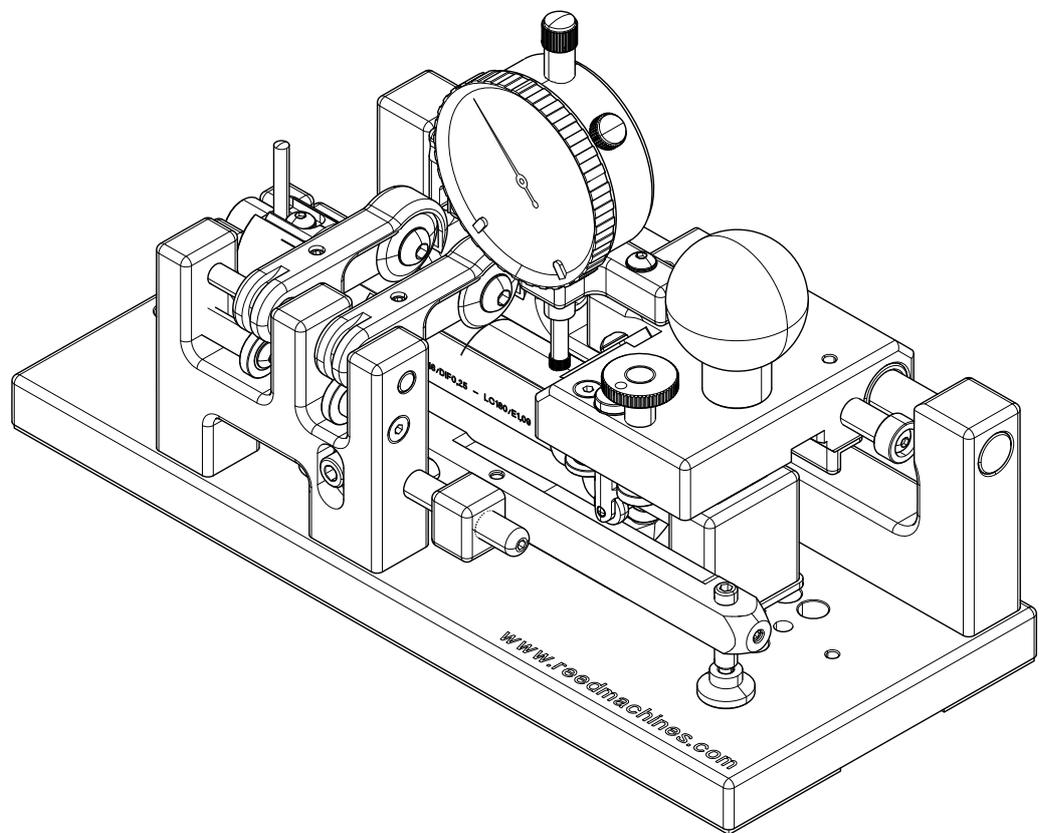


Bassoon Profiler Manual



2017-03-27

Preface

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Although Reed Machines V.O.F. tried to make this manual correct and up to date, there can be errors. Tell us, if you find an error or if you think that information is missing. This information helps Reed Machines V.O.F. to increase the quality of the manual.

Contact information

If you have questions, please contact us at:

Main Office address: Reed Machines V.O.F.

Laarweg 7

6882 AA Velp

Netherlands

E-mail address: contact@reedmachines.com

Website: www.reedmachines.com



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1 About this manual

1.1 Purpose of this manual

The manual gives a description of the bassoon profiler and gives the day-to-day procedures to operate the machine safely.

The manual includes these topics:

- Safety information.
The safety information gives warnings about safety and gives a description to the functions of the machine that have a relation to safety.
- Description.
The bassoon description gives information about the hardware layout of the machine and the most important parts of the machine.
- Operational procedures.
The operational procedures give the information for the operational tasks that an operator is permitted to do.
- Maintenance procedures.
The maintenance procedures give information for the maintenance tasks that an operator is permitted to do.

1.2 Audience

The target audience for this manual is the user of the bassoon profiler. The procedures in this manual include the tasks for the operator role in accordance with the operator and maintenance philosophy of Reed Machines V.O.F..

1.3



Note

Note – Gives more information on a topic.



Caution

CAUTION – Gives information about a situation that can cause damage to the machine. Obey the instruction to prevent this situation.



Warning

WARNING - Warns you about a situation that can cause serious injury. Obey the instruction to prevent this situation.

1.4

Additional information

Refer to the support page on the website of [Reed Machines](#) for more information about:

- Product updates
- Manual updates, corrections and additions
- Presets and adjustment examples

Every effort has been made to make this manual as accurate and complete as possible. However, if you find any errors or omissions, it would be appreciated if these were brought to the attention of Reed Machines.

2

Introduction

2.1

Contents of the delivery

The box of the bassoon profiler contains the following tools and accessories:

Contents of the delivery:

- 1 bassoon profiler
- 1 cylinder set
- 1 template set
- 1 Allen key 2,5 mm
- 1 Allen key 3 mm
- 1 Allen key 4 mm
- 1 analog dial indicator
- 1 dial indicator adaptor



Note

In case of transport damage, contact your supplier.



Danger

Keep packing materials away from children because of choking danger.

2.2

About the bassoon profiler

The bassoon profiler scrapes the profile of the reed. The bassoon profiler is not a tip profiler so it does not make a finished reed tip. Depending on the settings of the template set and the type of cylinder set the profiler can do this for all types of bassoon reed. The profiler with Collar Cutting Function (CCF) can cut a sharp collar.

There are two variants available:

- Non-CCF version, without collar cutting function.
- CCF version, with collar cutting function.

Features of the bassoon profiler:

- Marking set for the folding line of the reed.
- Marking set for the collar of the profile.

- Possible adjustments:
 - Overall thickness of the profile.
 - Length of the scrape.
 - Difference between the thickness of the tip and the collar.
 - A pre-fab of the reed tip can be activated and positioned.
 - End position of the collar cutting stroke (CCF version only).
 - Thickness of the collar cutted part (CCF version only).
- Can hold a variation of cylinder sets which each result in a specific difference between the middle and the sides of the reed.
- Can hold different template sets for easy and efficient exchange between different profiles.
- The difference between the thickness of the tip and the collar can be measured and set with the help of the dial indicator.
- Unique collar cutting function (CCF version), with this function you can cut a sharp collar easily and efficiently on the profiler.

2.3

Specifications

The bassoon profiler has the following specifications:

Length:	264 mm
Width:	114 mm
Height:	131 mm
Weight:	3.4 kg

2.4

Reed shapes and characteristics

Refer to the manufacturers website for more information about reed shapes and characteristics.

<https://reedmachines.com/support/bassoon/profiler>

3 Safety

3.1 General safety information

This section gives information about the safety of the bassoon profiler.

General:

- Use the bassoon profiler only for the intended use.
- Read this manual before you operate or do maintenance on the bassoon profiler.

3.2 Mechanical hazards

If incorrectly used the bassoon profiler can cause injury. Always obey the instructions below.



Warning

Never position your fingers between moving parts and the knife.



Warning

Be careful when you pick-up, exchange or position a knife.



Warning

Never hold or touch the knife at the cutting edge.



Caution

Install the profiler on a horizontal and even nonslip surface to prevent that it slips away or falls.



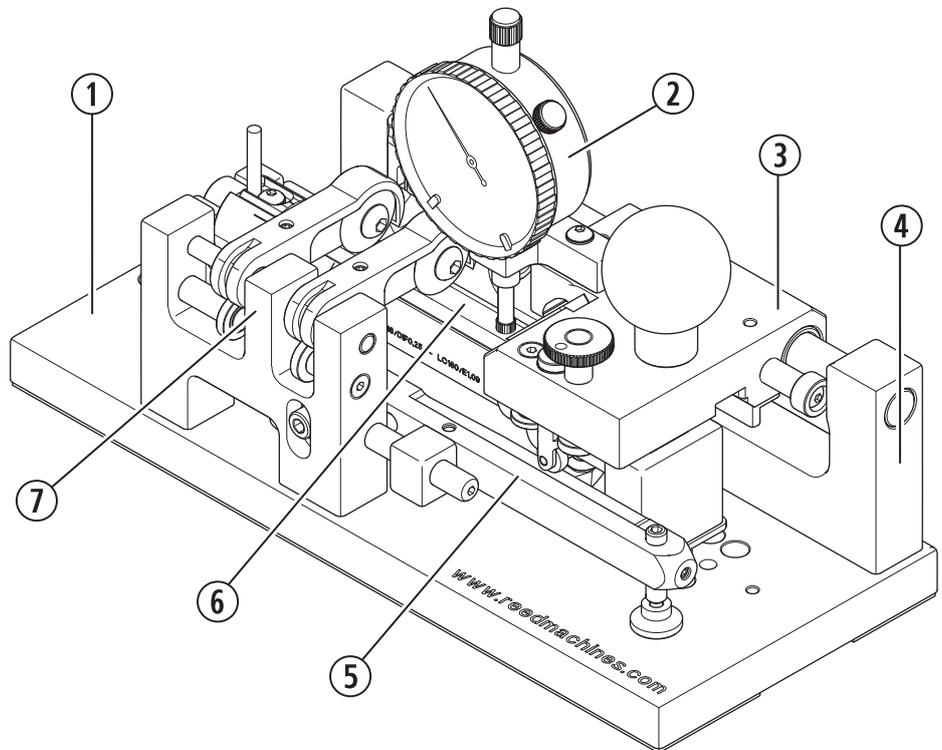
4

Description

4.1

Overview

Structure of the profiler



1. Base set

2. Dial indicator set

3. Carriage set

4. Guide set

5. Template set

6. Cylinder set

7. Marking set

4.2

Working principle

The cylinder set holds the reed and has to be turned a little bit after each scraping stroke of the knife. This cycle has to be repeated until the profile has the overall thickness that is set by the overall thickness adjustment. The profile is scraped in a few depth steps.

