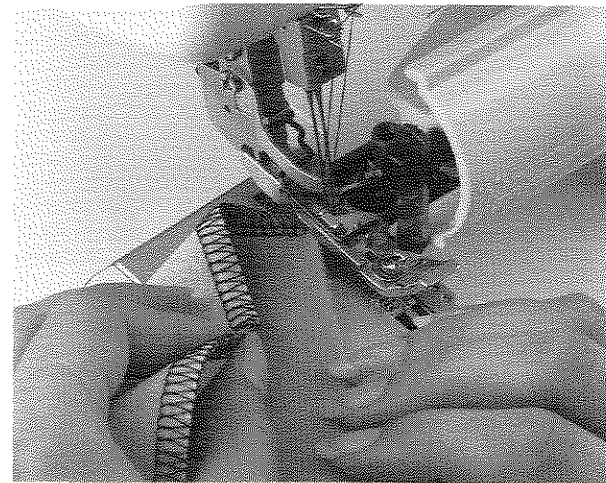
3 thread overlock with fine rayon embroidery thread, e.g. Rayon No. 40: take threads through the deco guide to the needles.

Test sew.

**Seam begin – sewing in the thread chain**

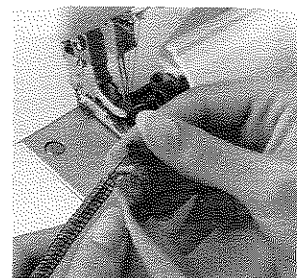
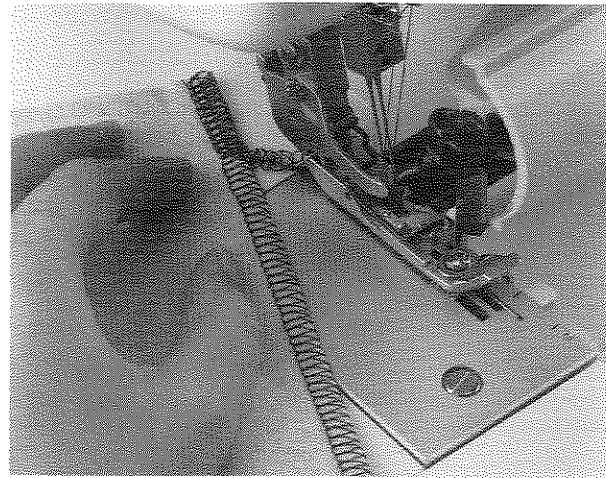


- Sew a 3–4 cm thread chain.
- Sew 2–3 stitches on the fabric.
- Lower needles into fabric (Needle stop down\*).
- Raise the presser foot.
- Straighten out the thread chain and from the left lay it under the presser foot on the fabric.
- Lower the presser foot.
- Sew over the thread chain for approx. 2 cm (1") and cut off the excess chain with the knife.



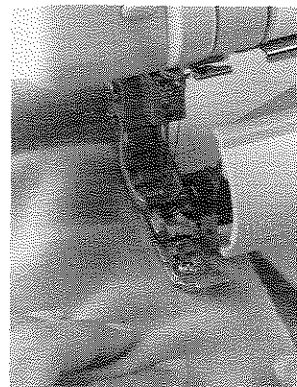
**Seam end—sewing in the thread chain**

- Sew to the end of the seam.
- Raise the needles (Needle stop\*).
- Raise the presser foot.
- Turn the fabric over towards you and lay it under the presser foot so that the needle enters the fabric with the first stitch.
- Lower the presser foot.
- Sew carefully over the previous stitching without cutting for about 2–3 cm (1").
- Raise the tip of the foot and turn work away from you.
- Stitch off the edge.



