Instruction manual

BERNINA 2000DCE/DE/D



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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.

DANGER

To reduce the risk of electric shock:

- 1. The appliance should never be left unattended when plugged in.
- 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.
- 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.
- 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.
- 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.

- 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.
- 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.

SAVE THESE INSTRUCTIONS

This sewing machine is intended for household use only.

«GROUNDING INSTRUCTIONS»

(Model 2000D, 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.

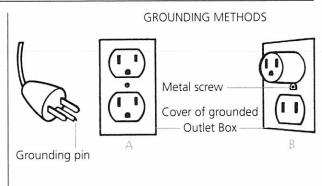
DANGER – Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the cord or plug is necessary,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

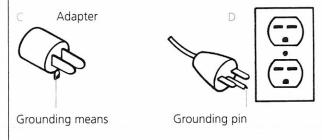
IMPORTANT SAFETY INSTRUCTIONS

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 adpator 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.







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.

Our comprehensive instruction manual takes you step by step through the features and handling of your new machine. We also provide you with tips and suggestions for using the various overlock stitches, roll hem and how to give your sewing a professional finish with the fantastic cover stitch. On the last page of the manual, you will find a list of optional accessories and Bernina services which provide even more scope for getting the most out of your new overlocker.

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.

We wish you happy and successful overlocking.

FRITZ GEGAUF LTD. CH-8266 Steckborn, Switzerland

Hanspeter Ueltschi President

Note:

This instruction manual is for the following models:

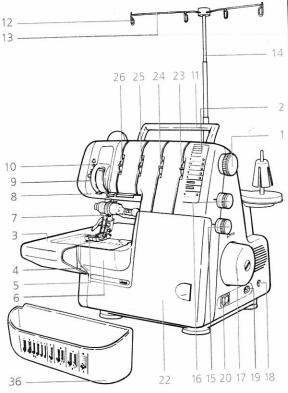
BERNINA 2000DCE BERNINA 2000DE BERNINA 2000D

All features exclusive to the BERNINA 2000DCE are marked with the symbol*. The cover stitch mode and its special applications are dealt with in detail as from page 34.

The BERNINA 2000DCE and 2000DE are equipped with electronics and an LED display. These features which are exclusive to these two models are marked with the symbol**.

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Details of the machine



BERNINA 2000DCE cover stitch* mode View from the front

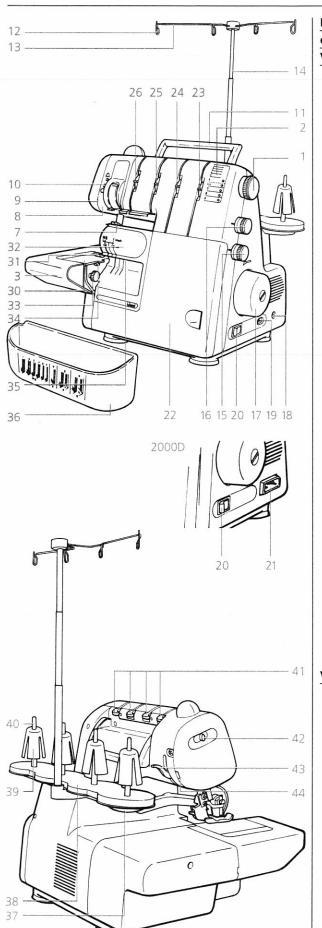
- 1 Stitch selection dial
- 2 Stitch display
- 3 Cloth plate/free arm
- 4 Cover stitch* stitch plate
- 5 Cover stitch* presser foot
- 6 Cover stitch* extension plate
- 7 Needle clamp
- 8 Sewing light
- 9 Needle stop**
- 10 Safety control light**
- 11 Carrying handle
- 12 Thread guide
- 13 Thread guide support
- 14 Support rod
- 15 Differential feed dial
- 16 Stitch length dial
- 17 Handwheel
- 18 Foot control socket**
- 19 Machine socket**
- 20 Power switch
- 22 Looper cover
- 23 Lower looper fine tuning (red)
- 24 Upper looper fine tuning (blue)
- 25 Right needle fine tuning (green)
- 26 Left needle fine tuning (yellow)
- 27 Foot control**
- 28 Power cord**
- 29 Foot control/power cord combined
- 36 Waste collector with stitch formations





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BERNINA 2000DCE/DE/D

overlock mode

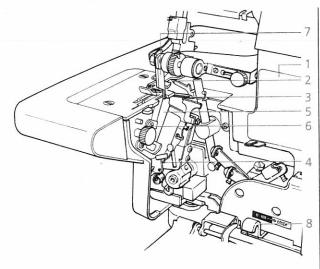
View from the front

- 1 Stitch selection dial
- 2 Stitch display
- 3 Cloth plate/free arm
- 7 Needle clamp
- 8 Sewing light
- 9 Needle stop**
- 10 Safety control light**
- 11 Carrying handle
- 12 Thread guide
- 13 Thread guide support
- 14 Support rod
- 15 Differential feed dial
- 16 Stitch length dial
- 17 Handwheel
- 18 Foot control socket**
- 19 Machine socket**
- 20 Power switch
- 21 Machine socket
- 22 Looper cover
- 23 Lower looper fine tuning (red)
- 24 Upper looper fine tuning (blue)
- 25 Right needle fine tuning (green)
- 26 Left needle fine tuning (yellow)
- 30 Overlock stitch plate
- 31 Overlock presser foot
- 32 Knife guard
- 33 Cutting width dial
- 34 Stitch selection lever
- 35 Seam guide lines
- 36 Waste collector with stitch formations

View from behind

- 37 Thread stand
- 38 Foam pad
- 39 Cone stabilizers
- 40 Spool holder pin
- 41 First thread guides
- 42 Presser foot pressure
- 43 Presser foot lifter
- 44 Light switch

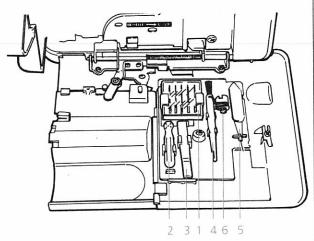
Details of the machine



View with looper cover

open

- 1 Threading diagram
- 2 Upper looper (blue)
- 3 Lower looper (red)
- 4 Lower looper autothreader
- 5 Lower knife
- 6 Lower knife setscrew
- 7 Upper knife
- 8 Conversion arm*

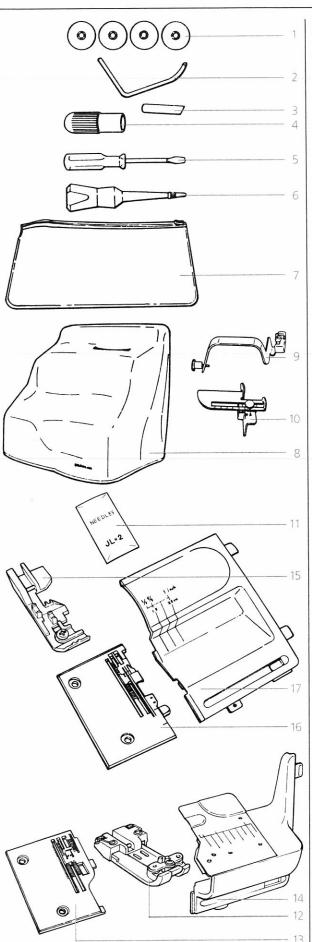


Accessories in looper

cover

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

- 1 Household needles 130/705H (2x70, 3x80)
- 2 Small screwdriver
- 3 Tweezers
- 4 Brush/needle inserter
- 5 Needle and looper threader
- 6 Upper looper converter



Accessories

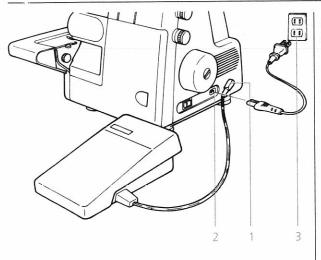
All other accessories are stored in the accessory bag.

- 1 Spool caps
- 2 Seam guide left
- 3 Spare knife
- 4 Bulb holder
- 5 Large screwdriver
- 6 Oiler
- 7 Accessory bag
- 8 Dust cover
- 9 Deco guide
- 10 Seam guide right**
 (available as optional accessory for BERNINA 2000D)
- 11 Needle set JLx2 (2x80)
- 12 Cover stitch* presser foot
- 13 Cover stitch* stitch plate
- 14 Cover stitch* extension plate
- 15 Overlock presser foot
- 16 Overlock stitch plate
- 17 Knife guard

Note 2000DCE:*

Depending on the mode in which your machine is supplied, either accessories 15, 16 and 17 or 12, 13 and 14 will be attached to the machine

Setting up the machine



Attaching the foot

control

2000DCE/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 mains socket (3).

2000D: Plug foot control into machine socket (4) and then into power socket (5).

Sewing speed

The electronic foot control allows very fine adjustment from minimum to maximum sewing speed.

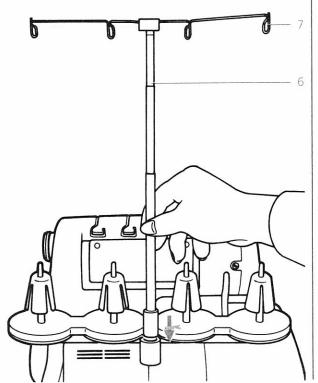
The sewing speed can be adjusted by increasing or decreasing the pressure on the foot control.

The maximum sewing speed for:

Overlock stitches
Positions A to E
1500 s.p.m.

Cover stitch*
Position F 800 s.p.m.

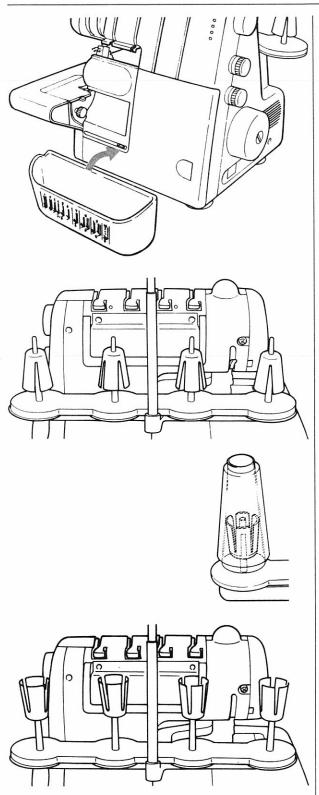
The maximum sewing speeds are automatically set by the stitch selection dial.