The template set defines the shape of the profile in the length direction. A curve wheel copies the shape of the template thru the knife to the reed. The cylinder set defines the shape of the profile in the cross direction. The template can be adjusted and there are different types of cylinder sets. The combination of template set setting and cylinder set makes the profiler suitable for all types of bassoon reed.

The profiler has a marking knife for the center line and a marking knife for the collar line of the reed. When the profile is made, the bassoon CCF ¹ version can cut a sharp collar with adjustments for the position of the collar and the thickness of the collar.

¹ bassoon profiler with collar cutting function.



Caution

We advise to scrape the reed when it is dry. However, the reed can also be scraped when it is wet. The knife is not completely corrosion resistant. When you scrape the reed when it is wet you have to dry the knife after use.

4.3

Components of the bassoon profiler

4.3.1

Base set

The base set of the bassoon profiler supports the guide set, marking set, carriage set, template set and cylinder set.

To prevent that the bassoon profiler unexpectedly moves away when a force is applied to operate it, there is an anti-slip plate under the bassoon profiler.

4.3.2

Carriage set

The carriage set holds the knife, the curve wheel, the stroke stops and the depth adjustment set. The depth adjustment set has an adjustment for the overall thickness of the profile and a spindle to control the depth steps of the scraping process. The carriage set can be turned outwards around the guide shaft for access to the reed and cylinder set.

4.3.3

Guide set

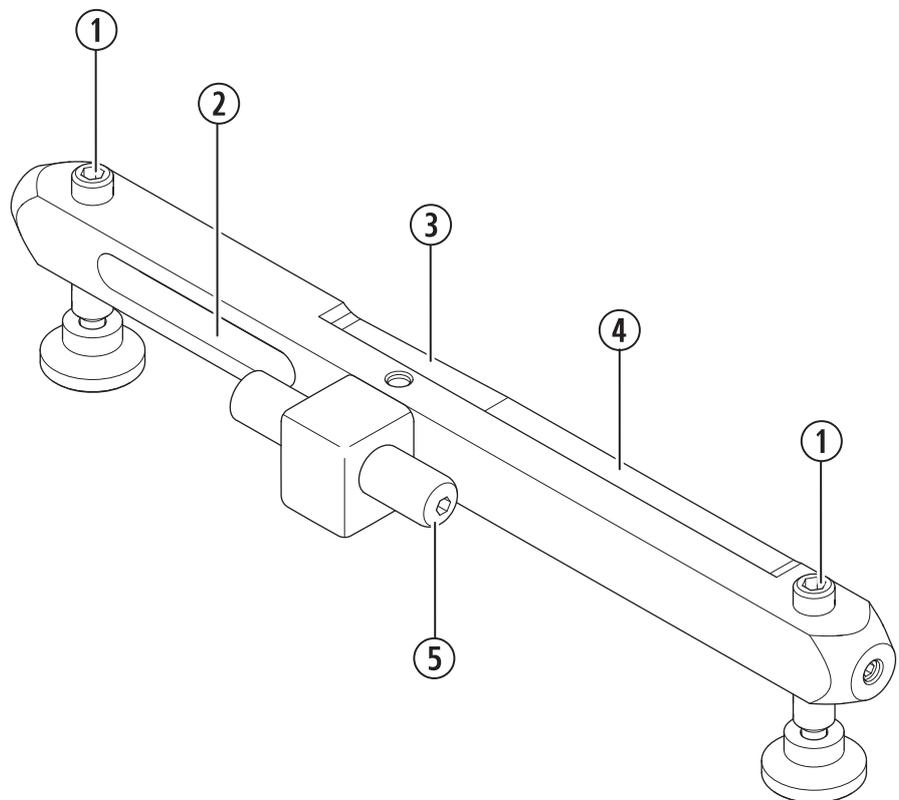
The guide set holds the shaft which is used to guide the carriage set. For the bassoon profiler with collar cutting function, the guide set also holds the parts that are needed to cut the collar.

4.3.4

Template set

The template set defines the difference between the tip thickness and the collar thickness. The template set has an extra angle to make a tip pre-fab. The start position of the tip pre-fab is adjustable and can be made inactive. When the profiler is used frequently for 2 different reed types it is advisable to use 2 template sets. A template set can be taken from the profiler and put back at the same position easily. This will save repeating adjustment time.

Template set



① Leveler

④ Profile part

② Length adjustment slot

⑤ Length stop

③ Tip pre-fab part

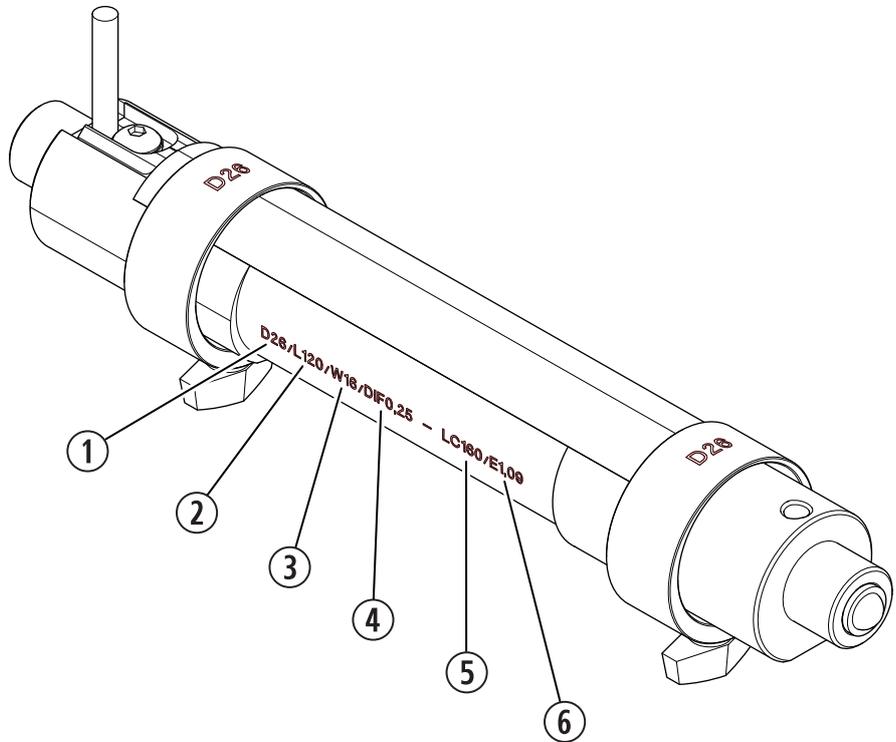
4.3.5

Cylinder set

The cylinder set holds the reed and is available in different variants to fit each type of bassoon reed. Each cylinder set is made for a nominal reed length and a specific difference between the middle and the sides of the profile. A length stop makes it easy to position the reed on the cylinder. The length stop is adjustable for plus or minus 6 mm in relation to the nominal reed length.

For actual detailed information about cylinder sets see the [support page](#) of the Reed Machines website. How to exchange the cylinder set, see [Exchange cylinder set](#) (on page 21).

Example: Cylinder set D26



The numbers on the cylinder have the following meaning:

- ① D: Diameter of the cylinder.
- ② L: Nominal length of the reed.
- ③ W: Width for which below mentioned difference is valid.
- ④ DIF: Difference from the middle to the sides of the profile.
- ⑤ LC: Length of the cylinder.
- ⑥ E: Eccentricity of the cylinder sets.

4.3.6

Marking sets

The marking set holds the two marking knives. One knife is used to make the center line mark, the other knife is used to make the collar line mark. Both knives are adjustable in depth and length direction, refer to [Adjust center line mark position](#) (on page 35) and [Adjust collar line mark position](#) (on page 37).

4.3.7

Knife

The knife is made of hardened steel, so it will stay sharp for a long time. When the knife wears, it becomes less sharp which can result

in bad cutting properties. Therefore, it can be exchanged. Refer to [Exchange knife](#) (on page 23).

4.3.8

Dial indicator

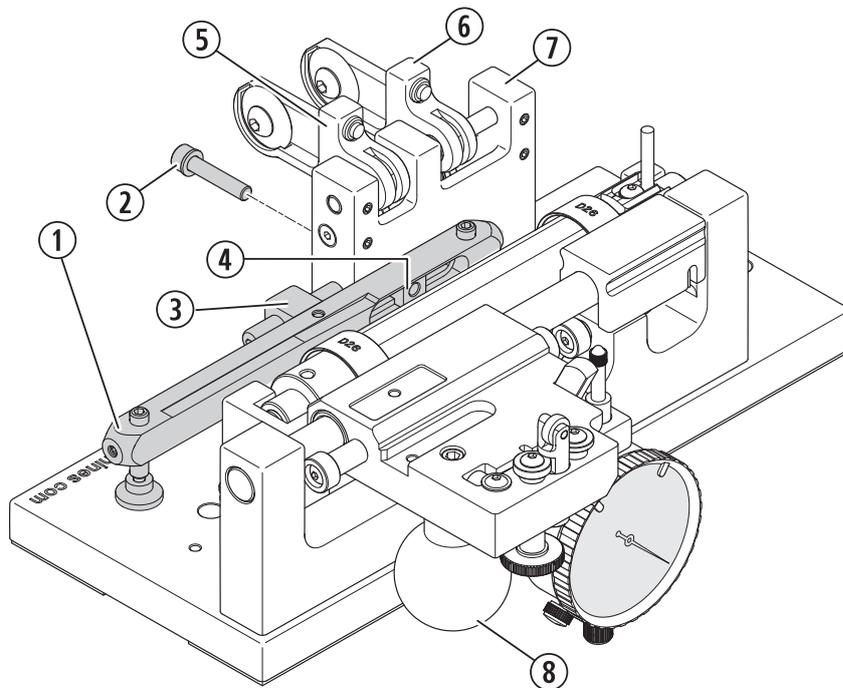
The dial indicator has to be used on the cylinder set without a reed. The dial indicator has to be assembled on the carriage set. The dial indicator set is used to set the difference between the thickness at the tip and the thickness at the collar. The dial indicator set is only used to set the profiler. During the scraping process the dial indicator set has to be taken from the profiler. The profiler is delivered with an analog dial indicator. A digital dial indicator is optional. Refer to [Install the dial indicator](#) (on page 25).



