DÜRKOPP ADLER

906

Additional Instructions

Semi-finished pocket style set

IMPORTANT
READ CAREFULLY BEFORE USE
KEEP FOR FUTURE REFERENCE

1 Kit components

Before starting to manufacture the template sets, check whether the delivery scope of the basic kit 0906 410014 or 0906 410024 is correct.

Basic kit 0906 410014

From a width of 94 mm of the inner seam and a length of 108 mm of the inner seam to the center of the tack.

Material-No.	Amount	Designation
0558 006060	1	Adjusting needle
0906 410434	1	Transfer frame
0906 410444	1	Outer frame
9225 201750	20	Screws M4x8
9231 000367	20	Nut BM4
0906 410074	1	Inner slider
0906 410414	1	SF-parts basic kit standard

Basic kit 0906 410024

From a width of 132 mm of the inner seam and a length of 160 mm of the inner seam to the center of the tack.

Material-No.	Amount	Designation
0558 006060	1	Adjusting needle
0906 410434	1	Transfer frame
0906 410444	1	Outer frame
9225 201750	20	Screws M4x8
9231 000367	20	Nut BM4
0906 410404	1	Inner slider large
0906 410424	1	SF-parts basic kit large

Additionally required:

- DA CAD 5000
- Flat head and cross head screwdriver
- Ring wrench or spanner size 7 mm
- Handsaw
- Rasps
- Knife

- Shape of the pocket as .dxf or dimensions on paper
- Triangle ruler
- Felt pen
- Degreaser
- Rag
- Bench vise

Optional:

- Band saw/jigsaw
- Emery cloth
- Vernier caliper

2 Programming in DA CAD

A DA CAD 5000 training is required in order to be able to create seam programs

In order to start the programming, select model 911 and a sewing area of 210x210 (class 906) at the DA CAD 5000.

In order to manufacture the templates correctly, 2 seam programs have to be written:

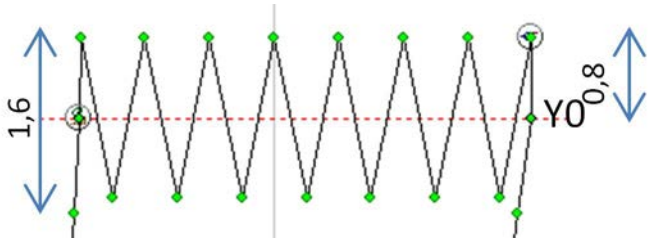
- Outer contour of the pocket: Seam contour with the dimensions of the outer pocket edges incl. tack width
- Seam program: Seam program with all seams/tacks/functions

2.1 Programming the outer contour of the pocket

The outer contour of the pocket is needed to manufacture the transfer plate, the outer frame plate and the Delrin.

With the class 906 the tack is always situated around the Y0 line. With a zigzag tack width of 1.6 mm the tack is situated 0.8 mm above Y0 and 0.8 mm below Y0.

Fig. 1: Tack of the seam contour



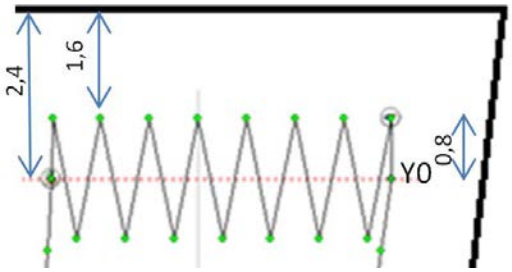
Example on the basis of the outer contour of a pocket

In this particular example the distance of the tack edge to the outer contour of the pocket is 1.6 mm. The tack width is 1.6 mm, that is 0.8 mm above Y0 and 0.8 mm below Y0.

This results in the tack's position at 2.4 mm above Y0 for the programming of the upper outer contour of the pocket.

The rest of the contour corresponds with the dimensions of the outer contour of the pocket.

Fig. 2: Programming the outer contour of the pocket



2.2 Programming a seam program

The seam program is needed in order to manufacture the inner slider. It can be created through an equidistant (translational motion) to the left (in seam direction) from the program of the outer contour of the pocket.

1. Programming the inner course of the seam.
2. Programming the tack.
3. Adding the corner override.
4. Set the TPs only after punch-marking the inner slider!
5. If an optional bar code scanner is available, a bar code can be issued for this pocket template, 🕮 *Additional Instructions Mounting a barcode reader*.