Thread stand

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

Raise the support rod (6) fully, turning slightly until the positioning catches engage. Position the thread guide (7) on the thread stand so that it is parallel to the machine.



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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.

Thread, cones, spools

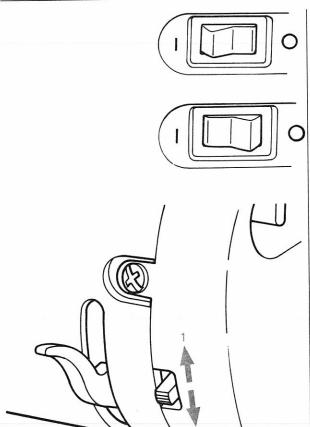
Cones or domestic spools in all sizes can be used on your Bernina overlocker.

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

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

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

Functions and general operating instructions



Power switch

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

0 = OFF

I = ON

Light switch

The light switch is positioned on the rear left side of the machine to the left of the presser foot lifter.

1 = ON

2 = OFF

Electronics/safety/

Needle stop**

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

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

Needle stop**
The Needle stop for overlock stitches (positions A to E) is generally up, i.e. when you stop sewing, the needles will stop in their highest position, the ideal position for threading or changing needles. To lower the needle, press the Needle stop** button (3).

The Needle stop** for cover stitch* (Position F) is generally down, i.e. the cover stitch formation is completed with the needle in the fabric.

Safety control lamp**: The machine will not sew if it has not been prepared correctly. When the foot control is depressed, the safety control lamp will light up (4).

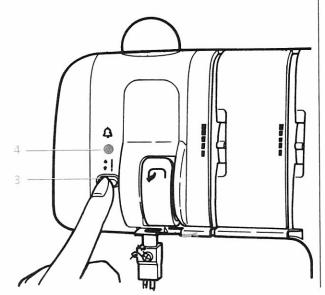
The control lamp lights up when the presser foot is raised or when it is swung out.

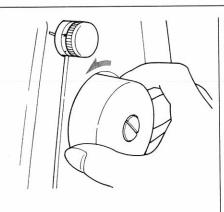
If the foot control is pressed when the presser foot is not lowered or the looper cover is open, the lamp will blink.

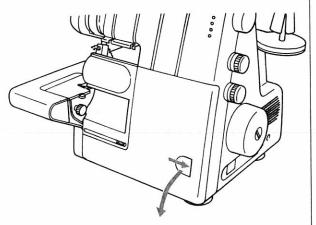
Safety cut-out**
If overheating should occur,
the motor will cut-out for 2
seconds, after which
sewing can be continued.

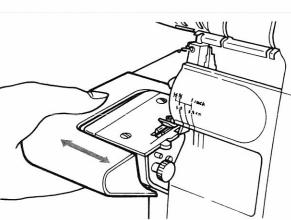
Note:

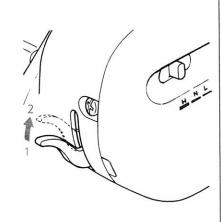
If you turn the stitch selection dial while sewing, the control lamp will blink and the machine will stop sewing.











Handwheel

The handwheel turns anticlockwise as on a household sewing 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 and it will engage automatically.

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.

Two-step presser

foot lifter

The presser foot lifter is positioned on the rear of the machine above the presser foot.

To raise the presser foot push the the presser foot lifter up 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). sewing tubular items such as ribbing, trouser and sleeve hems.

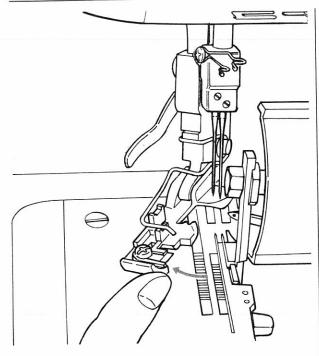
The free arm is ideal for

Press the lifter down to lower the presser foot.

Note:

When the presser foot is raised, all the tensions are released making it easier to thread the machine.

Functions and general operating instructions



Swing-out presser foot

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

To swing out:

- Raise the needles (Needle stop**).
- Raise the presser foot and swing it out to the left.

To position for sewing:

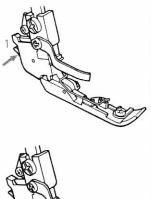
- Push the foot from left to right.
- The foot engages automatically.

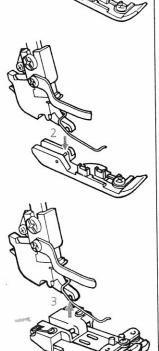
The foot can only be lowered when it is in the sewing position.

Note:

The machine will not run when the foot is swungout. An additional safety measure to prevent damage to needles or machines.

Note Cover stitch*: The cover stitch presser foot should not be swung out in order to prevent damaging the needles points.



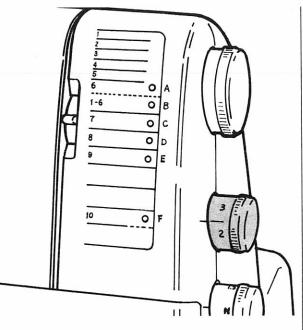


Changing the presser

foot

- Raise the needles (Needle stop**)
- Raise the presser foot.
- Press the catch (1) to release the presser foot from the clamp (2) and remove 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 (3). Lower the shank and the presser foot will engage automatically.



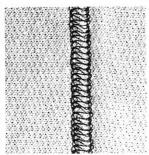
Stitch length

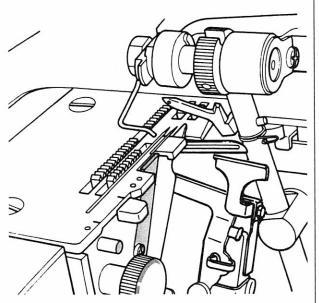
Every stitch equals one complete feed-dog movement. The amount of movement is determined by the selected stitch length.

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).

The recommended stitch length for most cover stitch* applications is between 3 and 4.







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

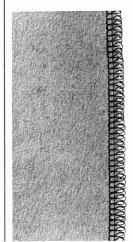
Cutting width

Adjusting the cutting width for overlock stitches: Turn the cutting width dial in the desired direction. The upper knife adjusts itself automatically to the position of the lower knife.

The cutting width is determined by the distance between the knife and the right or left needle and can be adjusted while sewing.

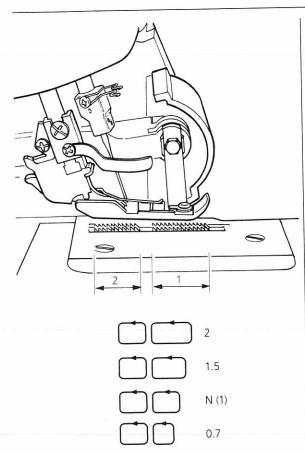
Note cover stitch*: The 5 mm ('/5") cover stitch is sewn without knives. The upper knife and upper knife arm are fully raised when the machine is in cover stitch mode.

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



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

Functions and general operating instructions



Differential feed

Your BERNINA overlocker is equipped with a front (1) and a rear (2) feed-dog. The two feed dogs move independently and the distance each feed-dog travels can be adjusted independently.

Pushing effect

This is the most common use for differential feed and is to prevent waving 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 so that the rear feed dog can take up the fabric (slightly stretched) behind the needle.

Adjusting the

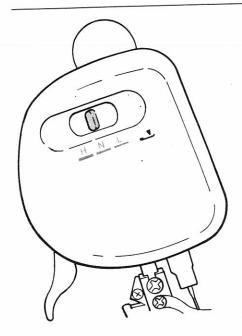
differential feed

Simply turn the dial in the direction desired for fully variable adjustments while sewing.

Test sew.

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Setting	2	1.5	N	0.7
Effect	Pushing effect, no fluting	Pushing effect, no fluting	Normal feed	Stretching effect, no puckering
Overlock applications	Thick or loose knits, handknits	Fine to medium weight jersey, e.g. sweatshirt fabric, velours, interlock, knits	Woven fabrics	Nylon tricot, closely woven fabrics e.g. charmeuse, linings, satin, poplin
Cover stitch* applications	Thick or loose knits, handknits	Fine to medium jerseys	Knits and jerseys with the grain	Sewing over seams
				THE TOTAL THE PARTY OF THE PART



Presser foot pressure

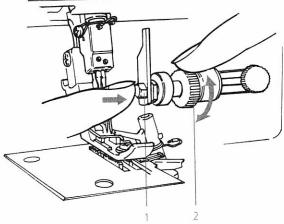
The presser foot pressure ensures perfect fabric feed. It is factory adjusted for normal sewing work.

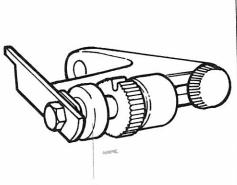
Adjusting the pressure: Push the lever in the direction desired.

- N Normal pressure: Basic setting for most normal overlock work.
- H High pressure: For thick or stiff fabrics such as denim, tweed, linen and for sewing on elastic.
- L Low pressure: For lightweight 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 knits.





Upper knife

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

To raise the knife press the upper knife holder (1) to the right. Turn the knob (2) clockwise until the knife locks (3).

To lower, press the holder to the right and turn the knife anti-clockwise until it engages.

Right and left outer needles (A, D):

Left inside needle (B)

- 5-7 mm overlock

Right inside needle (C):

- 2-3 mm roll hem

Important! When sewing with one needle remove the needle thread completely and the

Needle clamp

Needle positions

- 5 mm cover stitch*

right and left inside needle (B, C):

- 3-5 mm overlock

needle not in use.