5 Preparations

5.1 Exchange template set

Install / change template set



When you use the profiler for multiple types of reed, you can use different template sets. The design of the bassoon profiler enables you to change templates sets and place them back on exactly the same position. The length stop prevents repeating adjustment work.

To exchange the template set:

1. If needed, turn the center line marking set ⑤ outwards.

2. If needed, turn the collar line marking set ⑥ outwards.
3. Turn the carriage set ⑧ outwards.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

4. Remove the template set clamp screw ②.
5. Take out the template set ①.



Note

Take care not to lose the T-nut ④ which clamps the template set to the base block of the marking set ⑦.

1. Position another template set with the T-nut in the slot ④ of the template.



Note

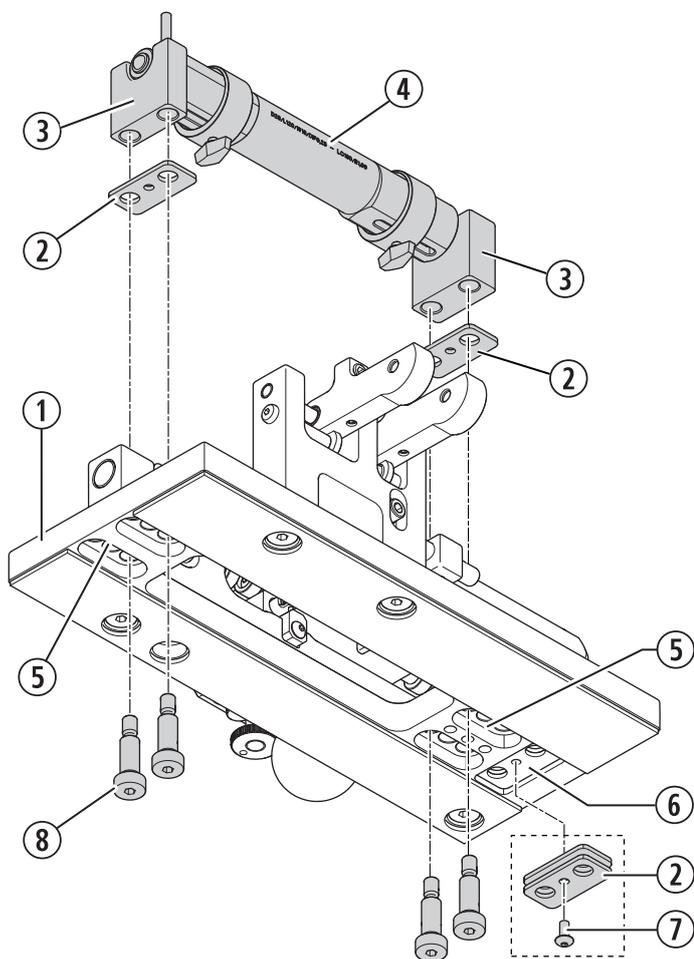
Use one finger to keep the T-nut in the slot of the template and in line with the hole in the base block of the marking set.

1. Insert the template set clamp screw ② and turn it in the T-nut for a few revolutions.
2. Push the template set with the length stop ③ against the base block of the marking set ⑦.
3. Tighten the template clamp screw.
4. Turn the carriage set inwards.
5. If needed, turn the center line marking set inwards.
6. If needed, turn the collar line marking set inwards.

5.2

Exchange cylinder set

Install / change cylinder set



There are different types of cylinder sets. The cylinder set depends on the type of bassoon reed for which the profiler is used. To hold all these types of reed, the cylinder set supports ③ can be mounted on different positions and with or without fill plates ②.

To exchange the cylinder set:

1. If needed, turn the collar line marking set outwards.
2. If needed, turn the center line marking set outwards.
3. Turn the carriage set outwards.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

Cylinder specifications and position of the supports

Cylinder length	Position of the supports
LC160	Inner hole's
LC180	Middle hole's
LC200	Outer hole's
Cylinder diameter	Fill plates required?
D26	Yes
D30	No

When the new cylinder set has the same diameter and length as the cylinder set that is in the profiler:

1. Take the cylinder set ④ out of the profiler.
2. Position the new cylinder set in the profiler.

When the new cylinder set has the same diameter but a different length than the cylinder set that is in the profiler:

1. Take the cylinder set out of the profiler.
2. Untighten the cylinder support screws ⑧ and take away the cylinder supports ③. If there are fill plates ② under the cylinder supports also take away the fill plates ②.
3. Position the cylinder support screws in the hole's ⑤ that corresponds to the length of the new cylinder.
4. If there were fill plates, position them over the cylinder support screws.
5. Position the cylinder supports over the cylinder support screws and tighten them.

When the new cylinder set has a different diameter and length than the cylinder set that is in the profiler:

1. Take the cylinder set out of the profiler.
2. Untighten the cylinder support screws ⑧ and take away the cylinder supports ③. If there are fill plates ② under the cylinder supports also take them away.
3. Position the cylinder support screws in the right hole's.
4. If there were fill plates, store them in the slot ⑥ under the base plate and tighten them with screw ⑦.
5. If there were no fill plates untighten screw ⑦ counter clockwise and take the fill plates out of the slot.
6. Position the cylinder supports ③ over the cylinder support screws and tighten them.

Finishing:

1. Position the new cylinder set in the profiler.
2. Turn the carriage set inwards.
3. If needed, turn the center line marking set inwards.

4. If needed, turn the collar line marking set inwards.

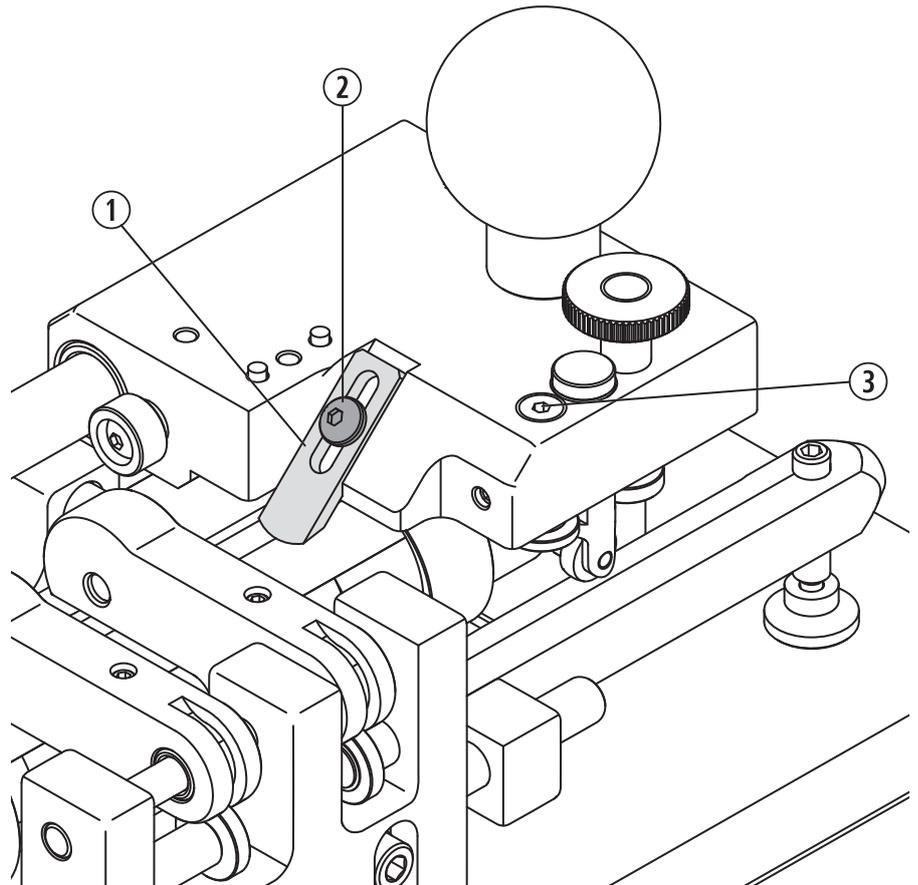
**Note**

Cylinder sets with D26 **always** need fill plates. Cylinder sets with D30 **never** need fill plates.

5.3

Exchange knife

Install / change knife

**Warning**

Risk of injury. Be careful when you operate, move, install or change a knife. The blade is very sharp. Always handle the knife by the center and do not touch the sharp edges as this can cause serious injury to hands and fingers.

**Note**

With below mentioned procedure the new knife is position on the same position as the old knife so the settings of the profiler do not change.