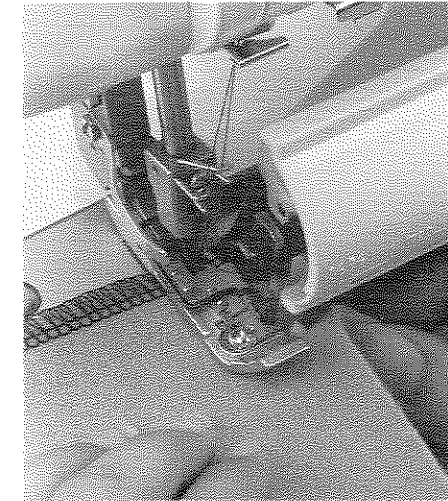
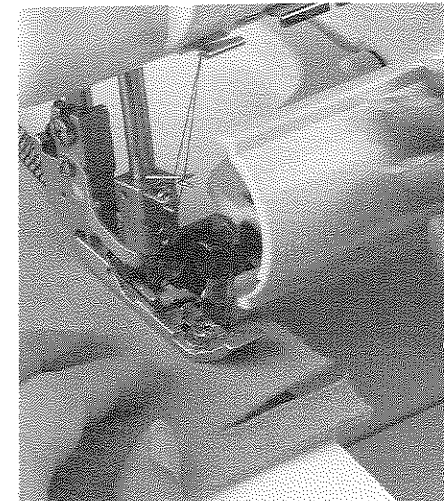
**Securing thread chains**

Leave enough chain at the beginning and end of the seam so that it can be knotted or pulled through the first/last few stitches with a darning needle.



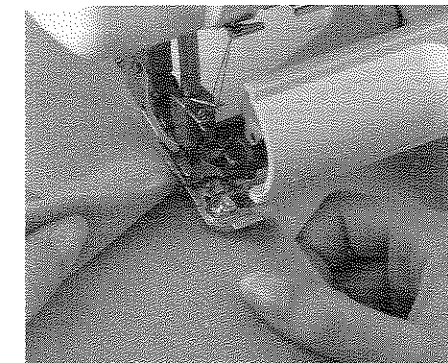
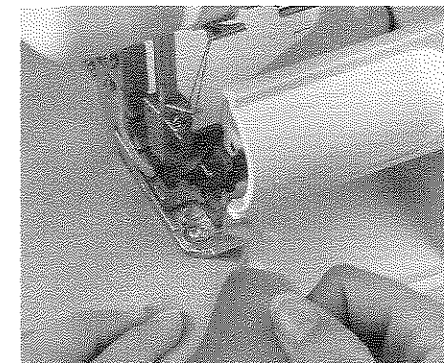
**Sewing curves**

Sewing both outside and inside curves is very easy with an overlocker. Guide fabric in as straight a line as possible towards the knife. Watch the knife and not the needles.



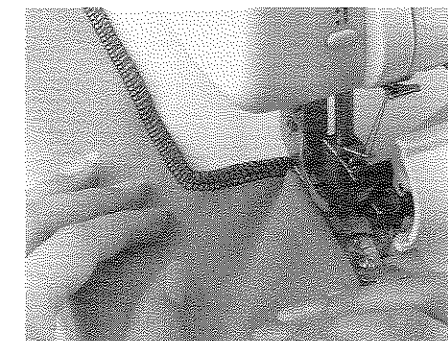
**Sewing outside corners**

- Snip into each corner along the stitching line.
- Sew up to the corner and slightly over the edge of the fabric.
- Raise the needles (Needle stop\*).
- Raise the presser foot.
- Pull the work out at the back slightly to clear the threads from the stitch finger.
- Turn the fabric and lay it under the presser foot so that the cut edge of the fabric is against the knife.
- Lower the presser foot.
- Lower the needles (Needle stop down\*).
- If necessary, pull all the threads taut above the first machine guide.
- Continue sewing.