Needle clamp BERNINA 2000DE/D

Needle clamp

Needle clamp BERNINA 2000DCE*

There are two screws for the four needle positions

(A, B, C, D), one for the two left needle positions and one for the two right

The two inner needle posi-

tions are used for overlock

The two outer needle posi-

tions are used for cover

needle positions.

stitch*.

There are two screws (B, C), one for the right and one for the left needle.

Inserting needles

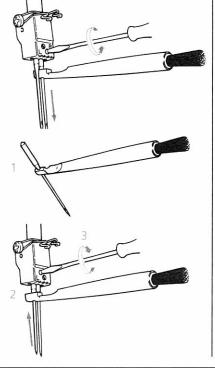
Needles can be inserted quickly and easily with the practical needle inserter (1).

To remove:

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

Using the small screwdriver, loosen the needle setscrews and remove the needles. Place a 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 needle setscrew lightly and then insert the second needle in the same way and tighten both setscrews firmly (3).

Insert the right needle first and then the left. The left needle is positioned slightly higher than the right.



Functions and general operating instructions

Upper looper converter

Attach the upper looper converter for overlock stiches sewn with one looper, e.g. 2 thread roll hem or 2 thread flatlock.

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.

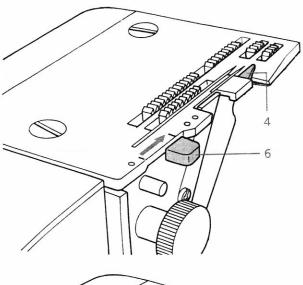
Tip:
Before starting to sew,
check that the upper
looper is correctly positioned by first turning the
handwheel a few times to
form a chain.

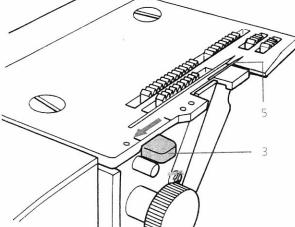


Roll hem

Stitch selection lever on the overlock stitch plate

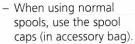
The selection lever for roll hem is integrated in the overlock stitch plate. When the selection lever is pulled forward (3), the wide overlock stitch finger (2) is retracted to expose the roll hem pin (5). The fabric edge is rolled round the pin while sewing to produce a fine seam or decorative edge finish.





For overlock, push the selection lever back away from you (6).

For roll hem, pull the selection lever towards you (3).



- Purchase threads on

cones or spools which

 Only use decorative threads in the loopers. The thread must move easily and without resistance through the thread guides and looper

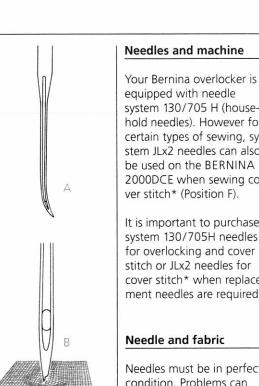
 The thicker the thread, the longer the stitch length (3-4).

 The thicker the thread, the looser the tensions.

 Sew slowly when using decorative threads. Pull the thread chain gently to the rear when starting to sew.

 Always test sew decorative threads before starting to sew your work.

- Use the deco-guide when sewing with thick or decorative threads (see Page 32).



equipped with needle system 130/705 H (house-

hold needles). However for certain types of sewing, system JLx2 needles can also be used on the BERNINA 2000DCE when sewing cover stitch* (Position F).

It is important to purchase system 130/705H needles for overlocking and cover stitch or JLx2 needles for cover stitch* 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

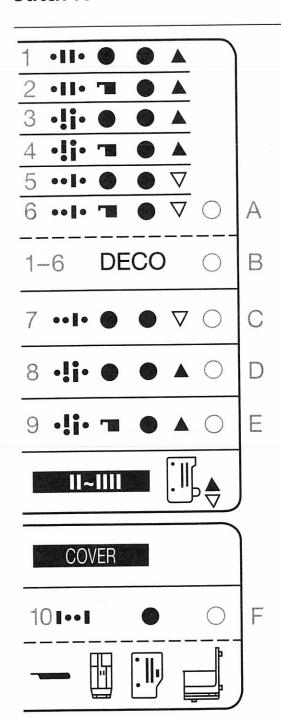
Sewing and overlock threads are being manufactured in increasing numbers in a wide variety of types, weights and combination fibres. It is worth investing in good quality threads for perfect sewing results.

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

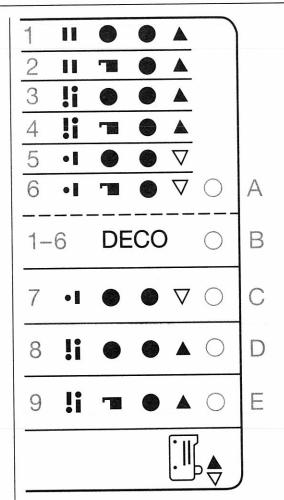
Thread, needle, application table

Thread	Needles	Where	Application
All purpose overlock thread (polyester)	70–90	Needle and loopers	For all overlock work
Spun polyester	-	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

Stitch formations and stitch selection



BERNINA 2000 DCE



BERNINA 2000 DE/D

Bernina 2000 stitches

The 2000DCE sews 10 different stitches.
The 2000DE and 2000D sew 9 different stitches.

Most of 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 selection of stitches can be sewn with one looper using the upper looper converter.

Examples:

3 thread super stretch 2 thread overlock/flatlock/ roll hem E RESIDE

1.83

The 2000DCE can be converted to cover stitch*. The cover stitch is 5 mm wide and is sewn with two needles and the lower looper (the upper looper is released and the upper knife and knife arm are raised).

Stitch display

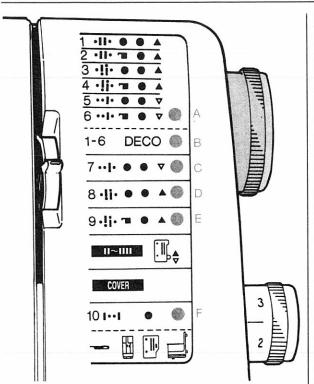
Blue dot =

Red dot = thread the lower looper

Purple dot* =

Small black dot =

- Attach the upper looper converter (upper looper is not threaded)
- Move stitch selection lever to roll hem
- Attach the overlock stitch plate
- Raise the upper knife and upper knife arm*
- Attach the cover stitch* presser foot
- stitch* stitch plate
- Attach the cover stitch* extension plate



Stitch display/stitch selection dial

Bernina 2000 overlockers are equipped with a unique stitch selection function. The basic tension settings for ten (nine) different stitches are distributed over six (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 green markings.

The positions A, C, D and E are set for overlock stitches using standard overlock thread.

The stitches on Position B are the same as position A but with automatic tension settings for using woolly nylon or a similar decorative thread in the loopers.

all the information you

need about stitches and threading.

Symbols:

Yellow line = insert and thread the left needle

Green line = insert and thread the right needle

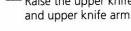
thread the upper looper through the blue guides