To exchange the knife:

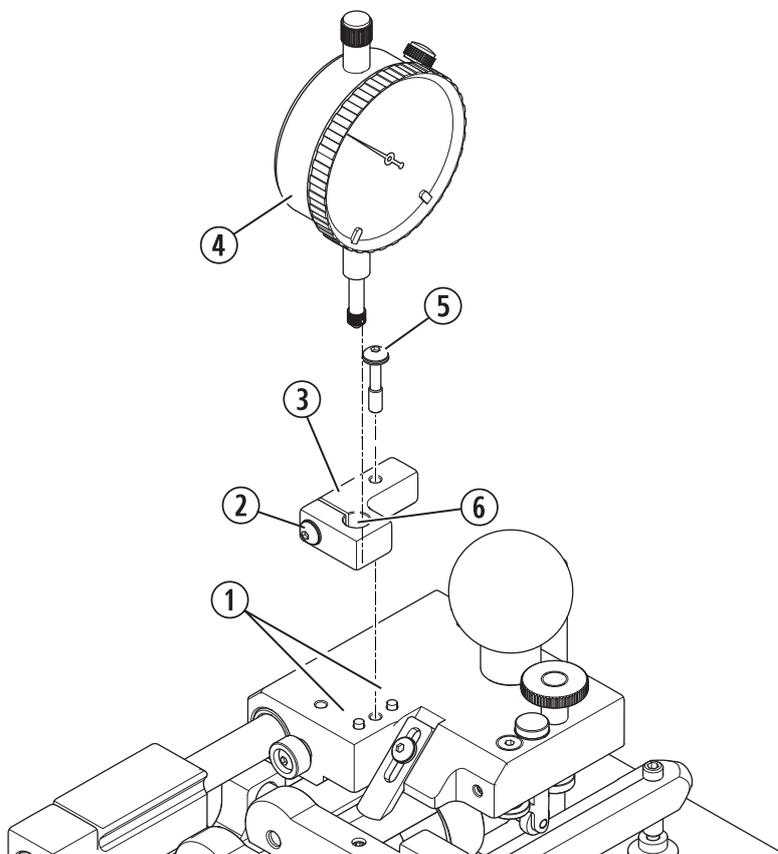
1. Profile a reed with the old knife and do not take the reed from the cylinder set.

2. Untighten the knife clamp screw ② counter clockwise and take away the old knife ①.
3. Position a new knife a little bit above the profiled reed and hand tighten the knife clamp screw.
4. Make a stroke movement with the carriage set and knife. Tap on the back of the knife every time you make a stroke until the knife starts to scrape the profiled reed.
5. When the knife starts to scrape the reed tighten the knife clamp screw ② firmly.
6. If needed fine tune the final depth position of the knife with spindle ③.

5.4

Install the dial indicator

Install the dial indicator



To install the dial indicator:

1. Be sure that the carriage set is resting with the curve wheel on the template set and that the carriage set is on the final depth position, see step 10 of [Profile the reed](#) (on page 47).
2. Position the cylinder set in the middle position.
3. Position the dial indicator adaptor ③ over the locating pins ① of the carriage set and tighten the dial indicator adaptor screw ⑤.
4. Position the dial indicator ④ in the position hole ⑥ of the dial indicator adaptor and tighten the dial indicator clamp screw ② just enough to slightly clamp the dial indicator.
5. Move the carriage set to the end point at which the knife is at the center line position.
6. Move down the dial indicator by rotating it a little bit to the left and right while pushing it down. Continue this until the pointer of the dial indicator made about 1 revolution and is facing upwards.
7. Rotate the outer ring of the dial indicator until the zero mark of the dial indicator is at the pointer.



6

Adjustments



Caution

When adjusting the profiler always take care that the cutting edge of the knife does not hit any part of the profiler because this can damage the knife.



Note

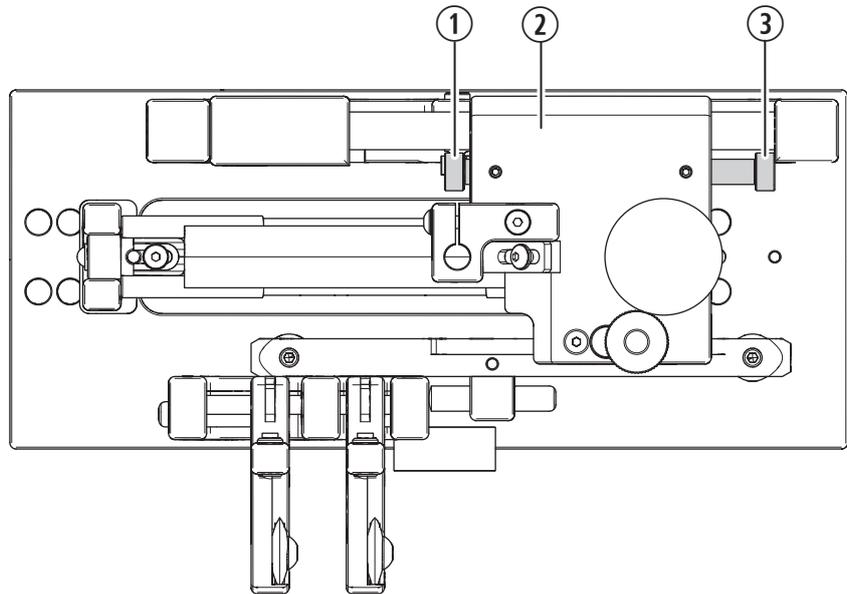
If the reed would be profiled to the final depth in one scrape sequence the reed would be damaged because too much cane would be taken of in one scrape. In order to prevent this the reed is scraped in multiple depth steps. For more information, refer to [Profile the reed](#) (on page 47).

Note

All adjustment explanations assume that the position of the point of the knife is equal to the bottom surface of the carriage set.

6.1

Adjust stroke length



The stroke of the carriage set ② and so the knife is defined by two stroke stops. Stroke stop ① defines the end point of the scrape (the tip) and stroke stop ③ defines the start point of the scrape (the collar).

To adjust the stroke:

1. Move the carriage set ② to the left until it is stopped by the stop block. This is the end point (tip) of the scrape.
2. In this position, the knife should be on the center line of the reed. If this is not the case, move the carriage set away from the stop block and adjust the stroke stop ① with the supplied Allen key.



Note

- Turn stroke stop ① clockwise to move the knife to the left.
- Turn stroke stop ① counter clockwise to move the knife to the right.

3. Repeat step 1 and 2 until the knife is at the center line.
4. The length of the profile and so the start point (collar) of the scrape is equal to the distance between stroke stop ③ and the guide base when the carriage set is positioned completely to the left.

5. If the distance is not equal to the needed stroke and so the length of the profile, adjust the stroke with stroke stop ③.

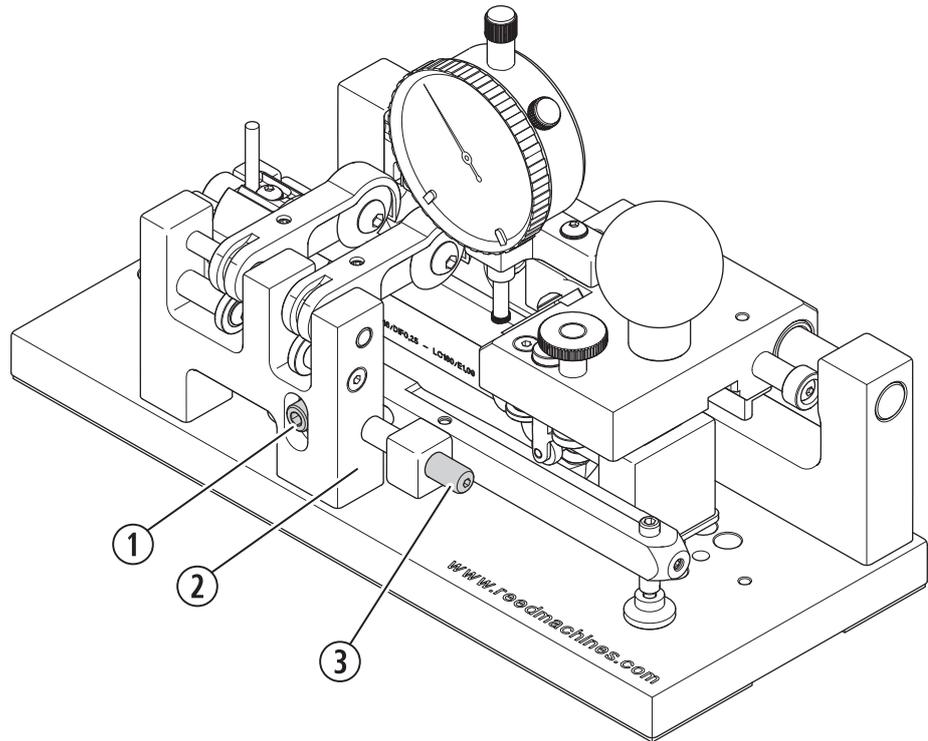


Note

- Turn stroke stop ③ clockwise to make the stroke bigger.
 - Turn stroke stop ③ counter clockwise to make the stroke smaller.
-

6.2

Adjust length of tip pre-fab



The template set has an extra angle to make a tip pre-fab. The position of the start of this tip pre-fab and so the length of the tip pre-fab is adjustable. It is also possible to de-activate the tip pre-fab.

To adjust the length of tip pre-fab:

1. Untighten clamp screw ① using the supplied Allen key.
2. Hand tighten clamp screw ① a bit with very low force.
3. Push the template set against the base block ② of the marking set and turn spindle ③ to adjust the length of the tip pre-fab.