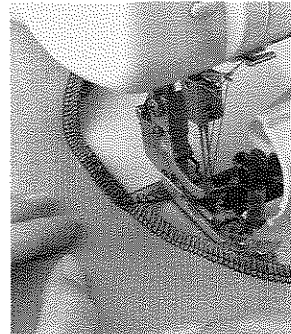
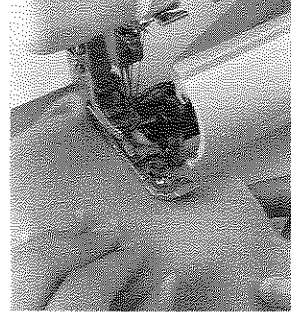
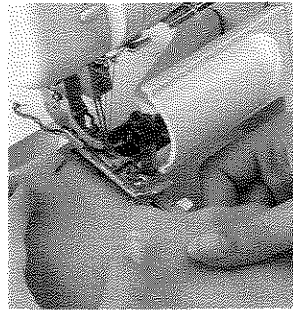


**Sewing inside corners**

- Snip into the corner up to the stitching line.
- Sew into the corner.
- Straighten out the fabric.
- Continue sewing.

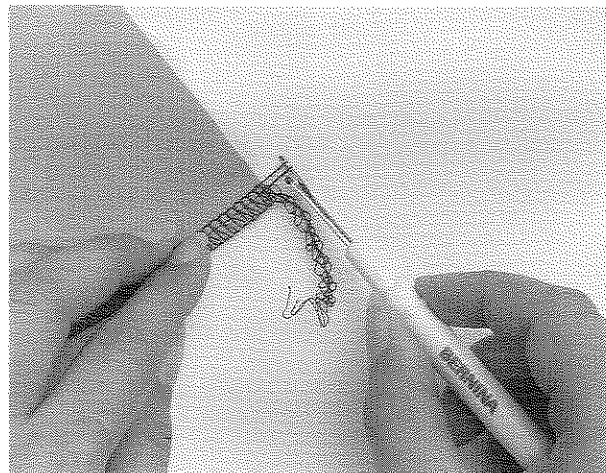


**Sewing circular or tubular items**

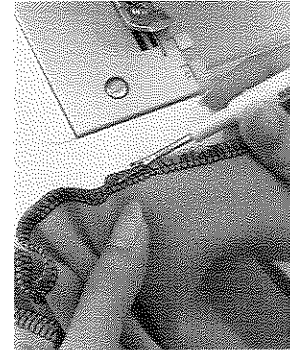


- Cut away a small section (approx. 2.5 cm/1") of the seam allowance.
- Raise the needles (Needle stop\*).
- Raise the presser foot.
- Remove the cloth plate to expose the free arm (if wanted).
- Position the fabric under the presser foot so that the edge of the cut is against the knife.
- Lower the presser foot.
- Sew.
- When the seam is complete, sew a few stitches over the previous stitches without cutting.
- Raise the tip of the presser foot.
- Turn work away from you and sew off the edge.

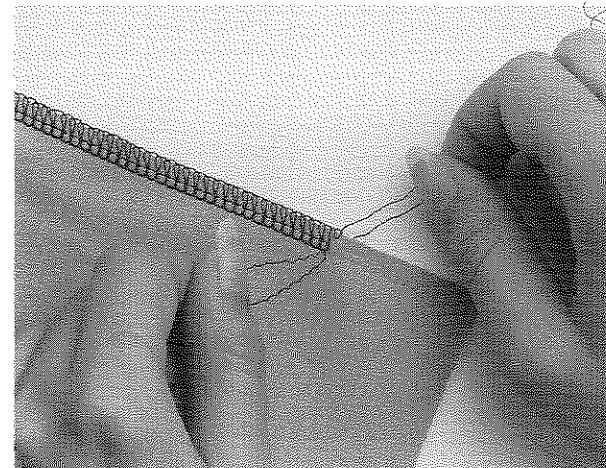
**Unpicking seams**



*Method 1:*  
Cut the loops formed by the looper threads with sharp scissors or the Bernina seam ripper. Pull gently on the threads and the seam will come undone.



*Method 2:*  
Loosen the loops formed by the needle threads with a pin or your Bernina seam ripper. Pull first on the needle and then on the looper threads and the seam will come undone.