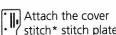
through the red guides

thread the lower looper through the purple guides

do not thread needle, remove needle and thread

- Move stitch selection lever to overlock





No.	Stitch	Symbols	Stitch width	Pos.	Thread	Bassic settings	
1	4 thread overlock with integrated safety seam	.	5–7mm, right and left needles	А	Loopers and needles: all-purpose overlock thread, polyester thread	Stitch length: 2.5 Cutting width: 2 Differential: N–2 (knits),	
				В	Loopers: woolly nylon Needles: all-purpose overlock thread, polyester thread	0.7–N (wovens)	
2	3 thread super stretch	- - T • A	5–7mm, right and left needles	А	Lower looper and needles: all-purpose overlock thread, polyester thread	Stitch length: 2.5 Cutting width: 1–2 Differential: N	
				В	Lower looper: woolly nylon Needles: all-purpose overlock thread, polyester thread		
3	3 thread overlock	·.i• • • •	3–5 mm, right needle 5–7 mm,	А	Loopers and needle: all-purpose overlock thread, polyester thread, embroidery or darning thread	Stitch length: 2.5 Cutting width: 2 Differential: N–1.5	
	The second second		left needle	В	Loopers: woolly nylon cr similar decorative thread Needle: all-purpose overlock thread, polyester thread	(knits), 0.7–N (wovens)	
4	2 thread wrapped overlock		3–5 mm, right needle 5–7 mm.	А	Lower looper/needle: all-purpose overlock thread, polyester thread, embroidery and darning thread	Stitch length: 2.5 Cutting width: 2 Differential: N-1.5	
			left needle	В	Lower looper: woolly nylon or similar decorative thread Needle: all-purpose overlock thread, polyester thread	(knits), 0.7–N (wovens)	
5	3 thread narrow seam	•• • ● ● ▽	2–3 mm right needle	А	Loopers/needle: all-purpose overlock thread, polyester and rayon threads	Stitch length: 1.0–1.8 Cutting width: 1–2 Differential: 0.7–N	
	Manager			В	Loopers: woolly nylon Needle: all-purpose overlock thread, polyester thread		
6	2 thread roll hem	•• • 1 • ∇	2–3 mm right needle	А	Lower looper/needle: all-purpose overlock thread, embroidery or darning thread, rayon thread	Stitch length: 1.0–1.8 Cutting width: 1–2 Differential: 0.7–N	
	NEW TENE		85	В	Lower looper: woolly nylon Needle: all-purpose overlock thread		
7	3 thread roll hem	•• • ● ♥ ▽	2–3 mm right needle	С	Upper looper: all-purpose overlock thread, woolly nylon, embroidery, darning or rayon thread Lower looper: all-purpose overlock thread, embroidery, darning or rayon thread Needle: all-purpose overlock thread, embroidery or darning thread, rayon thread	Stitch length: 1.0–1.8 Cutting width: 1–2 Differential: 0.7–N	
8	3 thread flatlock	·.i· • • A	3–5 mm, right needle 5–7 mm, left needle	D	Upper looper: all-purpose overlock thread, polyester thread, woolly nylon or similar decorative or rayon thread Lower looper and needle: all-purpose overlock thread, polyester thread	Stitch length: min. 2.5 Cutting width: 2 Differential: N	
9	2 thread fiatlock	•.i• T • A	3–5 mm, right needle 5–7 mm, left needle	Е	Lower looper: all-purpose overlock thread, polyester thread, woolly nylon or similar decorative or rayon thread Needles: all-purpose overlock thread, polyester thread	Stitch length: min. 2.5 Cutting width: 2 Differential: N	
10	Cover stitch*	••	5 mm, right and left needles	F	Lower looper: all-purpose overlock thread, polyester thread, woolly nylon or similar decorative thread Needles: all-purpose overlock thread, polyester thread	Stitch length: 3–4 Differential: N	
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Applications	Examples	Stitch
Durable stretch seams in jerseys and knits in cotton, wool, synthetic and blended fibres and for machine and hand knits. Ideal for seams in fine to medium weight cotton, viscose, satin or synthetic fibres, e.g. batiste, crepe-de-chine, poplin, satin etc.	Sweatshirts, running suits, jersey and knitted garments, children's clothing, light outer wear, home dec.	
Very elastic seams in stetchy fabrics suchs as Lycra.	Swimwear, gymwear, sportswear.	
Neatening edges of seam allowances, hems and facings. Suitable for all types of fabric. Stretchy seams in fine knits. Decorative and quickly sewn edges. Desorative seams in woven or fleecy fabrics or firm knits.	Neatening and sewing seams in clo- thing and home dec articles. Seams in T-shirts, baby and child- ren's wear and all garments such as coats, jackets pullovers as well as tablecloths, table mats, napkins, cushions and curtains.	THE OWN THE PROPERTY OF THE PARTY OF THE PAR
Neatening edges on seam allowances, hems and facings. Suitable for all fabrics. Double sided edging. Dedorative seams on firm wovens, fleecy fabrics or firm knits.	Neatening seams in clothing and home dec articles. Decorative finish on clothing such as coats, jackets and pullovers as well as tablecloths, table mats, napkins, cushions and curtains.	THE THERE WELLS
Narrow seams in the finest of silks, cotton or synthetic jersey. Particularly suitable for lingerie or lace inserts and fine pintucks.	Lingerie, underwear, light outer- wear, e.g. blouses, summer dresses, children's wear.	
Fine edge finish on sheer and lightweight woven fabrics or jerseys. Suitable for pintucks or lace insertion.	Lingerie, underwear, scarves, handkerchieves. Light outer wear evening wear, home dec.	
Quickly sewn delicate and fine edging for all fine or sheer fabrics.	Lingerie, underwear, scarves. Light outerwear, evening wear, home dec.	
■ Flat decorative seams in knit or woven fabrics. Suitable for patchwork.	Home dec: cushions, bedspreads. Clothing: jackets, coats, pullovers.	and the same of th
■ Decorative flat seam with slight stretch. Suitable for knits or woven fabrics. Ideal for patchwork.	Clothing: sportswear, gymwear, swimwear, fleece pullovers, jackets, coats. Home dec: cushions, bed covers etc.	
 The perfect flat hem for all stretch fabrics. Ideal for sewing and finishing with elastic or for binding edges in stretch fabrics. Decorative topstitch seams which can also be sewn with decorative thread (wrong side of stitch visible). 	T-Shirts, swim and gymwear, gar- ments made from knit and jerseys, underwear, lingerie, children's clothing, pullovers, sweatshirts.	TO THE PROPERTY OF THE PARTY OF

Threading symbols

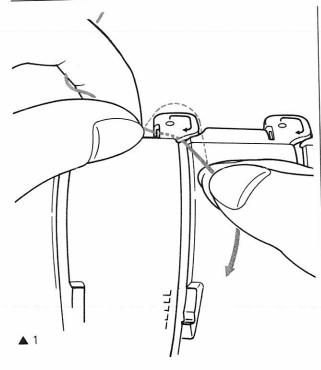
- = insert and thread the left needle
- = insert and thread the right needle
- = thread the upper looper through the blue guides
- = thread the lower looper through the red guides
- = thread the lower looper through the purple guides*
- = do not thread needle, remove needle and thread
- Attach the upper looper converter (upper looper is not threaded)
- Move stitch selection lever to overlock
- ∇ Move stitch selection lever to roll hem
- Attach the overlock stitch plate*
- Raise the upper knife and upper knife arm*
- Attach the cover stitch presser foot*
- Attach the cover stitch stitch plate*
- Attach the cover stitch extension plate

Note:

The positions A, C, D and E are set for overlock stitches using standard overlock thread. The stitches on Position B are the same as position A but with automatic tension settings for using woolly nylon or a similar decorative thread in the loopers.

Position F is for cover stitch*. The machine must be converted (see page 34)

Threading the machine for overlock and cover stitch*



General threading

instructions

Thread the machine carefully and in the following sequence.

Overlock stitches:

- Upper looper (blue markings)
- 2. Lower looper (red markings)
- 3. Right needle (green markings)
- Left needle (yellow markings)

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.

Cover stitch*:

- Lower looper
 (purple markings)
- 2. Right needle (green markings)
- 3 Left needle (yellow markings)

Tip:

When threading for the first time, use the same coloured threads as the markings, i.e.purple, green and yellow so that you can see exactly how the cover stitch* is formed.

Your BERNINA overlocker is equipped with practical threading aids:

- Stitch display with threading information
- Coloured threading diagram inside the looper
- Needle position diagram inside the looper cover
- Colour coded threading paths
- Lay-in thread guides
- Threading accessories in the looper cover

Preparation

- Turn the stitch selection dial to the appropriate position and check threading requirements.
- Raise the support rod fully.
- Raise the needles (Needle stop**).
- Raise the presser foot.
 The tensions release automatically.
- Swing foot out (do not swing the cover stitch* foot out in order to prevent damaging the needles).
- Open the looper cover.
- Raise the upper knife (if required).

First thread guide on

the machine

Thread the first guides on the top of the machine as follows: Holding the thread with both hands slip it into the appropriate guide from back left to front right in the direction of the arrow and pull gently to check that it is lying correctly (1).

Needle/looper threader

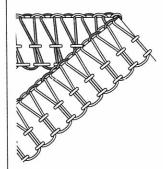
Insert the thread into the threader (2). Push the rigid end of the threader through the needle or looper eye and pull it completely through (3).





Upper looper (blue)

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



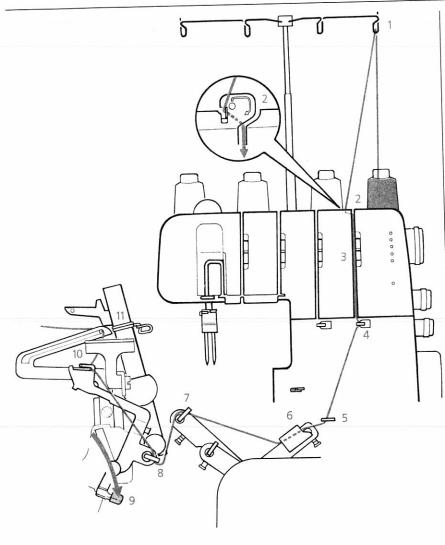
- Bring the thread up from the spool and lay it from back to front in the blue guide.
- 2. Thread the first machine guide.
- 3. Slip the thread through the groove.
- 4, 5, 6, 7, 8. Thread the guides.
- Thread the looper eye and lay the thread to the left under the presser foot.

Note:

Do not thread the upper looper when sewing with the upper looper converter (see page 20).

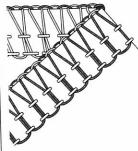
IMPORTANT!

When rethreading the upper looper after sewing with the upper looper converter, make sure that the thread goes through the guides 6 and 7 *behind* the lower looper thread. The looper threads must not cross.



Lower looper (red)

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

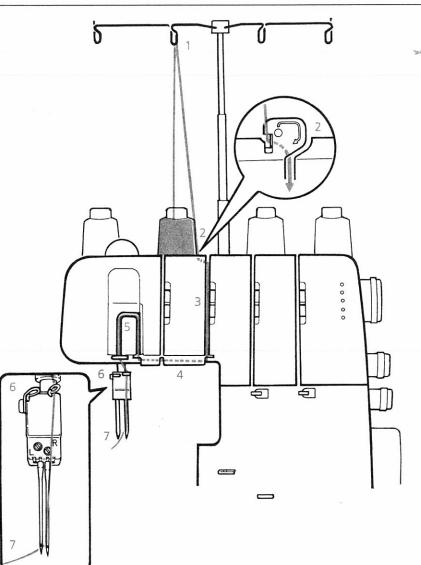


- Bring the thread up from the spool and lay it from back to front in the red guide.
- 2. Thread the first machine guide.
- 3. Slip the thread through the groove.
- 4, 5, 6, 7, 8. Thread the guides.
- 9. Press the lever on the auto-threader down.
- Thread the guide and then the slit on the threader. Push the auto-threader lever up to return it to its normal position.
- Thread the lower looper eye and lay the thread to the left under the presser foot.

Note:

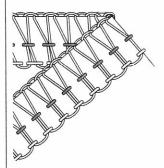
If the lower looper has to be rethreaded, cut off both needle threads and remove surplus thread from below. First thread the looper and then rethread the needles.



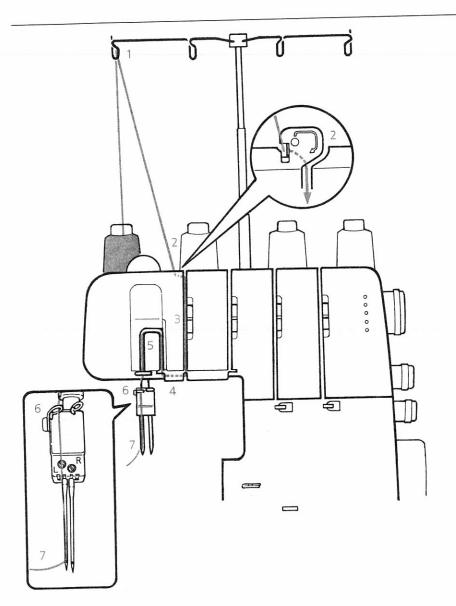


Right needle (green)

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



- 1. Bring the thread up from the 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. Thread the right needle from front to back and lay the thread to the left under the foot.