Note

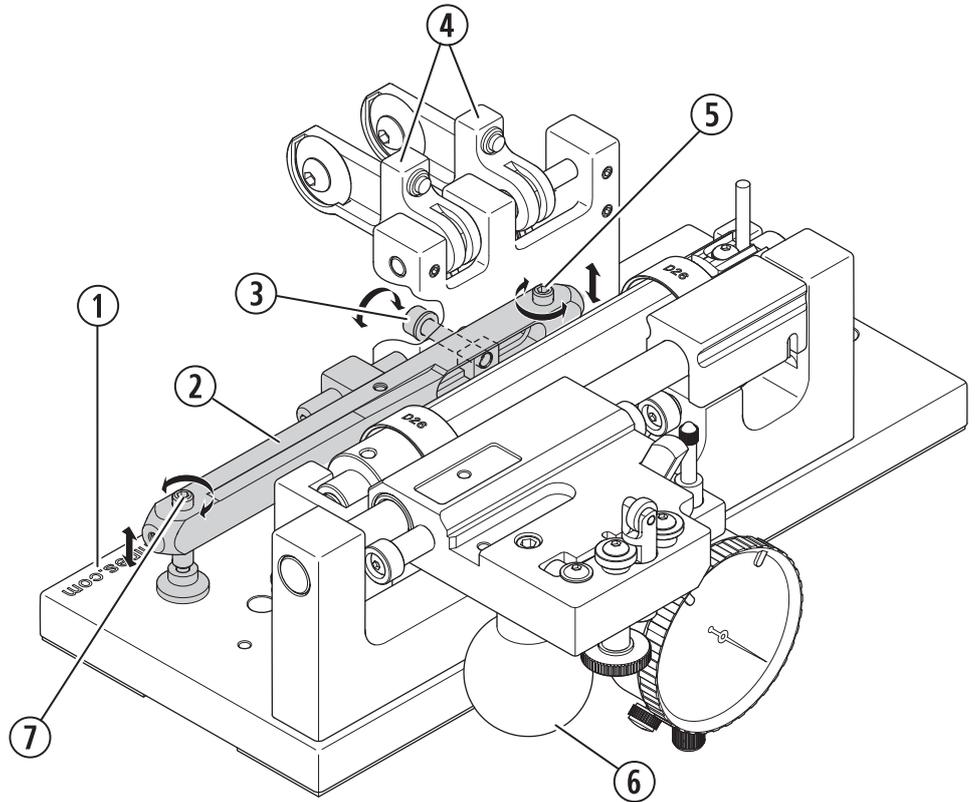
- Turn spindle ③ clockwise to make the tip pre-fab longer.
 - Turn spindle ③ counter clockwise to make the tip pre-fab shorter.
- The tip pre-fab can have a negative length in which case the tip pre-fab is inactive.

4. Tighten clamp screw ① firmly.

6.3

Adjust difference between tip and collar thickness

The angle of the template set defines the difference between the tip thickness and the collar thickness.



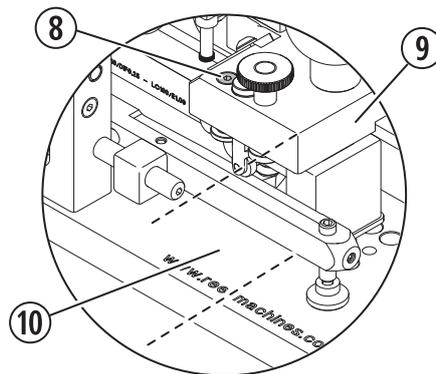


Note

When the top of the spindle ⑧ is equal to the top surface of the carriage set, the carriage set ⑨ must be parallel to the base plate ⑩.

If this is not the case, adjust the levelers ⑤ and ⑦ of the template set:

- Turn the 2 levelers clockwise with the same amount to raise the template set and so the carriage set.
- Turn the 2 levelers counter clockwise with the same amount to lower the template set and so the carriage set.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

To adjust the difference between the tip thickness and the collar thickness:

1. Install the dial indicator set, see [Install the dial indicator](#) (on page 25). The dial indicator pointer has to point to zero when the carriage set is moved completely to the center line end point.
2. Move the carriage set from one end point to the other end point of the stroke to read the difference from the dial indicator.
3. If necessary, untighten the clamp screw ③ counter clockwise to adjust the difference.
4. Hand tighten the clamp screw.

5. Adjust the difference with leveler ⑤ and or ⑦.



Note

To increase the difference, turn leveler ⑤ counter clockwise and/or leveler ⑦ clockwise.

To decrease the difference, turn leveler ⑤ clockwise and/or leveler ⑦ counter clockwise.

Note

When a leveler is turned counter clockwise, be sure to push down the template set thru the clamping force of the hand tight clamp screw ③ so the leveler keeps in contact with the base plate.

-
6. Move the carriage set from one end point to the other end point of the stroke to read the new difference from the dial indicator.
 7. Repeat step 5 and 6 until the desired difference is reached.
 8. Position the knife at the center line position.
 9. The indicator should indicate '0'.
 10. When the indicator shows a different value, turn the 2 levelers to the same direction with the same amount in order to move the pointer of the dial indicator to the zero position.

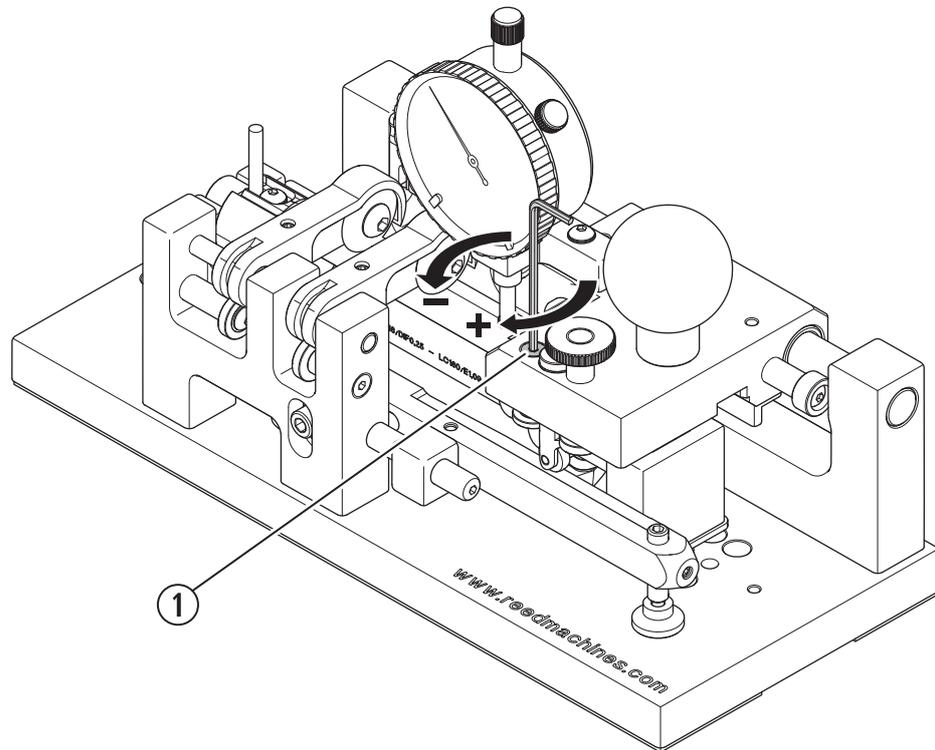


Note

With step 10 the tip thickness with the new difference is equal to the tip thickness with the old difference.

6.4

Adjust tip thickness



Note

When adjusting the tip thickness the carriage set has to be on the final depth position, see step 10 of Profile the reed.

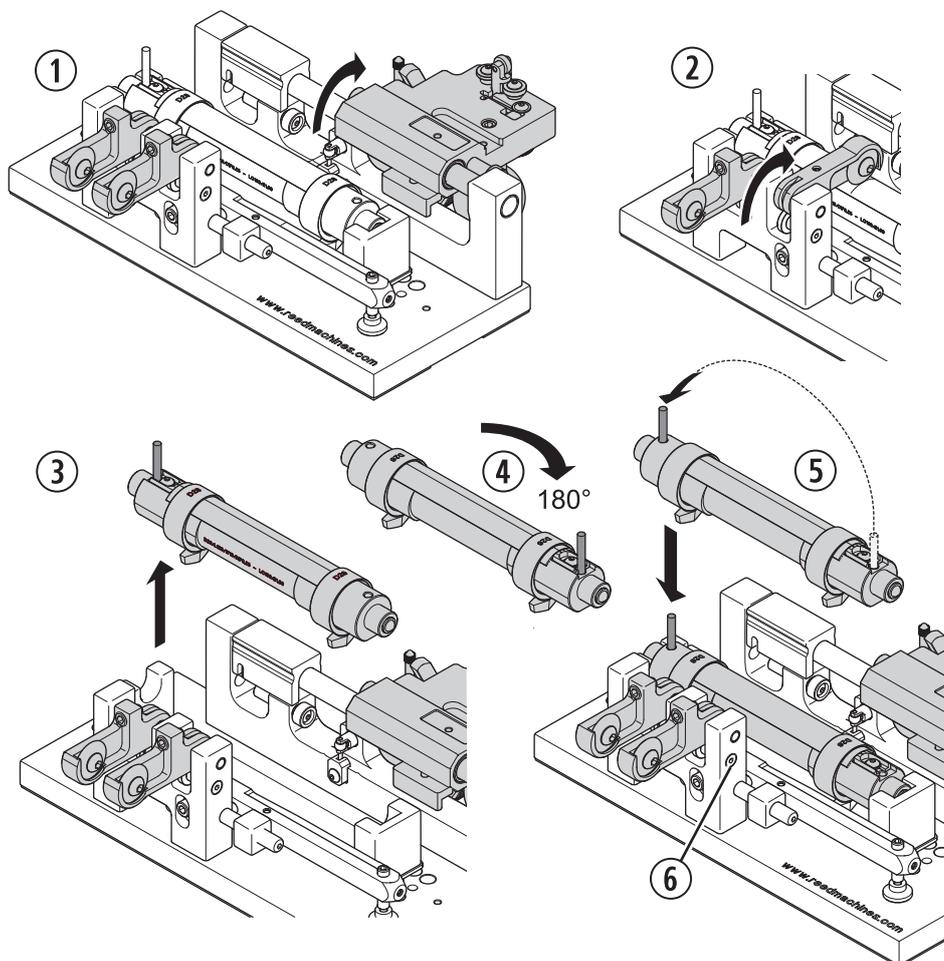
To adjust the tip thickness:

1. Position the dial indicator set, see [Install the dial indicator](#) (on page 25).
2. Turn spindle ① clockwise to make the tip thicker.
3. Turn spindle ① counter clockwise to make the tip thinner.

The amount that the thickness of the tip changes can be read from the dial indicator.

6.5

Adjust center line mark position



The center line is the line where the chips release from the reed during profiling and the line where the reed will be folded.