3 Manufacturing of the transfer plate

NOTE

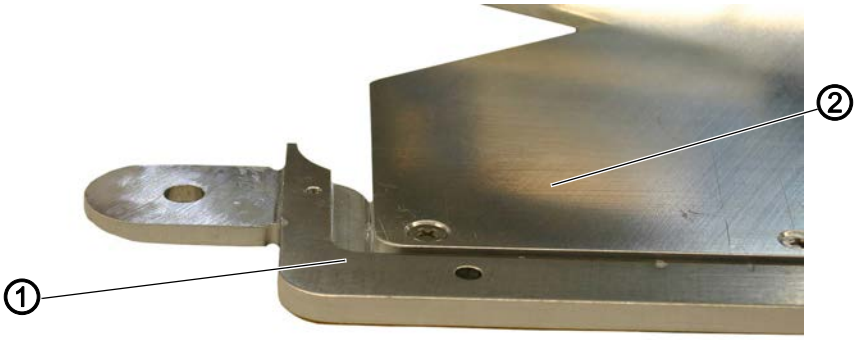
Risk of scratching the metal frame!

When punch-marking the templates, always lay some fabric underneath. Otherwise the table top and templates may get damaged.

3.1 Manufacturing the transfer plate

For the manufacturing of the transfer plate (2) (0906 410030) we recommend to screw the transfer plate (2) into the outer frame (1) (0906 410444). ATTENTION: Do not use the outer frame plate! The transfer plate (2) is thicker and shorter than the outer frame plate.

Fig. 3: Transfer plate mounted in the outer frame



(1) - Outer frame *(2) - Transfer plate*

Prerequisite

- The insertion mode 5 has to be activated in the machine's software, compare 🕮 *Operating Instructions 906*.

This is how you manufacture the transfer plate:

1. Switch on the machine and reference it.
2. Transfer the program **Pocket's outer contour** onto the machine, compare 🕮 *Operating Instructions 906*.
3. Press both manual keys.

↳ The machine moves to the loading position.

4. Select in the menu `Extras` - `Clamp change mode`.
5. Remove the previous template set - if there is one, compare 🕮 *Operating Instructions 906*.
6. Insert the outer frame (1) with the mounted transfer plate (2) into the sewing unit.

Fig. 4: Outer frame with transfer plate on the machine

7. Lock all template slots via the control panel, even if no template is inserted.
8. Check the inclination of the outer frame and adjust if needed, compare 🕮 *Service Instructions 906*.
9. Return to the user interface by closing the window with the button **X**.

↳ The machine will ask to execute a reference run.

10. Press both manual keys.

↳ The machine moves to the referencing position.

11. Remove the sewing foot.
12. Insert the adjusting needle (0558 006060), compare 🕮 *Operating Instructions 906*.
13. Open the seam program **Pocket's outer contour**.
14. Press both manual keys.

↳ The machine moves to the loading position.

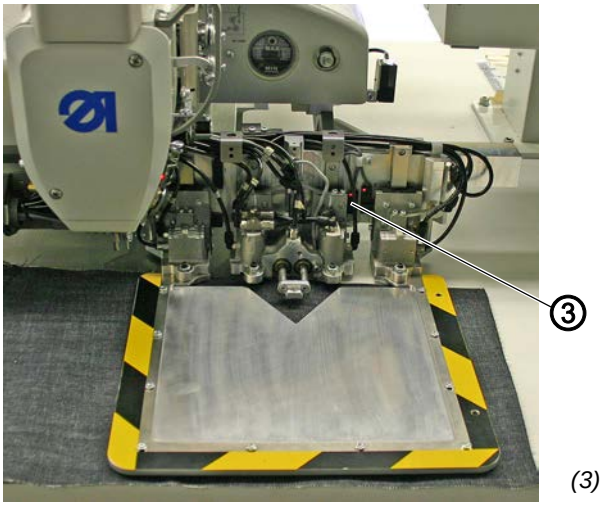
15. Select on the user interface `Edit` - `Seam programs` - `Contour test`.
16. Actuate the pedal.

↳ The outer frame lowers.

17. Actuate the pedal.

↳ The take-up of the inner slider lowers.
The sensor (3) has to light up, eventually push it manually upwards into switching position, otherwise an error message will appear.

Fig. 5: Sensor of the inner slider



(3) - Sensor

18. Press both manual keys.

↳ Preparation for the next step.

NOTE

Risk of damaging the machine due to incorrect marking!

The adjusting needle has to be in elevated position after each punch-mark.

Never mark the contours by sewing or by scraping the plate surface, as this will damage the machine.

19. Repeatedly press the button **Forward** in order to move along the contour. Lower the adjusting needle with the hand wheel at distinctive points in order to punch-mark the points (4) on the plate.

Fig. 6: Marking the contour

(4) - Marking

20. Remove the outer frame at the end of the contour test.
21. Remove the transfer plate from the outer frame.
22. Trace the contour along the punch-marked points.
23. Cut out the contour with a saw and deburr the edges.