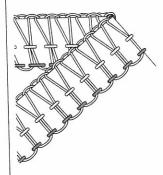


Re-threading or changing threads

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. Pull the looper threads through using the existing thread chain. Some thick decorative threads cannot be pulled through the looper eyes. Lower the presser foot. Select the stitch of your choice and test sew.

Left needle (yellow)

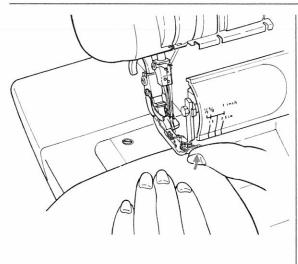
Place the spool on the spool holder pin underneath the yellow thread guide.

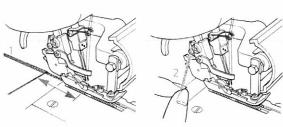


- Bring the thread up from the spool and lay it from back to front in the yellow guide.
- 2. Thread the first thread guide.
- 3. Slip the thread through the groove.
- 4, 5. Take the thread under the thread guide plate and through the take-up.
- 6. Thread guide on the needle clamp.
- 7. Thread the left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

After threading

When threading is finished, swing the foot back and lower it, lower the upper knife (if raised), close the looper cover and attach the waste collector.





Sewing test

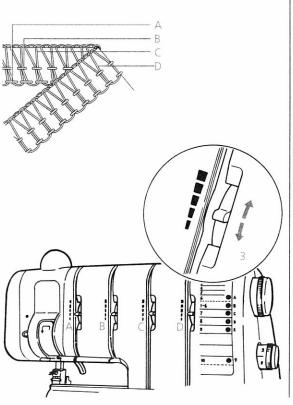
After threading select the stitch of your choice and test sew.

Seam begin, seam end, 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 $(2-2\frac{1}{2}")$ long thread chain (1).

Holding the fabric in your left hand, pull the thread chain over the thread cutter on the presser foot shaft (2).



Fine tuning

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

Example: 4 thread overlock

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

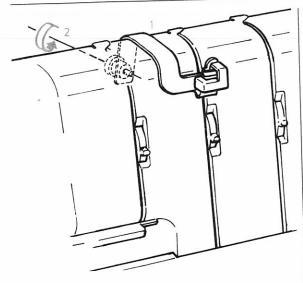
The upper looper thread lies on the upper side of the fabric and the lower looper thread lies on the underside of the fabric. The loops formed by both threads meet exactly on the edge of the fabric.

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

Stitch formations which are not perfect can be corrected with the fine tuning (3).

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

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



Deco guide

The deco guide (accessory bag) is specially designed for sewing wide seams and edges with decorative threads (see section Threads/ Decorative thread page 21).

Position the guide over the top of the machine over one of the thread slits (1) and tighten screw (2).

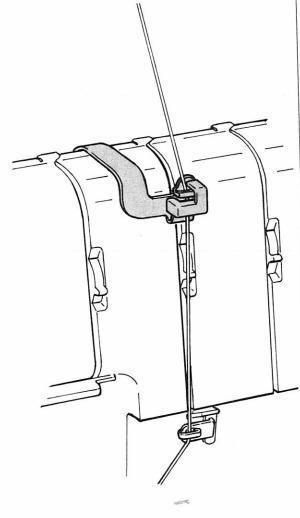
Take the thread through the deco guide without threading the first machine guide or tension slit.

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.



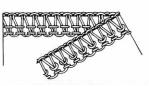
Fine tuning for 3/4 thread overlock and 3 thread narrow seam:



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



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



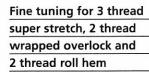
The right needle thread forms loops on the underside:
Increase the right needle

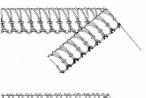
Increase the right needle tension (green).



The left needle thread forms loops on the underside:

Increase the left needle tension (yellow).

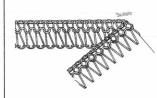


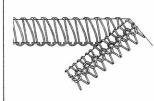


The left needle forms loops on the underside. Reduce the lower looper tension (red).

Tip: The elasticity of the 3 thread super stretch stitch can be increased by reducing the needle tensions or shortening the stitch length, depending on the fabric and application.





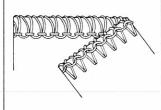


Fine tuning for 3 thread flatlock

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

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

Fine tuning for 2 thread flatlock



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

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

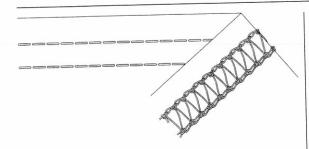


Fine tuning for 3 thread roll hem:



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).

Cover stitch* functions and general operating instructions



1 ·II· • • A 2 ·II· • • A 3 ·Ii· • • A 4 ·II· • • A 5 ··I· • • ▼ O 6 ··I· • • ▼ O 8 ·II· • • A O 9 ·Ii· • • A O COVER • F 10 I··I 2

Cover Stitch

The 5 mm wide cover stitch is formed with two needles and one looper. The needle threads appear as two straight lines (5 mm/3/16" apart) on the upperside. The looper thread is formed on the underside. The elasticity of the cover stitch makes it ideal for all stretch fabrics. The cover stitch is sewn in the fabric and not on the fabric edge, i.e. the fabric is not cut. The upper knife and upper knife arm are raised. The cover stitch gives a truly professional finish to all your home sewing. It is perfect for hems, top stitching, flat joining seams, edging with elastic and bindings.

Stitch selection dial / Position F

To select cover stitch turn the stitch selection dial to position F.

The sewing speed on position F is automatically reduced from 1500 s.p.m. to max. 800 s.p.m.

The needle stop** is automatically set to generally down. The cover stitch formation is completed with the needle inserted in the fabric.

Note:

When sewing is completed or interrupted, the needles stay in the fabric. This is ideal for positioning your work while sewing. To remove your work, raise the needles by turning the handwheel backwards, i.e. away from you in a clockwise direction.

Mechanical safety

In addition to the electronic safety features (page 12) your machine is equipped with mechanical safety features.

The looper cover can only be closed when:

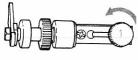
- the position of the converter arm corresponds to the extension plate (cover stitch) or knife quard (overlock)
- the stitch plate corresponds to the looper cover mode
- the upper knife is in the raised position when the cover stitch extension plate is attached.

Looper converter arm

- Lower the needle clamp, press Needle stop**. The loopers are automatically lowered.
- Open the looper cover.
- The looper converter arm can now be moved from overlock to cover stitch or from cover stitch to overlock.

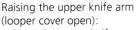
When the converter arm is switched from overlock to cover stitch, the upper looper is released and the movement of the lower looper becomes elliptic.

When the converter arm is switched from cover stitch to overlock, the upper looper is reinstated and the lower looper moves sideways.

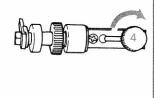


Upper knife arm

The knives are not used for cover stitch and the upper knife arm is raised to provide additional space to the right of the needle.

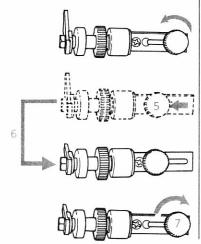


- Raise the upper knife until it engages fully.
- Loosen the screw (1).
- Press the screw to the left (2), push the arm up (3) and the screw engages on the right (4).
- Tighten the screw.



Lowering the upper knife arm (looper cover open):

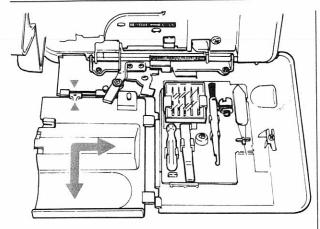
- Loosen the screw and press to the left (5).
- Push the arm down (6) and push the screw to the right (7).
- Tighten the screw.
- Lower the upper knife until it engages fully. (Close looper cover.)

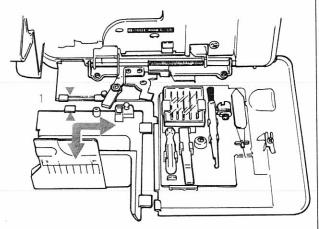


Note:

See page 18 for raising the upper knife.

Cover stitch* functions and general operating instructions





Knife guard/cover stitch extension plate

For cover stitch, the knife guard in the looper cover is replaced by the cover stitch extension plate. The extension plate covers the released upper looper and extends the stitch plate to the right of the presser foot.

To replace:

Open the looper cover. Remove the knife guard by pulling gently to the left. To attach the extension plate, hold it at a slight angle to the looper cover (1), hold both parts parallel and push to the right until it clicks into place.

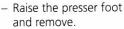
Note:

The looper cover will not close and the machine will not sew when:

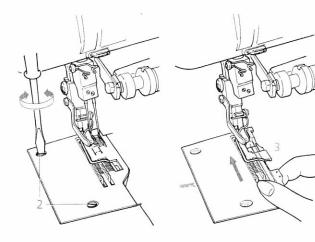
- the position of the converter arm does not correspond to the extension plate (cover stitch) or knife guard (overlock)
- the stitch plate does not correspond to the looper cover mode
- the upper knife is not in the raised position when the cover stitch extension plate is attached.

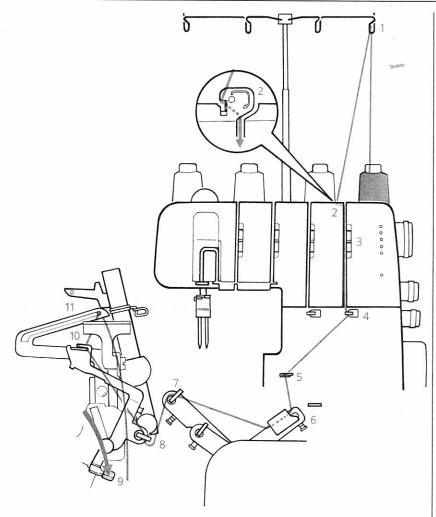
Changing

the stitch plate



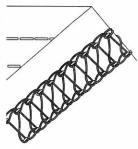
- Loosen the screw (2)
 with the screwdriver
 (accessory bag). Lift the
 stitch plate with the right
 hand and remove to the
 front.
- Attach the replacement stitch plate from the front (3).
- Insert and tighten the screws.