To adjust the position of the center line mark:

1. Turn the carriage set outwards ①.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

2. Push the knife of the center line marker onto the reed ②.
3. Make a first center line mark and mark it with a pencil.
4. Take out the cylinder set ③, turn and insert the cylinder set 180° ④, reposition the pin ⑤ and insert the cylinder set .
5. Make a second center line mark.



Note

The second center line mark should be on exactly the same position as the first center line mark.

6. If the two center mark lines are not on the same position, use the Allen key to adjust the center line marking set with spindle ⑥.



Note

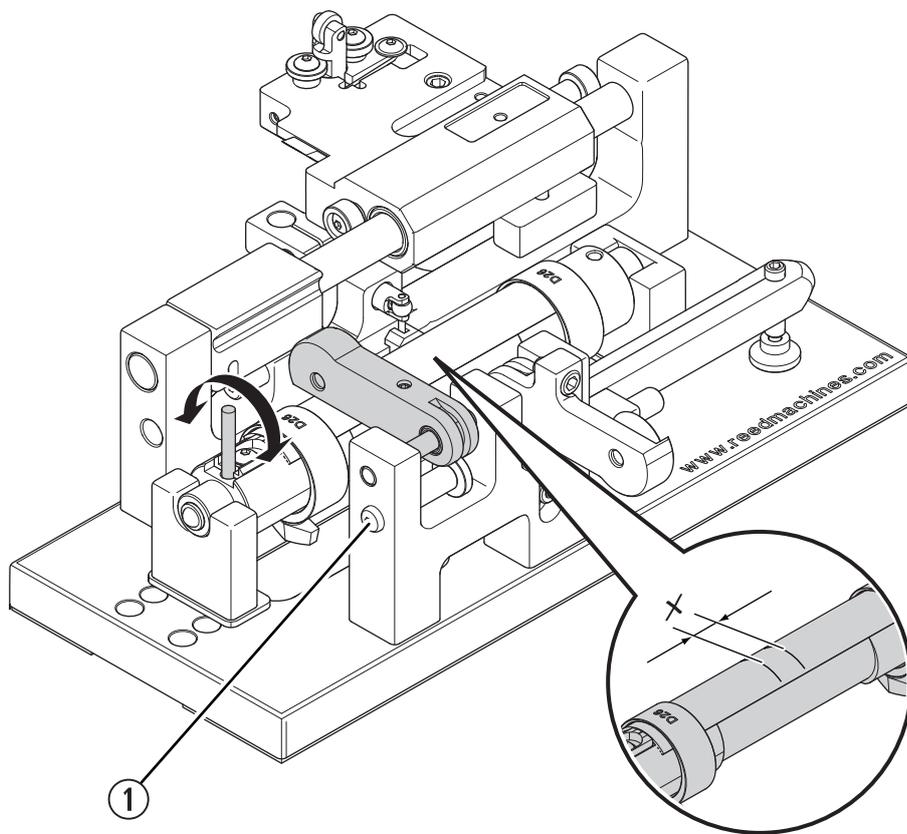
Turn spindle ⑥ clockwise to move the center line marking set to the left.

Turn spindle ⑥ counter clockwise to move the center line marking set to the right.

7. Repeat step 2 to 6 until the two center line marks are on the same position.
8. Turn the carriage set inwards.

6.6

Adjust collar line mark position



The collar line is the line where the knife starts to profile the reed.

To adjust the position of the collar line mark:

1. Define the distance 'X' between the center line mark and the collar line mark. This has to be equal to the length of the profile.
2. Turn the carriage set outwards.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

3. Make a collar line mark, see [Make collar line mark](#) (on page 46).
4. If the collar line mark is not on the right position adjust the collar line marking set with spindle ①.



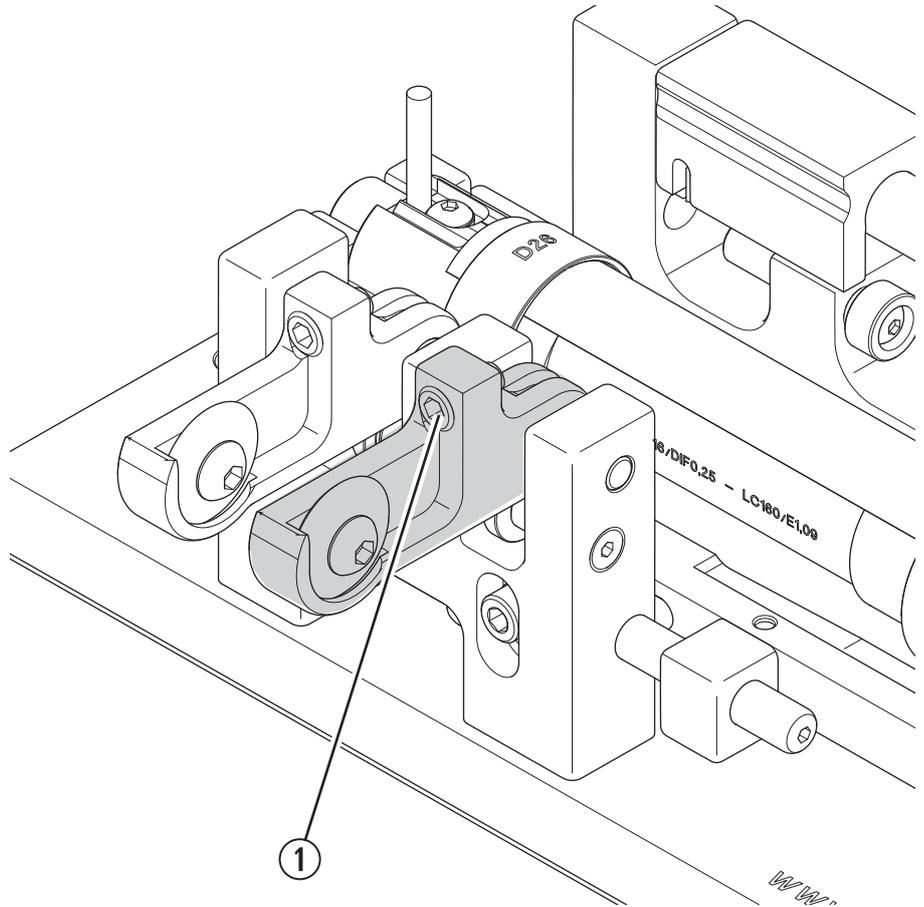
Note

Turn spindle ① clockwise to move the collar line mark to the right.
Turn spindle ① counter clockwise to move the collar line mark to the left.

5. Repeat step 3 and 4 until the collar line mark is on the right position.
6. Turn the carriage set inwards.

6.7

Adjust depth of center line mark



Adjust depth of center line mark:

1. Turn the marking set of the center line outwards.
2. Use the supplied Allen key to adjust the depth of the collar line mark with spindle ①.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.



Caution

Take care with adjusting the depth of the center line mark to a deeper position because the marking knife can hit the cylinder which can result in damages of the marking knife and the cylinder.

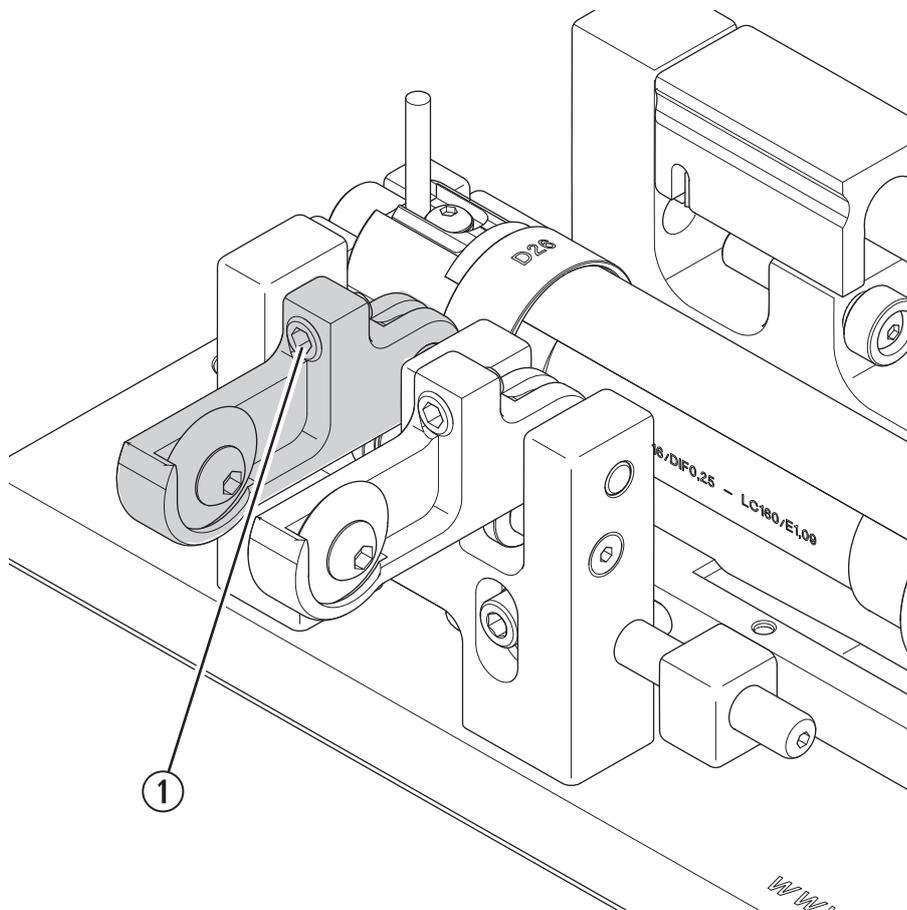


Note

Turn spindle ① clockwise to make the center line mark less deep. Turn spindle ① counter clockwise to make the center line mark more deep.