Fig. 7: Cut out transfer plate

24. Attach a phase (5) on the left protrusion at the bottom of the transfer plate.

Fig. 8: Attaching the phase

(5) - Phase

25. Taping the transfer plate, 📖 *3.2 Taping the transfer plate*, p. 10.

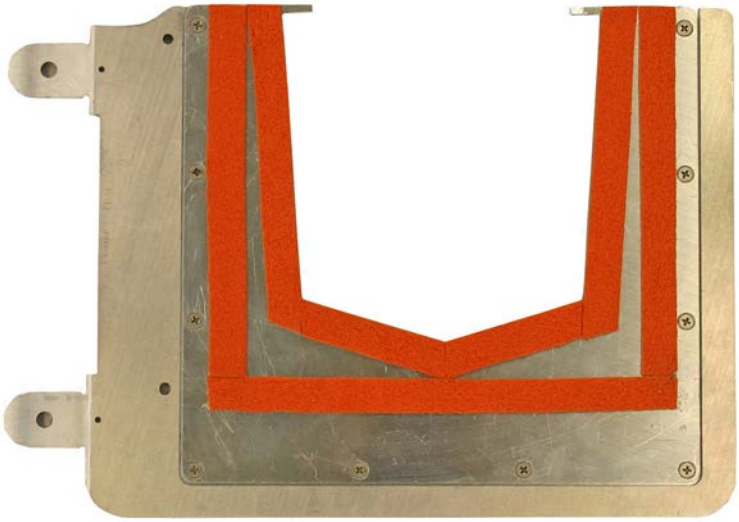
3.2 Taping the transfer plate

This is how you tape the transfer plate:

1. Attach the double-faced adhesive tape (0699 989148) to the foam rubber (0805 410830).
2. Cut the foam rubber with the adhesive tape in strips of the same width.
3. Degrease the transfer plate.
4. Tape the foam rubber accurately alongside the pocket's outer contour on the transfer plate.
   ATTENTION: Make sure to position the foam rubber exactly on the edge, as it serves as lateral support for the pre-creased pocket.

5. A second contour of foam rubber is taped underneath the tip of the pocket template and on the sides.
   If the pocket is very large and there is not enough space for it, the second foam rubber contour can be omitted.
6. Mount the transfer plate into the transfer frame after taping it.

Fig. 9: Taped transfer plate



For your information

With very small trouser rear parts, when the part is smaller than the tapes, the foam rubber wears off quickly. Readjust as needed.

7. Check the inclination angle of the transfer plate, compare 🕮 *Service Instructions 906*.
8. Before using the transfer plate, check its proper functioning, 🕮 *6 Checking the template set's functioning*, p. 24.

4 Manufacturing of the outer frame plate

NOTE

Risk of scratching the metal frame!

When punch-marking the templates, always lay some fabric underneath. Otherwise the table top and templates may get damaged.

4.1 Manufacturing the outer frame plate

For the manufacturing of the outer frame plate (2), the outer frame plate (2) (0906 410060) is screwed into the outer frame (1) (0906 410444). ATTENTION: Do not use the transfer plate! The outer frame plate (2) is thinner than the transfer plate.

Fig. 10: Outer frame plate mounted in the outer frame

(1) - Outer frame *(2) - Outer frame plate*

Prerequisite

- The insertion mode 5 has to be activated in the machine's software, compare 🕮 *Operating Instructions 906*.

This is how you manufacture the outer frame:

1. Switch on the machine and reference it.
2. Transfer the program **Pocket outer contour** onto the machine, compare 🕮 *Operating Instructions 906*.
3. Press both manual keys.

↳ The machine moves to the loading position.

4. Select `Extras` - `Clamp change mode` on the control panel .
5. Remove the previous template set - if there is one, compare 🕮 *Operating Instructions 906*.
6. Insert the outer frame with the outer frame plate mounted into the sewing unit.

Fig. 11: Outer frame with outer frame plate on the machine

7. Lock all template slots via the control panel, even if no template is inserted.
8. Check the inclination of the outer frame and adjust if needed, compare 🕮 *Service Instructions 906*.
9. Return to the user interface by closing the window with the button **X**.

↳ The machine will ask to execute a reference run.

10. Press both manual keys.

↳ The machine moves to the referencing position.

11. Remove the sewing foot.
12. Insert the adjusting needle (0558 006060), compare 🕮 *Operating Instructions 906*.
13. Open the seam program **Pocket's outer contour**.
14. Press both manual keys.

↳ The machine moves to the loading position.