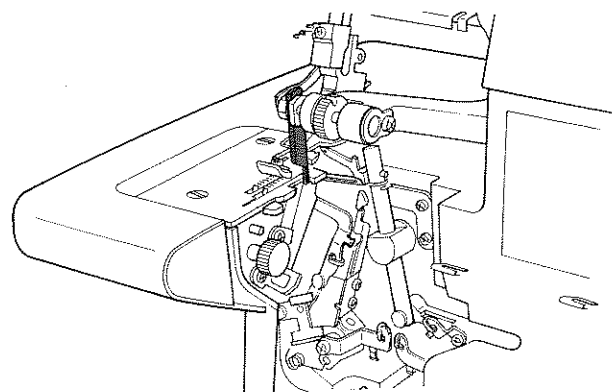
# Maintenance

Replacing the upper knife	44
Replacing the lower knife	44
Replacing the bulb	44
Cleaning and oiling	44

# Trouble shooting guide

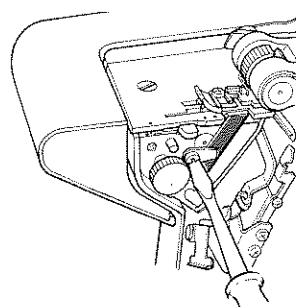
**WARNING** Please refer to the safety instructions!

**Replacing the upper knife**



The upper knife (moving knife) is made from special material and generally does not need replacing. Should it get damaged, it can be replaced by your local Bernina dealer.

**Replacing the lower knife**

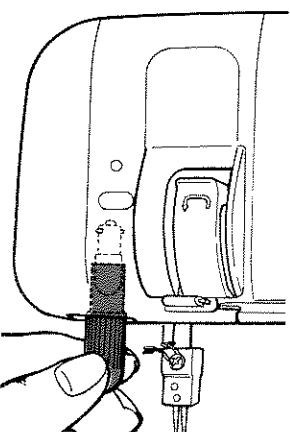


Raise the needles fully (Needle stop\*).  
Raise the upper knife.

- Loosen the setscrew on the lower knife retaining plate with the large screwdriver.

- Remove the lower knife.
- Fit the replacement knife (accessory bag) in the groove so that the sharp edge is in line with the stitch plate.
- Retighten the setscrew.

**Replacing the bulb**



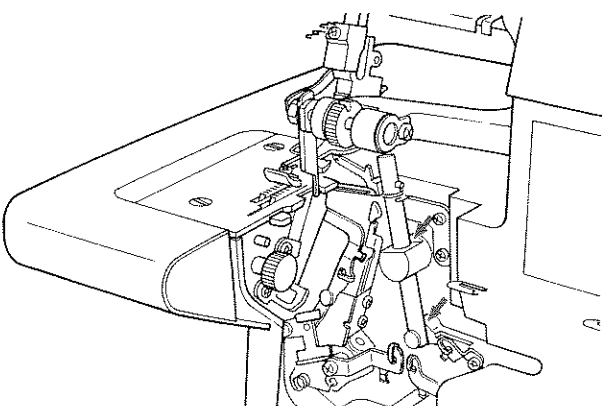
Using the special bulb holder provided in the accessory bag, press upwards against the bulb, turn to the left and remove the bulb.

Place the new bulb on the holder. Insert into the bulb fixation, press upwards and turn to the right until the bulb engages.

Replacement bulbs for your Bernina overlocker are available from your Bernina dealer.

Use 12 Volt/5 Watt bulbs only.

**Cleaning and lubricating**



Dust and fluff collect on and in the machine. This should be removed regularly.

Your Bernina overlocker requires very little lubrication as the main components are made of special materials. Occasionally lubricate the points illustrated.