6.8

Adjust depth of collar line mark



To adjust the depth of collar line mark:

1. Turn the marking set of the collar line outwards.
2. Use the supplied Allen key to adjust the depth of the collar line mark with spindle ①.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.



Caution

Take care with adjusting the depth of the collar line mark to a deeper position because the marking knife can hit the cylinder which can result in damages of the marking knife and the cylinder.

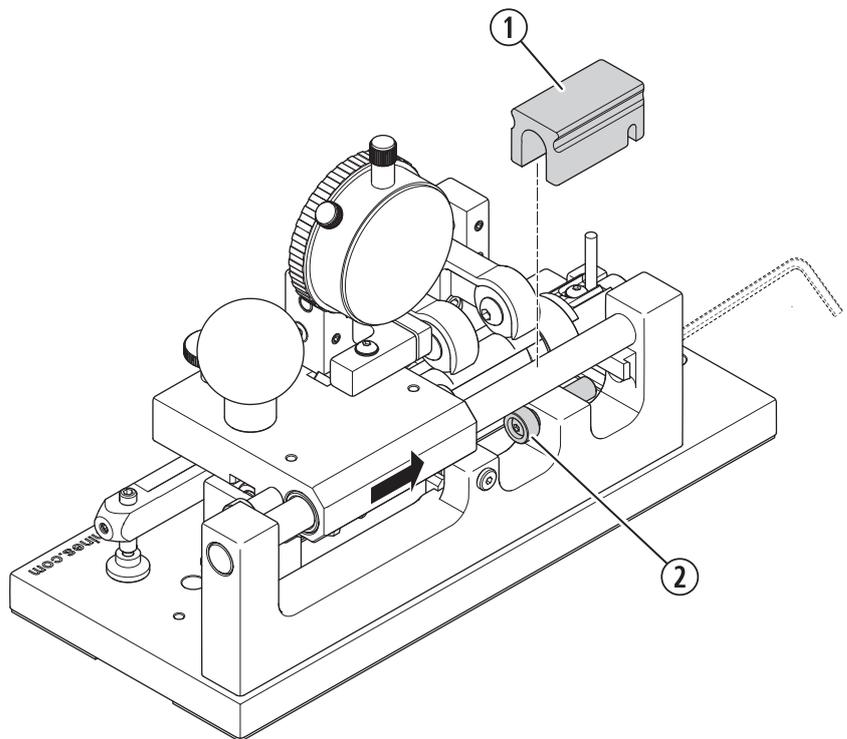


Note

Turn spindle ① clockwise to make the collar line mark less deep.
Turn spindle ① counter clockwise to make the collar line mark more deep.

6.9

Adjust collar cutting stroke [CCF version]



The profiler version with Collar Cutting Function (CCF) can make a sharp collar. The end point of the collar cutting stroke has to be equal to the collar mark line.

To adjust the end point of the collar cutting stroke:

1. Activate the collar cutting function by removing the stop block ①, see [Cut the collar \[CCF version only\]](#) (on page 50).
2. Turn the carriage set a little bit outwards, move the carriage set to the collar cutting end point and put it down gently with the knife on the reed.
3. Move the carriage set completely to the end point of the collar cutting stroke.
4. If the point of the knife is not equal to the collar mark, adjust the collar cutting stroke with spindle ②.

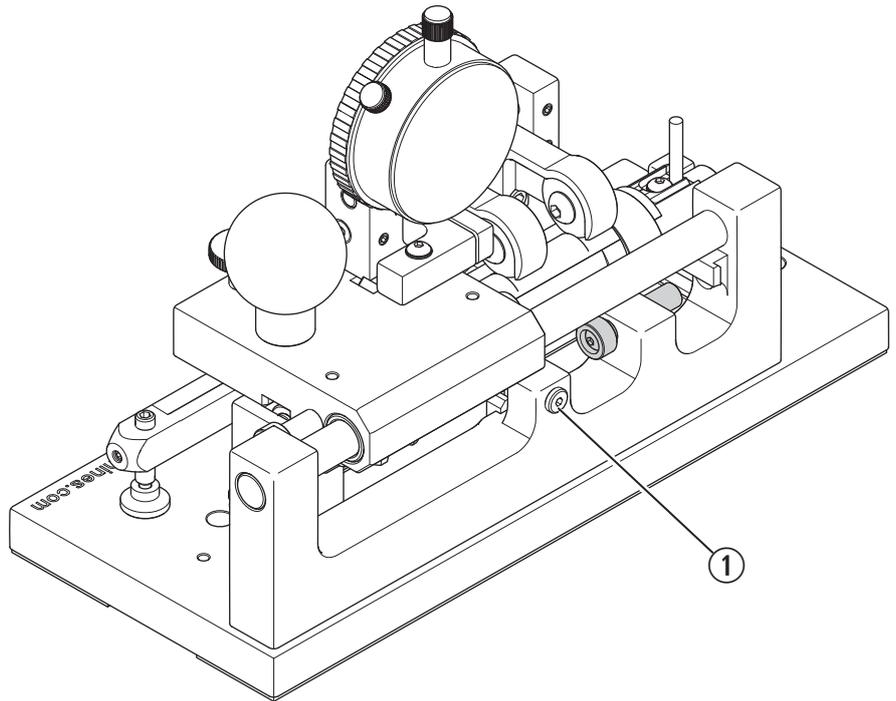


Note

- Turn spindle ② clockwise to move the end point of the collar cutting stroke to the right.
- Turn spindle ② counter clockwise to move the end point of the collar cutting stroke to the left.

6.10

Adjust collar cutting depth [CCF version]



Adjust collar cutting depth:

1. Activate the collar cutting function, see [Cut the collar \[CCF version only\]](#) (on page 50).
2. Adjust the collar cutting depth with spindle ①.



Note

- Turn spindle ① clockwise to make the collar thicker.
 - Turn spindle ① counter clockwise to make the collar thinner.
-



7

Operating instructions

7.1

Preparation

Before starting the profiling process:

1. Position the bassoon profiler on a horizontal and non-slip surface.
2. Make sure that the cylinder supports are clean.

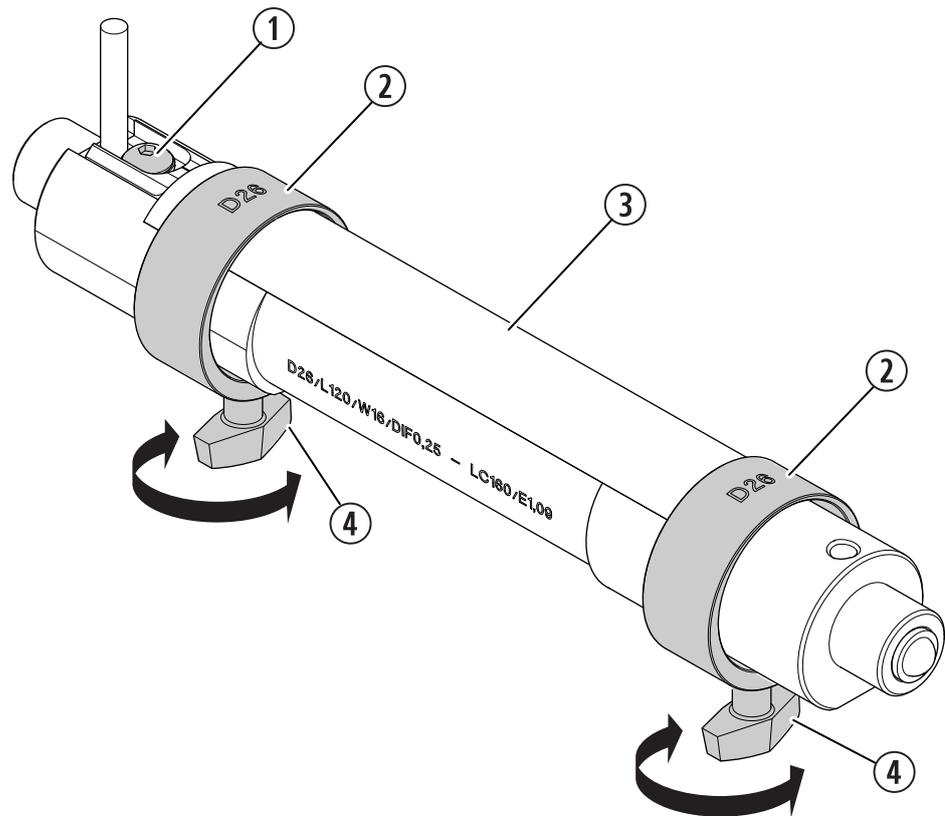


Note

Reeds do not need to be wet when they are profiled. If reeds are wet when they are profiled be sure to dry the knife before storing the profiler.

7.2

Position a reed



To position a reed, first prepare the profiler:

- If needed, turn the collar line marking set outwards.
- If needed, turn the center line marking set outwards.
- Turn the depth step spindle clockwise to the position that the knife is above the reed when the carriage set is turned inwards.
- Turn the carriage set outwards.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

1. Take the cylinder set out of the profiler.
2. Untighten the winged screws (4) of the reed clamps (2) and move the reed clamps outwards as far as possible.
3. Position the reed (3) against the length stop (1) and symmetrical in relation to the width lines on the cylinder. Keep the reed in this position by clamping the reed to the cylinder at the center line position.