Preparation

As described on page 26



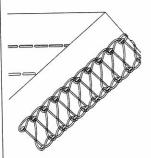
Cover stitch looper (purple)

Place the spool on the spool holder pin under the purple markings.

- Take the thread from back to front through the purple guide on the thread stand.
- 2. Thread the first guide.
- 3. Take the thread through the groove.
- 4, 5, 6, 7, 8. Thread guides.
- 9. Press the lever of the auto-threader down.
- Thread the guide and the slit of the threader. Push the auto-threader lever (9) up and it will return to its normal position.
- 11. Thread the looper eye and leave about 8 cm (3") hanging.

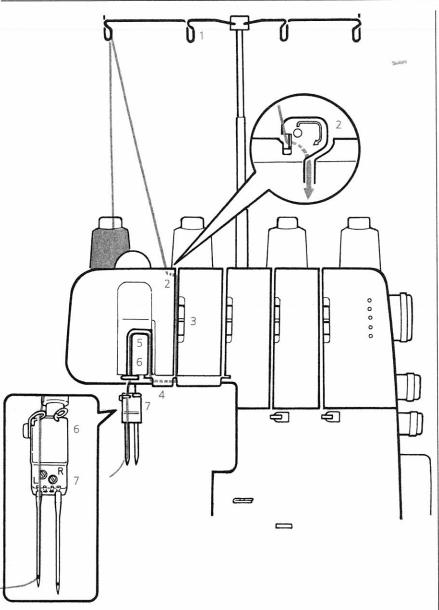
Cover stitch right needle (green)

Thread the right needle as follows:



Place the spool on the spool holder pin under the green marking.

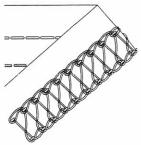
- Take the thread from back to front through the green guide on the thread stand.
- 2. Thread the first guide.
- 3. Take the thread through the groove.
- 5. Take the thread under the thread guide bar and through the takeup.
- 6. Thread guide on the needle clamp.
- 7. Thread the needle from front to back. Lay the thread to the left over the presser foot and cut to the length of the stitch plate.



Cover stitch left needle

(yellow)

Thread the left needle as follows:



Place the spool on the spool holder pin under the yellow marking.

- Take the thread from back to front through the yellow guide on the thread stand.
- 2. Thread the first guide.
- 3. Take the thread through the groove.

1(

- 5. Take the thread under the thread guide bar and through the takeup.
- 6. Thread guide on the needle clamp.
- Thread the needle from front to back. Lay the thread to the left over the presser foot and cut to the length of the stitch plate.

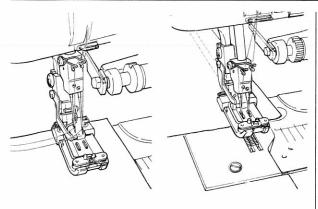
Completing cover stitch threading

After threading lower the presser foot and close the looper cover.

Rethreading or changing thread

See page 30

Cover stitch* sewing test and fine tuning



Cover stitch sewing test and fine tuning

After threading check that the stitch selection dial is on position F. Test sew.

Starting to sew:
Raise the presser foot and place a double layer of fabric under the presser foot and needles. Lower the presser foot. To make the first stitch, turn the handwheel towards you to check the position of the needles. Sew. When sewing is interrupted, the needles stop in the fabric. When sewing is complete, raise the needles by turning the handwheel away from

you (clockwise). This relea-

ses the needle threads from

the lower looper. Do not

use the Needle stop button! Raise the presser foot

and remove work towards

the left. Cut the thread

chain (thread cutter on

presser foot shaft).

A Fine tuning for the left needle thread (yellow)

B Fine tuning for the right needle thread (green)

C Fine tuning for the lower looper (purple)

Fine tuning cover stitch

The needle threads form loops on the underside of the fabric:

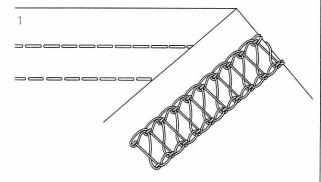
Increase the needle thread tensions.

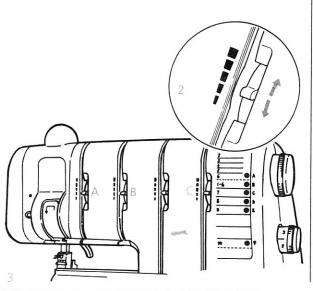
Tip:

When using decorative threads, attach the Deco Guide (see page 32) over the looper threading path. Do not thread the first machine guide but take the thread directly through the Deco Guide.

Note:

If needle system JLx2 is used, reduce the needle thread tensions slightly.





Fine tuning cover stitch

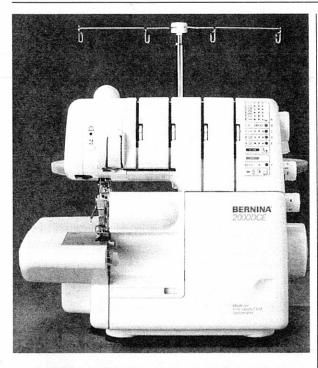
Compare your result with the stitch formation on the waste collector or threading diagram in the looper cover.

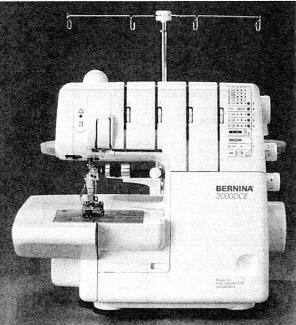
The needle threads form two straight lines on the upperside of the fabric (1). They appear as dots on the underside of the fabric.

The looper thread forms horizontal and vertical loops between the two rows of needle threads on the underside of the fabric to give a stretchy, durable seam.

Incorrect stitch formation can be corrected by fine tuning (2).

To increase the tension push the fine tuning lever up. To reduce the tension push the fine tuning lever down.

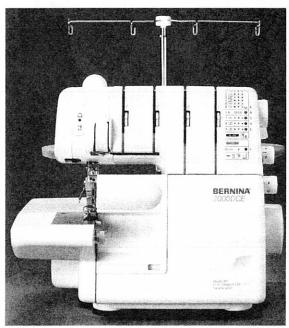




The individual steps of the conversion sequence are described in detail in the chapter: «Cover Stitch* Functions» (pages 34–36).

- 1. Turn stitch selection dial to position F.
- 2. Cut all threads and remove the thread chain.
- Remove waste collector and open the looper cover.
- 4. Raise the upper knife.
- 5. Lower the presser foot.
- Remove the needle(s) (screwdriver in looper cover).
- 7. Close looper cover.
- 8. Press the needle stop button** to lower the needle clamp.
- 9. Open the looper cover.
- 10. Switch converter arm from overlock to cover stitch.
- 11. Raise the upper knife
- Remove overlock presser foot.
- 13. Remove overlock stitch plate.
- 14. Attach cover stitch stitch plate.
- 15. Attach cover stitch presser foot and lower.
- 16. Remove the knife guard.
- 17. Attach extension plate.
- 18. Turn the handwheel to bring the needle clamp into its highest position.
- 19. Insert needles into two outer holes.
- 20. Turn the handwheel to check if the needles, presser foot and stitch plate correspond with each other.
- 21. Raise presser foot.
- Thread cover stitch looper (purple markings).

- 23. Thread cover stitch needles (green/yellow markings).
- 24. Close the looper cover.
- 25. Adjust stitch length and differential feed to suit stitch and fabric.
- 26. Sewing test: Place fabric under the foot and needles. Sew. When the seam is complete, turn the handwheel away from you (clockwise) to raise the needles. Do not press the Needle stop button! Raise the presser foot, remove work and cut threads.



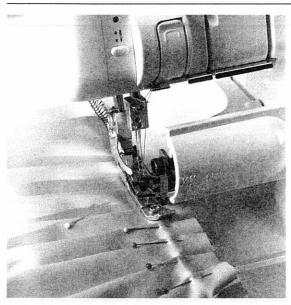
The individual steps of the conversion sequence are described in detail in the chapter: «Cover Stitch* Functions» (pages 34–36).

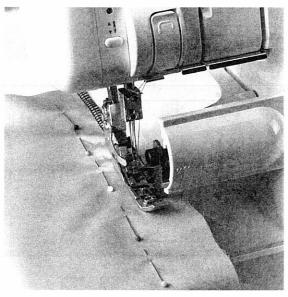
- Turn the stitch selection dial to desired position (A–E).
- 2. Cut and remove all threads.
- 3. Lower the presser foot.
- Remove the needles (screwdriver in looper cover).
- 5. Close looper cover.
- 6. Press Needle stop button** to lower the needle clamp.
- 7. Open the looper cover.
- 8. Switch converter arm from cover stitch to overlock.
- 9. Remove cover stitch presser foot.
- 10. Remove cover stitch stitch plate.
- Attach overlock stitch plate.
- Attach overlock presser foot.
- 13. Remove the extension plate.
- 14. Attach the knife guard.
- Turn handwheel to bring needle clamp into its highest position.
- Insert overlock needle(s) (depending on stitch choice).
- Turn handwheel to check if needles, presser foot and stitch plate correspond with each other.
- Raise presser foot and swing out.
- 19. Thread overlock looper(s) (depending on stitch choice).
- 20. Thread needle(s) (depending on stitch choice).
- 21. Swing foot back and lower.
- 22. Lower the upper knife arm.
- 23. Lower the upper knife.

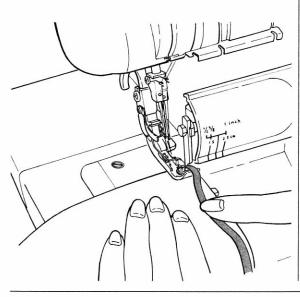
- 24. Close the looper cover and attach waste collector.
- Adjust stitch length, differential feed and cutting width to suit stitch and fabric.
- 26. Test sew: Raise the tip of the presser foot and position fabric (an overlock chain can also be formed without fabric). Continue sewing at the end of the seam until an 8 cm (3") chain is formed. Cut threads.