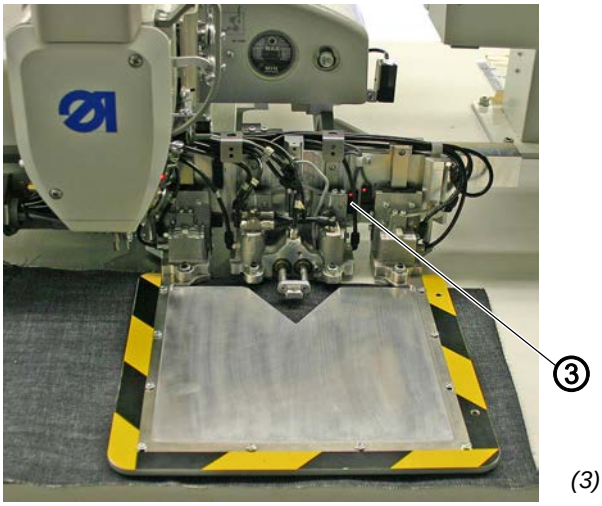
15. Select `Edit` - `Seam programs` - `Contour test` on the user interface.
16. Actuate the pedal.

↳ The outer frame lowers.

17. Actuate the pedal.

↳ The take-up of the inner slider lowers.
The sensor (3) has to light up, eventually push it manually upwards into switching position, otherwise an error message will appear.

Fig. 12: Sensor of the inner slider



(3) - Sensor

18. Press both manual keys.

↳ Preparation for the next step.

NOTE

Risk of damaging the machine due to incorrect marking!

The adjusting needle has to be in elevated position after each punch-mark.

Never mark the contours by sewing or by scraping the plate surface, as this will damage the machine.

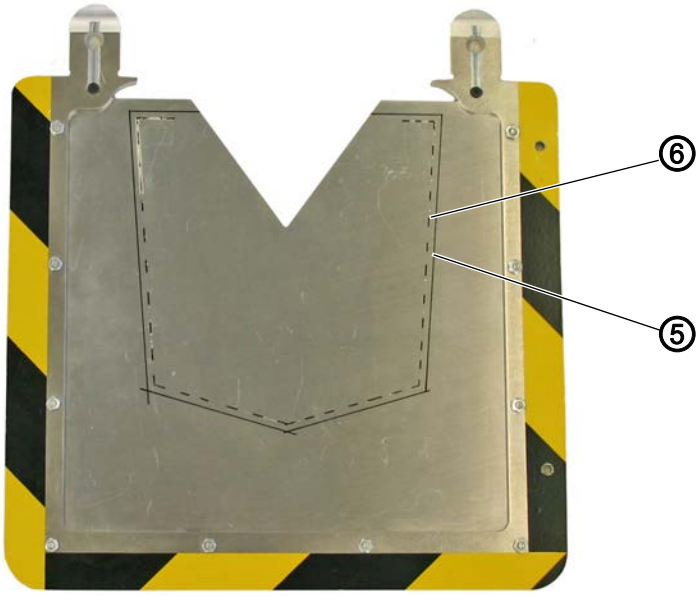
19. Repeatedly press the button **Forward** in order to move along the contour. Lower the adjusting needle with the hand wheel at distinctive points in order to punch-mark the points (4) on the plate.

Fig. 13: Marking the contour

(4) - Marking

20. Remove the outer frame at the end of the contour test.
21. Remove the outer frame plate from the outer frame.
22. Trace the contour along the punch-marked points.
23. Trace an equidistant (translational motion) on the outer side of the punch-marked contour.
    NOTE: Select the distance so that the sewing foot does not collide with the outer frame plate. If the distance is too big, the material may not be securely maintained in place and slip away.

Fig. 14: Marking of the cutting contour



(5) - Equidistant *(6) - Marked contour*

24. Cut out the contour with a saw and deburr the edges.

Fig. 15: Cut out outer frame plate

25. Covering the outer frame plate, 📖 *4.2 Covering the outer frame plate*, p. 16.

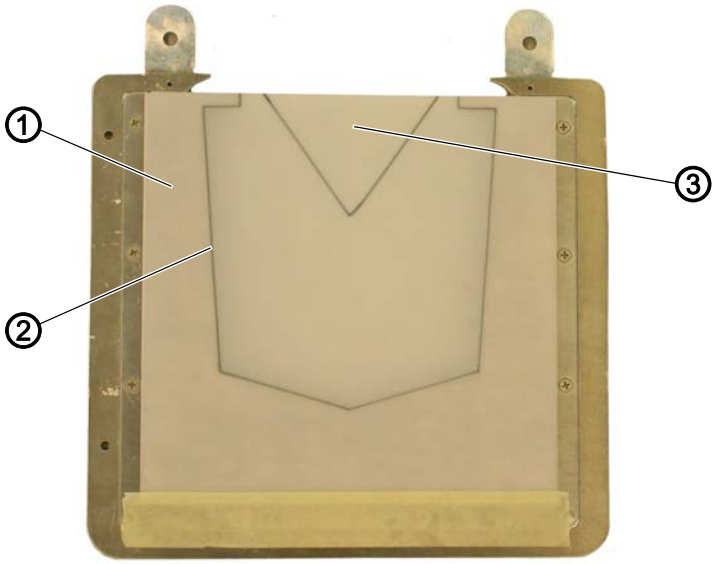
4.2 Covering the outer frame plate

4.2.1 Attaching the Delrin

This is how you attach the Delrin:

1. Screw the outer frame plate (0906 410060) into the outer frame (0906 410444).
2. Cut out the Delrin (1) (0805 410820) to fit the size of the outer frame plate, making sure that the screws remain uncovered.
3. Position the Delrin (1) on the outer frame.
4. Trace the pocket's outer contour (2) and the V-shaped cutout (3). The V-shaped cutout (3) has to be large enough so that the Delrin (1) doesn't collide with the take-up for the inner slide.

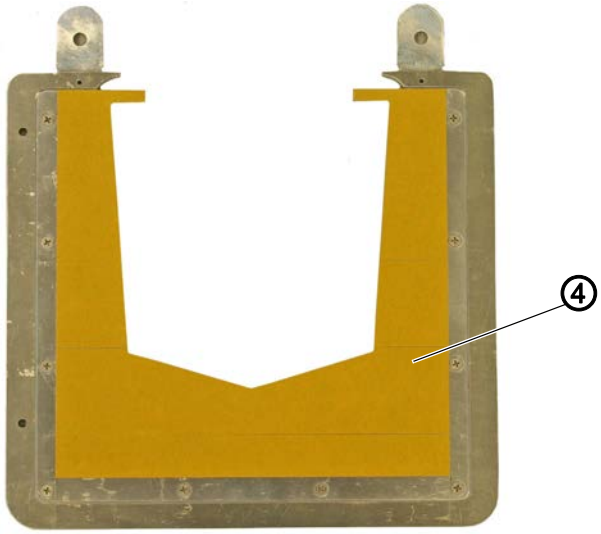
Fig. 16: Fitted Delrin with marked contour



(1) - Delrin
(2) - Pocket's outer contour
(3) - V-shaped cutout

5. Degrease the Delrin (1) and the outer frame plate and attach double-faced adhesive tape (4) on the outside of the pocket's outer contour.

Fig. 17: Covering with double-faced adhesive tape



(4) - Double-faced adhesive tape

6. Firmly press the Delrin onto the outer frame plate.

Fig. 18: Outer frame plate with Delrin

7. Insert the outer frame into the machine and check the inclination of the outer frame, compare 🕮 *Service Instructions 906*.
8. Call up the program **Pocket's outer contour**.
   Recommendation: Set the stitch length to a small value.
9. If needed, adjust the punching height of the adjusting needle.
10. At first start sewing at a low speed.

Fig. 19: Punch-marking the Delrin

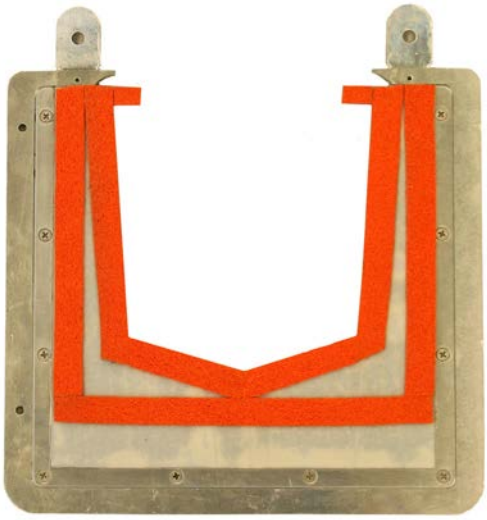
11. Afterwards you can sew at a little faster, but if the speed is too high, the Delrin will break and cannot be used anymore.
12. Remove the outer frame at the end of the seam.
13. Accurately cut along the punch-marked contour with a knife.
14. File and deburr the edges.
15. Attach foam rubber on the outer frame plate, 📖 *4.2.2 Attaching foam rubber*, p. 18.

4.2.2 Attaching foam rubber

This is how you attach the foam rubber:

1. Degrease the Delrin.
2. Attach double-faced adhesive tape (0699 989148) to the foam rubber (0805 410830) and cut in strips of the same width.
3. Attach the foam rubber accurately along the pocket's outer contour.

Fig. 20: Attaching the foam rubber



4. A second contour of foam rubber is attached underneath the tip of the pocket template and on the sides.
   ATTENTION: If the pocket is very large and there is not enough space for it, the second foam rubber contour may be omitted.