**Trouble shooting guide**



Problem	Cause	Solution
The machine does not sew.	The presser foot is up or the looper cover is open, the safety control lamp is on*.	Lower the presser foot or close the looper cover.
Fabric does not feed evenly.	Differential feed is wrongly adjusted. Presser foot pressure is too low. Lower or upper knife is blunt or wrongly positioned.	Check the differential feed setting. Adjust the presser foot pressure. Replace the lower or upper knife.
Thread breaks.	Thread tension is too tight for the thread being used. Needles not inserted correctly.	Reduce thread tension. Insert needles fully into needle clamp with flat side to the back. Use system 130/705 H needles.
Needles break.	Needles are bent, blunt or points are damaged. Needles not inserted correctly. Fabric was pulled while sewing.	Replace the needles. Insert needles fully into needle clamp with flat side to the back. Guide fabric gently with both hands.
Skipped stitches.	Needles are bent or blunt. Wrong needles used. Presser foot pressure is too low.	Replace the needles. Use system 130/705 H needles. Increase foot pressure.
Poor stitch formation.	Sewing position incorrect. Threads are not between the tension discs. Thread has got caught.	Turn the stitch selection dial to the correct position. Check if thread is lying between tension discs. Raise the presser foot, pull the threads and lower the presser foot. Check threading path of each thread.
Seams flute or wave, especially when sewing knits.	Presser foot pressure is too high. Differential feed is set incorrectly. Fabric was pulled while sewing.	Reduce presser foot pressure. Adjust differential feed to between N and 2. Guide fabric gently.
Seams pucker.	Differential feed is set incorrectly.	Adjust differential feed to between N and 0,7.
Fabric edges curl.	Too much fabric in the stitch.	Reduce the cutting width.
Thread loops are too loose.	Too little fabric in the stitch.	Increase the cutting with.
Machine does not sew.	Overheating.	Should the machine overheat, the motor cuts out for 2 seconds after which you can continue sewing.

Index

Technical data





## Technical data

Stitch types: 2 needles, 2 loopers: 4 thread overlock with integrated safety seam  
2 needles, 1 looper: 3 thread super stretch  
1 needle, 2 loopers: 3 thread overlock, flatlock, roll hem  
1 needle, 1 looper: 2 thread overlock, flatlock, roll hem

Seam width: 3–7 mm (2/3 thread overlock)  
5–7 mm (4 thread overlock/3 thread super stretch)

Stitch length: 1–4 mm

Differential feed: Pushing effect: N–2  
Stretching effect: N–0.7

Presser foot: Swing-out, snap-on sole

Handwheel: Rotates forwards

Needle system: 130/705H

Sewing speed: Up to 1500 s.p.m.

Weight: 2000 DE: 8.4 kg  
2000 D: 7.9 kg

Dimensions: 335W x 295D x 340H mm

Optional accessories: Blind stitch foot  
Elasticator  
Cording foot

*We reserve the right to make changes in the interests of technical progress.*

## Bernina Publications

It is not possible to cover more than the basics of sewing in an instruction manual. However, to help you use the creative potential of your Bernina overlocker or sewing machine to the full, Bernina regularly publishes sewing literature which covers everything from simple techniques to advanced fashion or craft projects. There is also a video available for your Bernina overlocker with half an hour of interesting and detailed instruction. Your Bernina dealer will be delighted to give you more information.

### Sewing Service Leaflets

Each issue deals with a particular sewing technique presented in easy to follow steps. Success is guaranteed.

### Bernina Creative Sewing

The Creative Sewing magazine appears twice yearly. Fashion, «Couture Rapide», home decoration, sewing for teens and twens and craft projects are all regular features. Special Bernina specific sewing techniques are described in detail in words and pictures. Unusual and imaginative ideas are also included from enthusiastic sewers around the world. Read about the latest sewing developments and trends in the comfort of your own home. Creative Sewing is a source of inspiration for all sewers.

### Bernina Collection

These booklets deal with one particular theme in all its variations. Basic information, pattern suggestions, detailed sewing instructions and many tips and tricks of the trade will turn you into a sewing pro in no time at all. Issued two or three times a year.