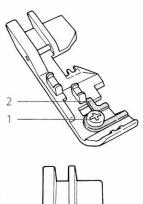
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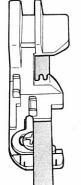
Pins









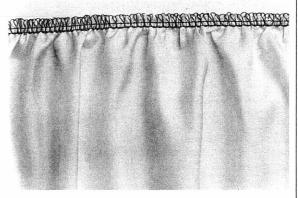


Tape guide

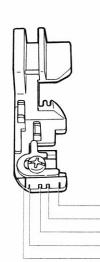
The standard presser foot is equipped with a guide for sewing on tape to strengthen or stabilise shoulder or side seams in garments made from knits or stretch fabrics. The guide is also ideal for sewing on narrow elastic for lingerie, swim and gymwear.

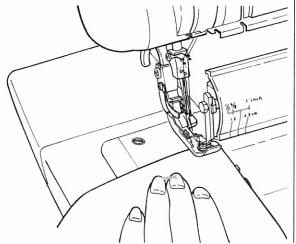
- Raise the needles (Needle stop**).
- Raise and swing the presser foot out.
- Place the tape under the foot, slip it into the guide from the right and pull through slightly.
- Swing the presser foot back and lower it.
- Sew a few stitches on the tape.
- If necessary, loosen the setscrew (1) and adjust the tape guide to suit the width of the tape (2).
- Retighten the setscrew.
- Raise the tip of the presser foot, place work underneath the tape/elastic and sew.

Practical Sewing – Overlock









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:

Increase the needle tensions for a tighter gather.

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.

Presser foot markings

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

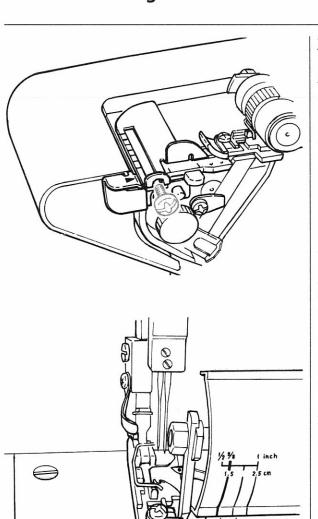
- A Cutting line (cutting width 2)
- B Right needle insertion.
- C Left needle insertion.
- D 0.75 cm distance from cutting line (A) (cutting width 2)
- E 1 cm distance from cutting line (A) (cutting width 2)

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.

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Seam guide right**

Loosen the screw. Position the attachment (accessory bag) over the screw and retighten the screw. 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 the cutting line on the presser foot.

Note:

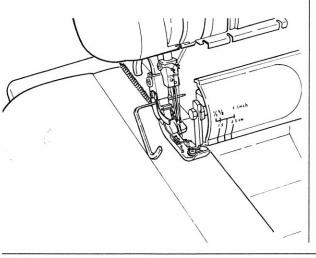
Push the guide fully to the left to open the looper cover.

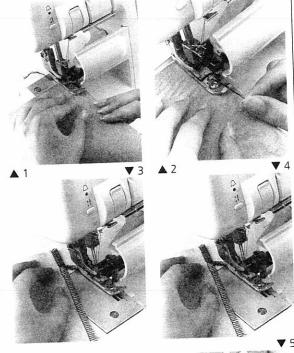
2000D:

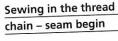
The seam guide is available as an optional accessory.

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. It is ideal for cutting fabric strips, e.g. for bias binding and for patchwork, for hems and pintucks, for sewing on decorative bands with flatlock stitches and for inserting lace with a narrow seam.







- Sew to form a 3-4 cm (2") chain.
- Position fabric and sew one stitch.
- Insert needles (press Needle Stop**).
- Raise the presser foot.
- Pull the thread chain gently and from the left place it under the presser foot (in the tape guide if wanted).
- Lower presser foot.
- Start sewing, sewing over the thread chain.
- After approx. 2 cm/1", guide the thread chain towards the knife to cut off the excess (1, 2).

Sewing curves

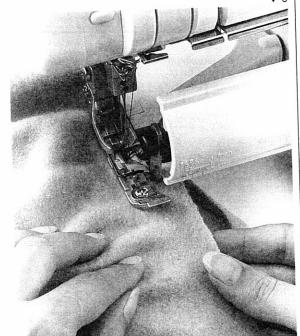
Overlocking outside and inside curves is easy using the right technique. As the fabric is cut before it is sewn, it is important to watch the knives and not the needles. Guide the fabric as straight as possible towards the knife. Avoid letting the fabric slip between the knives and needles (6).

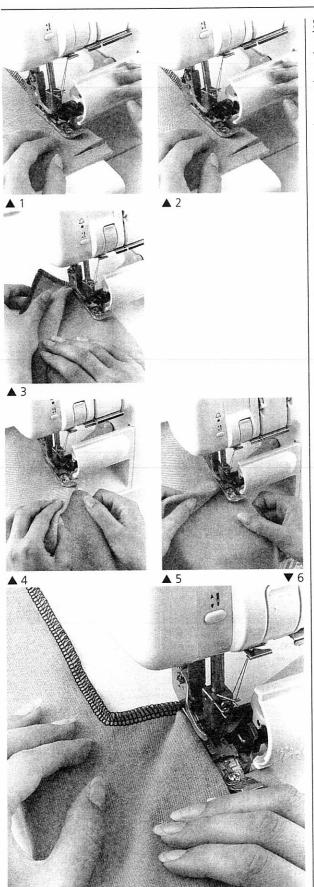
Sewing in the thread chain – seam end

- Sew to the end of the seam.
- Raise the needles (Needle stop**). Raise the presser foot.
- Remove work carefully towards the back.
- Turn work over and 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 (3, 4).

Securing thread chains

Leave a 12 cm/5" 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 (5).





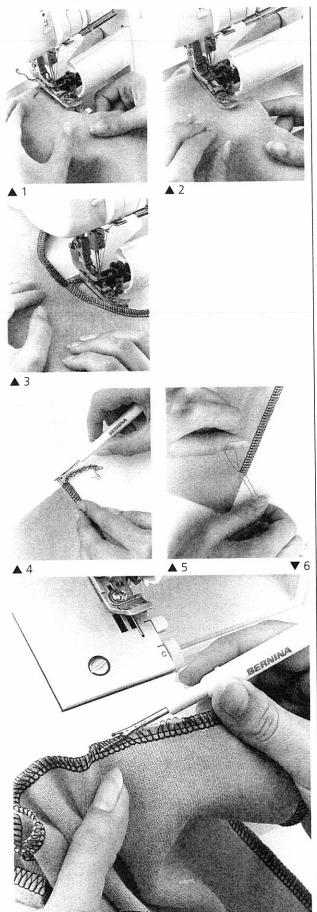
Sewing outside corners

- Snip into each corner along the stitching line.
- Sew up to the corner and slightly over the edge of the fabric.
- Raise the needle (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.(Figs. 1, 2, 3)

Sewing inside corners

- Snip into the corner up to the stitching line.
- Sew until the knife reaches the cut.
- Fold fabric towards you.
- Sew over the corner.
- Fold fabric away from you.
- Continue sewing. (Figs. 4, 5, 6)

Practical Sewing – Overlock



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 stiches without cutting.
- Raise the tip of the presser foot.
- Turn work away from you and sew off the edge. (Figs. 1, 2, 3)

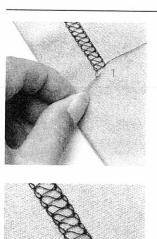
Unpicking seams

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. (Figs. 4, 5)

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. (Fig. 6)

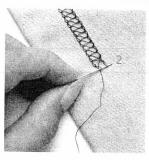


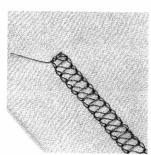
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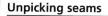


Securing the seam end

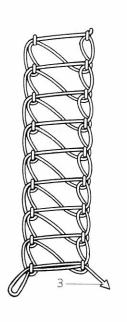
After removing your work turn it over to the wrong side. Secure the seam by pulling the loop (1) to the left. If the looper thread is subsequently pulled upwards, the needle threads (2) appear and can be pulled through to the wrong side and knotted.

Note:

The cover stitch formation can only come undone at the end of a seam. It is not necessary to secure the seam begin because the first stitch is automatically knotted by the subsequent stitches.

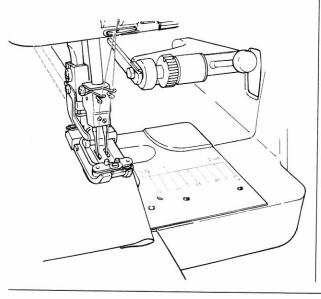


The cover stitch (chain formation) can be unpicked from the seam end by pulling the looper thread (3). The needle threads can then be removed from the right side.

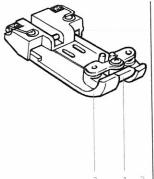


Stitch plate with seam guide lines

The seam guide lines on the extension plate are an invaluable aid for sewing hems, bindings and for topstitching.



Practical sewing - Cover Stitch*

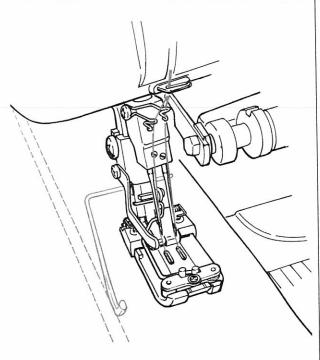


Cover stitch presser foot

The presser foot (compensating presser foot) consists of a solid centre section and two spring-loaded side sections.

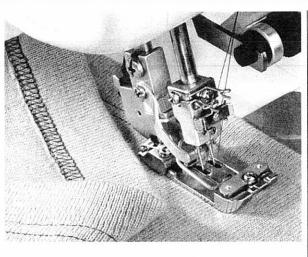
The indents on the centre section (1) indicate the needle positions and act as guides.