For your information

With very small trouser rear parts, when the part is smaller than the covering, the foam rubber wears off quickly. Readjust as needed.

5. Check the inclination angle of the outer frame, compare 🕮 *Service Instructions 906*.
6. Before using the outer frame plate, check its proper functioning, 🕮 *6 Checking the template set's functioning*, p. 24.

5 Manufacturing of the inner slider

NOTE

Risk of scratching the metal frame!

When punch-marking the templates, always lay some fabric underneath. Otherwise the table top and templates may get damaged.

5.1 Manufacturing the inner slider

Prerequisite

- The insertion mode 5 has to be activated in the machine's software, compare 🕮 *Operating Instructions 906*.

This is how you manufacture the inner slider:

1. Switch on the machine and reference it.
2. Transfer the program **Seam program** onto the machine, compare 🕮 *Operating Instructions 906*.
3. Press both manual keys.

↳ The machine moves to the loading position.

4. Select `Extras` - `Clamp change mode` on the control panel.
5. Insert the inner slider and check the inclination angle, compare 🕮 *Service Instructions 906*.
6. Lock all template slots via the control panel, even if no template is inserted.
7. Return to the user interface by closing the window with the button **X**.

↳ The machine will ask to execute a reference run.

8. Press both manual keys.

↳ The machine moves to the referencing position.

9. Remove the sewing foot.
10. Insert the adjusting needle (0558 006060), compare 🕮 *Operating Instructions 906*.
11. Call up the program **Sewing program**, the TPs may only be set AFTER punch-marking the inner slider.
12. Press both manual keys.

↳ The machine moves to the loading position.

13. Select `Edit` - `Seam programs` - `Contour test` on the user interface.

NOTE

Risk of damaging the machine due to incorrect marking!

The adjusting needle has to be in elevated position after each punch-mark.

Never mark the contours by sewing or by scraping the plate surface, as this will damage the machine.

14. Repeatedly press the button **Forward** in order to move along the contour. At the same time make sure that the inner slider is completely spread out. Lower the adjusting needle with the hand wheel at distinctive points in order to punch-mark the points.

Fig. 21: Marking the contour

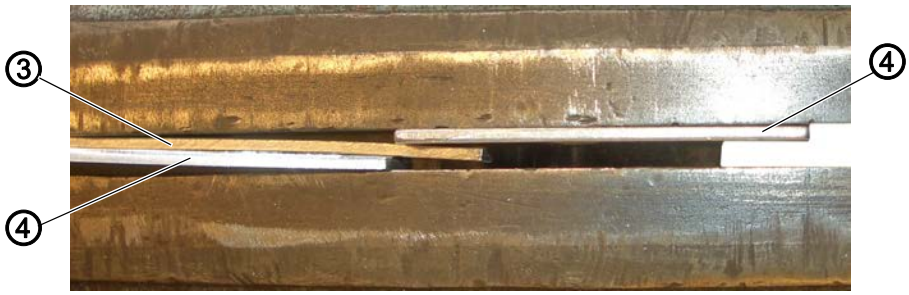
15. Once you have moved along the outer seam, abort the contour test and remove the inner slider.
16. Trace the contour along the punch-marked points.
17. Trace an equidistant (translational motion) on the inside of the marked contour.
    NOTE: Select the distance so that the sewing foot does not collide with the inner slider. If the distance is too big, the material may not be securely maintained in place.
18. Unscrew the semi-finished parts from the inner slider.
19. Cut out the contour with a saw, file and deburr the edges.
20. Cut out the brackets at the upper end of the two outer parts of the inner slider and file them. Use the hem of a pocket as guide.

Fig. 22: Width of the bracket

(1) - Bracket *(2) - Hem*

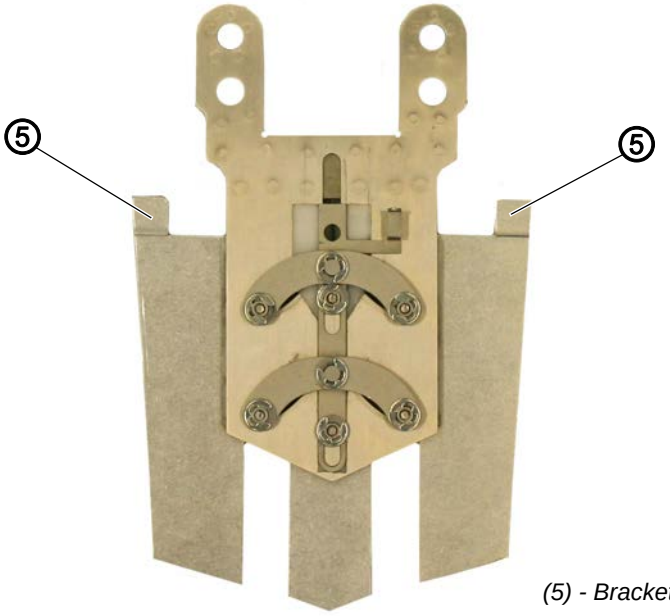
21. Bend the bracket on the work-piece (3), preferably in a bench vise using some leftover pieces (4).