The spring-loaded side sections (2) guide the fabric and prevent sideways movement. Perfect for top-stitching hems with elastic, folded edges, seams and ribbings as well as binding or sewing on lace or elastic.



Seam guide left

The seam guide left (accessory bag) is ideal for guiding parallel lines or edges which require a guide to the left. For example shoulder straps or decorative seams in the fabric as well as sewing on binding and bands.







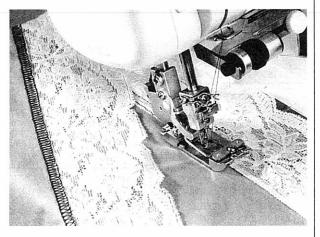
Simple hem

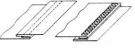
Stitch length: 3–4
Differential: N–2
(depending on fabric)

- Mark hem depth and fold or press.
- Place fabric under the foot and guide the folded edge along a line on the stitch plate.

The hem is sewn and the raw edge on the wrong side is neatened simultaneously. Surplus seam allowance can be trimmed close to the stitches if desired.

Ideal for all stretch fabrics.







Flat joining seam

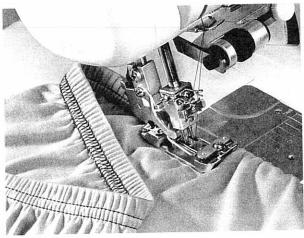
Stitch length: 3–4 Differential: N–2 (depending on fabric)

- Mark seam allowances.
- Turn or press under the edge of the upper fabric (if not already neatened).
- Place edges on top of one another.
- Guide fabric edge along one of the side sections of the foot.

When sewing on elastic or lace, place it on the fabric and cover the seam allowance. The underside (raw edge) will be neatened. If the seam allowance is more than 6 mm ($\frac{1}{4}$ "), it can be trimmed close to the stitches after sewing.

Ideal for all hems and edges with elastic in jerseys, knits and stretch fabrics. Suitable for shaped pieces such as raglan sleeves, rounded sections and bindings.

Practical sewing - Cover Stitch*









Hem with sewn-in

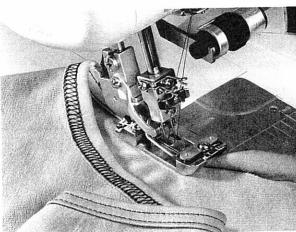
elastic

Stitch length: 3-4 Differential: 0.7-N

- Sew on elastic with 4-thread overlock
- Turn under hem to the width of the elastic and topstitch from the right side.

Guide the fold along the right section of the foot or use one of the lines on the stitch plate as a guide. The hem is stretchy, durable and regains its shape after stretching.

Ideal for swimwear, gymwear, children's clothing, skirt and trouser waistbands.

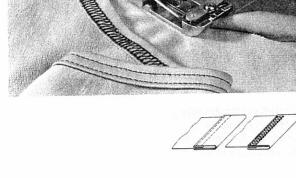


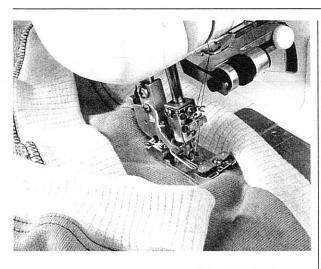
Binding

Stitch length: 3-4 Differential: N

Cut bias binding or bias cut strips to the desired width, mark if wanted and press or pin. Lay the binding round the fabric edge and sew. Guide the edge of the binding on the right side of the fabric along the left side section of the foot. The edge of the binding on the wrong side (raw edge) is neatened by the looper thread. Trim surplus binding close to stitches.

Ideal for necks, armholes and tubular items.





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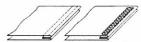
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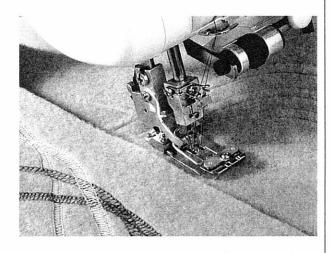
Top stitching seams/ ribbing/yokes

Stitch length: 3–4 Differential: 0.7–N

- Fold or press seam to one side.
- Edge stitch (or at distance desired) from the right.
- Guide the edge of the seam along the side sections of the foot.

Cover stitch is perfect for top and edge stitching overlock seams in all stretch fabrics to give a professional and decorative finish.

Ideal for sweatshirts, all garments made from jersey such as dresses, jackets, coats and garments made with the patchwork technique.







Decorative stitching

Stitch length: 3–4 Differential: 0.7–N

The additional space to the right of the needle allows you to sew decorative seams in the fabric.

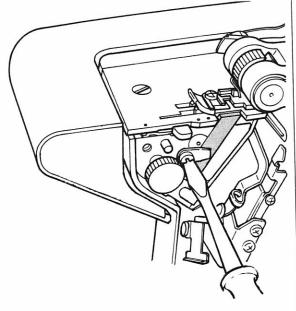
The «wrong» side of the stitch can be used on the «right» side of the fabric. It is particularly effective if fine decorative threads are used in the looper.
Use the Deco Guide if necessary (page 32).

- Draw pattern lines on the right or left side of the fabric.
- Sew.

Tip:

Use a double layer of fabric or stabilizer. Remove or trim after sewing.

WARNING Please refer to the safety instructions.



Replacing the lower knife

- Open the looper cover.
- 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.
- Lower the upper knife.
- Close the looper cover.
- Test sew.

Upper knife

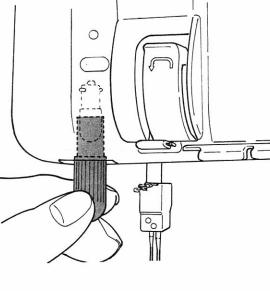
The upper knife (moving knife) is made from special material and generally does not need replacing. Should it get damaged, it can be replaced by your local BERNINA dealer.

Replacing the 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.

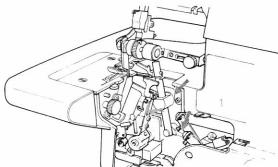
Replacement bulbs for your Bernina overlocker are available from your BERNINA dealer. Use 12 Volt/5 Watt bulbs.



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. Now and then lubricate the points illustrated.



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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. Close the looper cover.
	The main switch is not on.	Switch machine on. Main switch to I.
	The machine is not plugged in.	Plug machine into mains socket.
Fabric does not feed evenly:	Differential feed is wrongly adjusted.	Check the differential feed setting.
	Presser foot pressure is too low.	Adjust the presser foot pressure.
	Lower or upper knife is blunt or wrongly positioned.	Replace the lower or upper knife.
Thread breaks:	Thread tension is too tight for the thread being used.	Reduce thread tension.
	Needles not inserted correctly.	Insert needles fully into needle clamp with flat side to the back.
	Wrong needles.	Use system 130/705 H needles for overlock or cover stitch*, or JLx2 for cover stitch*.
Needles break:	Needles are bent, blunt or points are damaged.	Replace the needles.
	Needles not inserted correctly.	Insert needles fully into needle clamp with flat side to the back.
	Needle, stitch plate and foot do not correspond.	Use the two inner needle positions for overlock and the two outer needle positions for cover stitch*.
	Fabric was pulled while sewing.	Guide fabric gently with both hands.
Skipped stitches:	Needles are bent or blunt.	Replace the needles.
	Wrong needles used.	Use system 13 0/705 H needles for overlock and cover stitch or JLx2 for cover stitch*.
	Presser foot pressure is too low.	Increase foot pressure.
Poor stitch formation:	Sewing position incorrect.	Turn the stitch selection dial to the correct position.
	Threads are not between the tension discs.	Check if thread is lying between tension discs. Raise the presser foot, pull the threads and lower the presser foot
	Thread has got caught.	Check threading path of each thread.
	Machine is incorrectly thread.	Check threading path of each thread.
Seams flute or wave,	Presser foot pressure is too high.	Reduce presser foot pressure.
especially when sewing knits:	Differential feed is set incorrectly.	Adjust differential feed to between N and 2.
	Fabric was pulled while sewing.	Guide fabric gently.

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Trouble shooting guide

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Problem:	Cause:	Solution:
Seams pucker	Differential feed is set incorrectly.	Adjust differential feed to 0.7–N.
Seams pucker	Needle thread tensions are too tight.	Reduce needle thread tensions.
	Looper thread tension is too tight for thread.	Use the Deco Guide.
Fabric edges curl	Too much fabric in the stitch.	Reduce the cutting width.
Stitch selection lever is on roll Set shem.		Set selection lever to overlock.
Thread loops are too loose	Too little fabric in the stitch.	Increase the cutting width.
Machine stops sewing	Should the machine stop sewing, the motor cuts outs for 2 seconds after which you can continue sewing.	Check why the machine stopped. The machine will sew again after the safety cut-out.
Fabric cannot be removed	Handwheel was turned anti- clockwise.	Insert needles into fabric, press Needle stop, turn the handwheel away from you (clockwise) to raise needles. Remove work.

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Technical data

itch types:	2 needles, 1 looper: Cover stitch* 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	
eam width:	5 mm (3/16") Cover Stitch* 3–7 mm 2/3 thread overlock 5–7 mm 4 thread overlock/3 thread super stretch	
titch length:	1–4 mm	
Differential feed:	Pushing effect: N-2 Stretching effect: 0.7-N	
Presser foot:	Cover stitch* (compensating foot), snap-on sole Swing-out, snap-on sole	
Presser foot lifter:	Two-step. Max. 7 mm.	
Integrated accessories:	Roll hemmer, tape guide	
Handwheel:	Rotates forwards (anti-clockwise)	
Needle system:	130/705H (JLx2 can be used if necessary for cover stitch)	
Electronic needle stop**:	Cover stitch* Position F: generally down Overlock stitches Positions A-E: generally up	
Sewing speed:	Max. 800 s.p.m. for cover stitch* (Pos. F) Max. 1500 s.p.m. for overlock stitches (Pos. A–E)	
Weight:	2000DCE 8.8 kg 2000DE 8.4 kg 2000D 8.8 kg	
Dimensions:	335W x 295D x 340H mm	
	A Language	

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