Fig. 23: Bending the material in a bench vise



(3) - Work-piece to be bended *(4) - Leftover pieces*

Fig. 24: Inner slider with brackets



(5) - Brackets

22. Taping the inner slider, 📖 *5.2 Taping the inner slider*, p. 22.

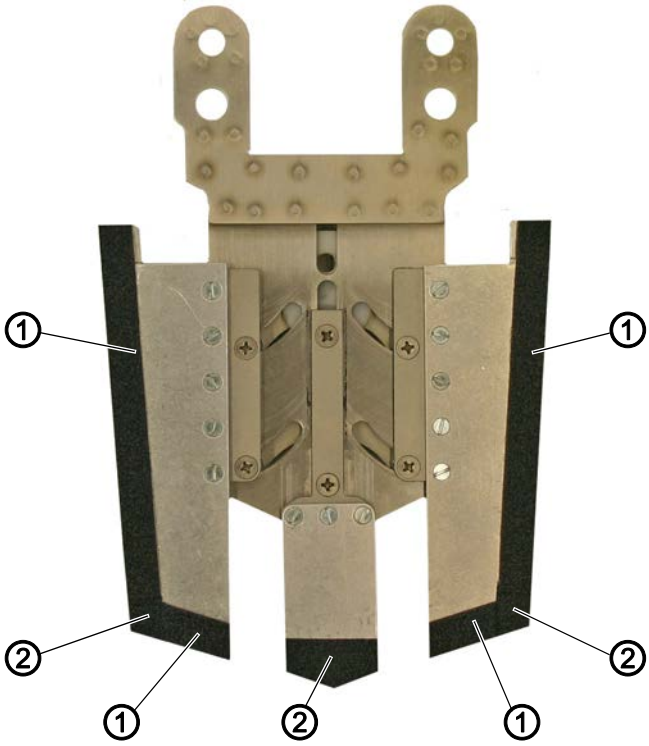
5.2 Taping the inner slider

This is how you tape the inner slider:

1. Attach double-faced adhesive tape (0699 989148) on one side of the black foam rubber (0699 989253).

2. Attach an anti-slip coat on the other side of the foam rubber.
3. Cut an addition strip of anti-slip coat.
4. Tape the inner slider as shown below.
5. Screw the semi-finished parts onto the inner slider.

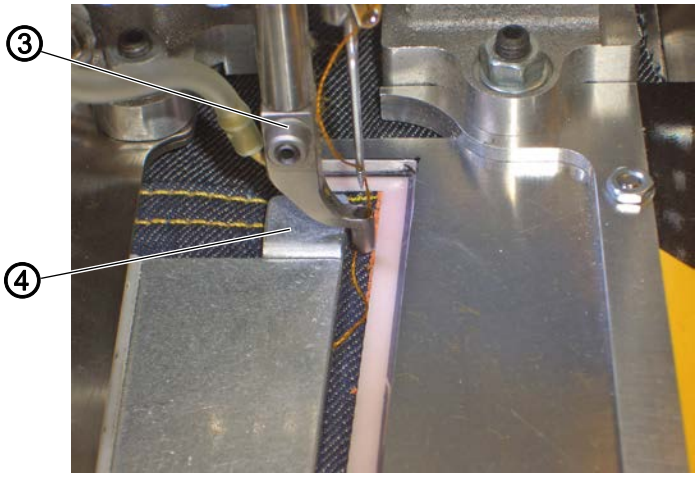
Fig. 25: Taping the inner slider



(1) - Anti-slip coat with foam rubber *(2) - Anti-slip coat*

6. Execute a contour test to see whether the sewing foot (4) collides with the bracket (3) of the inner slider.

Fig. 26: Collision test



(3) - Bracket *(4) - Sewing foot*

7. If a collision occurs, attach a phase in the area of the right bracket (3) of the inner slider.
8. Before using the inner slider, check its proper functioning, 📖 *6 Checking the template set's functioning*, p. 24.

6 Checking the template set's functioning

NOTE

Risk of scratching the metal frame!

When punch-marking the templates, always lay some fabric underneath. Otherwise the table top and templates may get damaged.

Prerequisites:

- Insert the needle
- Mount the sewing foot
- Insert the complete template set
- Set all the required TPs in the program **Sewing program**, to this end consult the illustration in the 🕮 *7 Appendix*, p. 26.

Fig. 27: Complete template set

This is how you check the functioning of the template set:

1. Call up the program **Seam program**.
2. Call up the contour test.
3. Actuate the pedal twice.

↳ The outer frame and the inner slider lower.

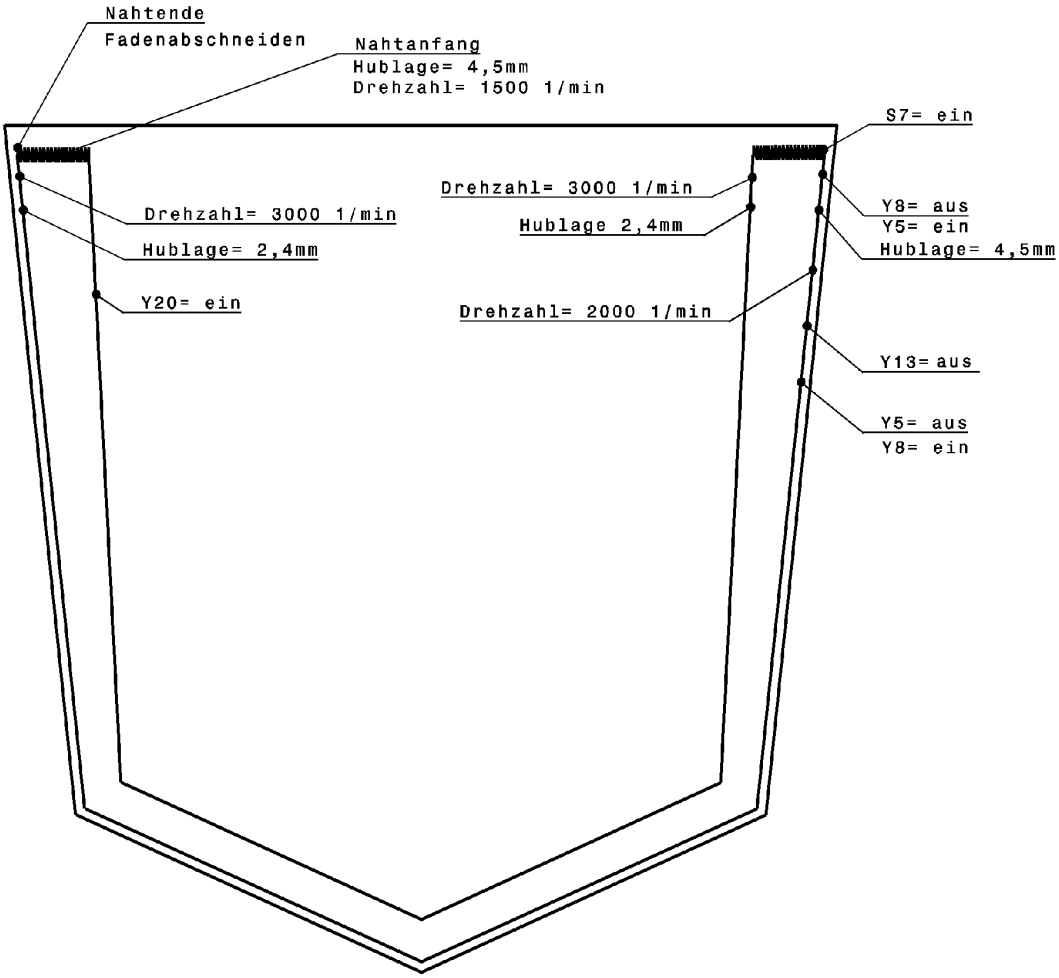
4. Press both manual keys.

↳ Preparation for the next step.

5. Repeatedly press the button **Forward** in order to move along the contour. At the same time check whether the sewing foot and the needle pass without any hindrance.
6. Check the inclination angle of the outer frame and the transfer plate, the material has to be maintained correctly in place.
7. Activate insertion mode 1 and removal mode 1 in the software, compare 🕮 *Operating Instructions 906*.

8. Carry out a sewing test, compare 🕮 *Operating Instructions 906*.
9. Correct the seam if needed in the DA CAD, so that the seams run uniformly alongside the outer edge.
10. Check, whether input S7: Inner slider at the rear, runs through automatically. If this is not the case, set the function in the DA CAD to be activated a few stitches earlier until it runs through smoothly.

7 Appendix



Output 5 (Y5)

off = inner slider without pressure
on = inner slider lowered

Output 8 (Y8)

on = lifting the inner slider
off = lowering the inner slider

Output 13 (Y13)

off = contracting the inner slider
(The inner slider is driven out automatically at the end of the seam.)

Output 20 (Y20)

on = throwing over the trousers

Input 7 (S7)

on = inner slider at the rear/back

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