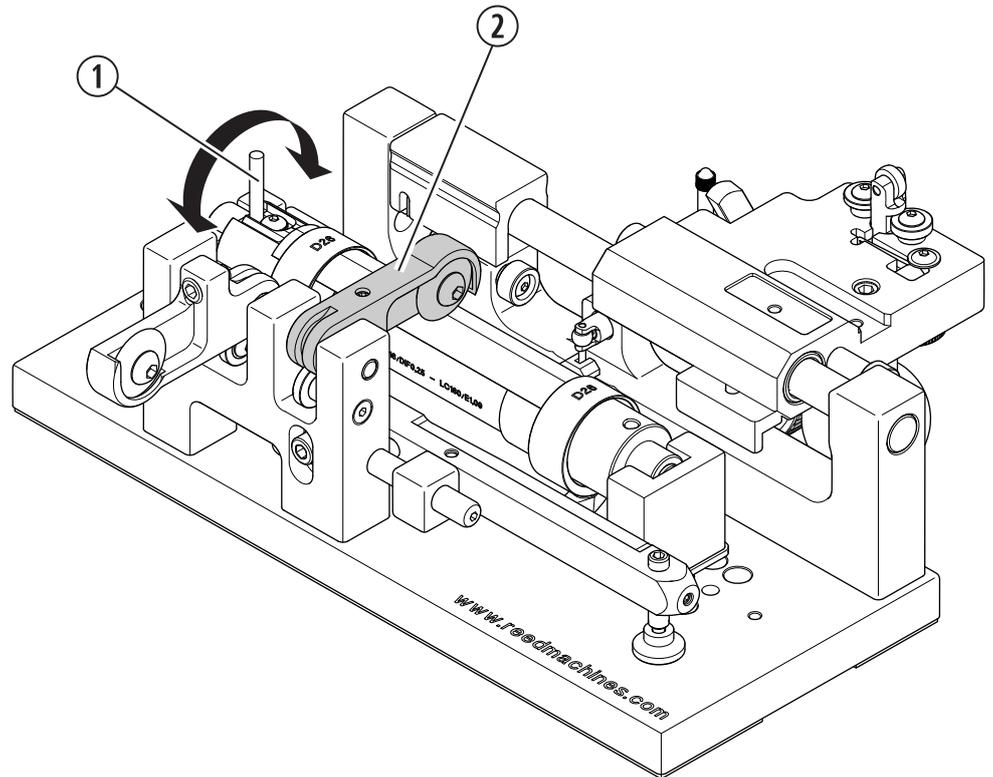
Note

The distance between the length stop and the center line of the cylinder should be half the length of the reed.

4. Move the reed clamps over the reed to the middle of the cylinder as far as possible and tighten the winged screws.
5. Position the cylinder set in the profiler.
6. Turn the carriage set inwards.

7.3

Make center line mark



The following explanation assumes the profiler has a cylinder set and a reed that needs to be profiled.

Make a center line mark:

1. Turn the carriage set outwards.



Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

2. Turn the center line marking set ② inwards.
3. Rotate the cylinder set with pin ① a few times while pressing on the center line marking set.
4. Turn the center line marking set outwards.
5. Turn the carriage set inwards.

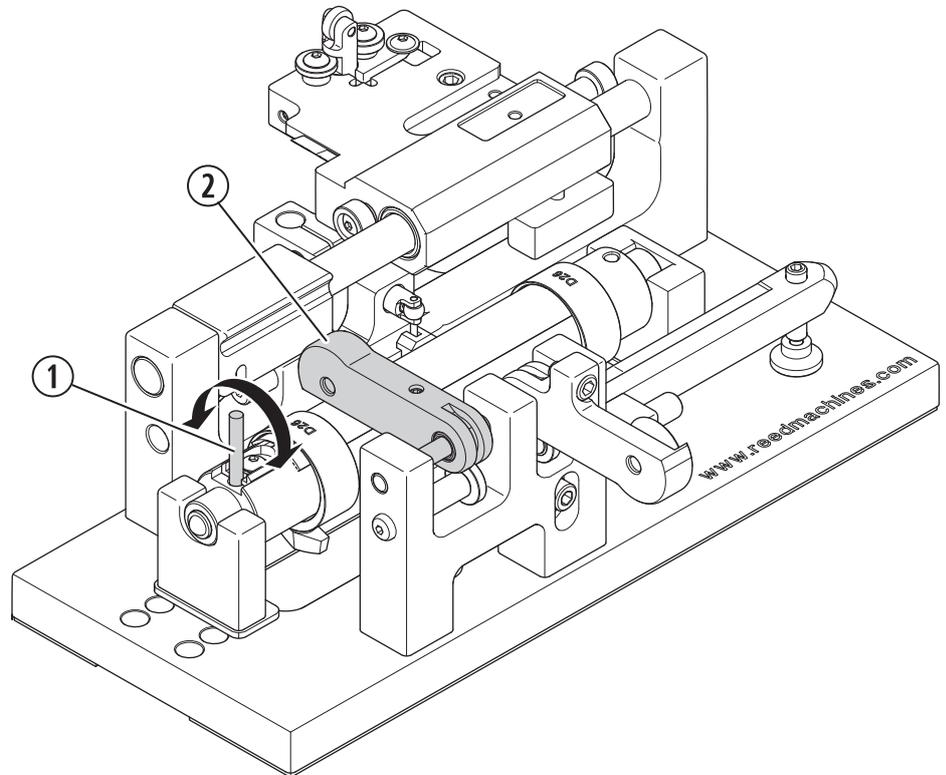


Note

The center line mark cannot be made to the final depth in one time. When a scraping sequence (see [Profile the reed](#) (on page 47)) is done, repeat the center line mark sequence.

7.4

Make collar line mark



The following explanation assumes the profiler has a cylinder set and a reed that needs to be profiled.

To make a collar line mark:

1. Turn the carriage set outwards.



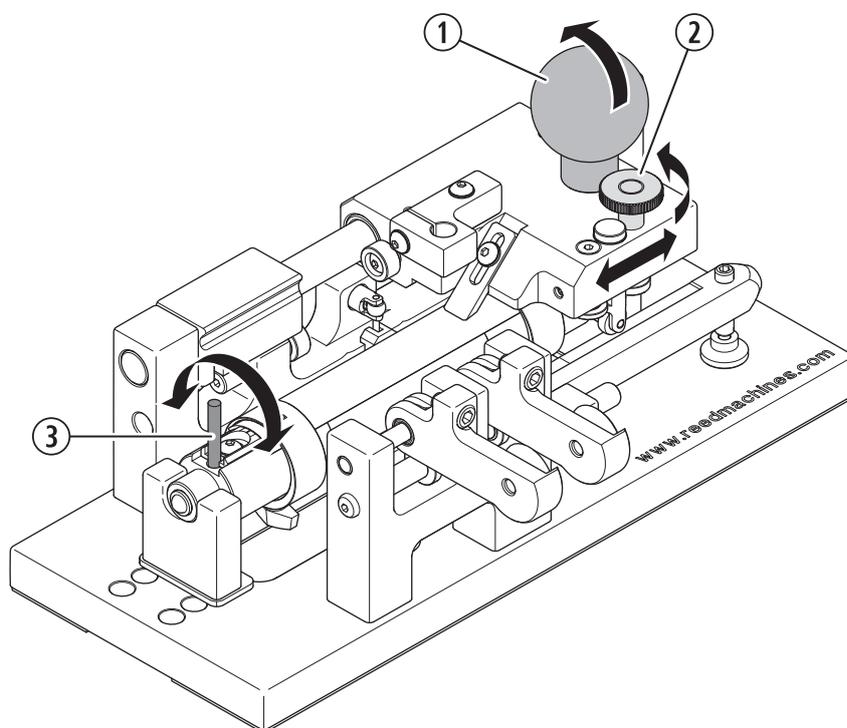
Warning

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

2. Turn the collar line marking set ② inwards.
3. Rotate the cylinder set with pin ① a few times while pressing on the collar line marking set.
4. Turn the collar line marking set outwards.
5. Take out the cylinder set, turn the cylinder set 180°, reposition the pin and insert the cylinder set. See [Adjust center line mark position](#) (on page 35).
6. Repeat step 2 to 4.

7.5

Profile the reed



Profiling a reed consists of two well timed movements which need a certain rhythm. Mastering this technique can take some time.

The two profiling movements are:

- The scrape (length) movement which is controlled by the carriage set ①.
- The cross movement which is controlled by the cylinder set ③.



Note

Before starting the profiling process be sure that the depth step spindle ② is in the position that the knife is above the reed during the complete stroke.

To profile a reed:

1. Hold the cylinder set and so the profiler with the left hand, align the middle of the reed with the middle of the knife and position the carriage set completely to the right.

2. Move the carriage set and so the knife to the end point (center line) of the stroke and back to the start point of the stroke with the right hand.



Note

If the stroke is not completely finished the scrape is not made completely to the tip of the reed

Note

If the knife did not take a chip from the reed lower the knife by turning the depth step spindle ② counter clockwise for about ½ revolution (about 180°) and make a new stroke. Repeat this until the knife takes a chip from the reed.

3. Move the reed for about 1 mm by rotating the cylinder set.



Note

Big movements result in a coarse profiled surface. In order to get a smooth profiled surface, it is necessary to make small movements during the last scraping sequence.

4. Repeat step 2 and 3 until the complete profile is scraped.
5. Turn the carriage set ① outwards.



Warning

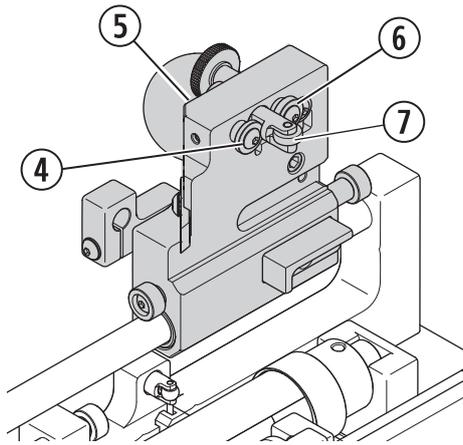
Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

6. Take the cylinder set out of the profiler, turn it 180° and put it back in the profiler.
7. Turn the carriage set ① inwards.
8. Repeat step 2 and 3 until the complete profile is scraped.
9. Lower the knife by turning the depth step spindle ② counter clockwise for about ½ revolution (about 180°).
10. Repeat step 2 to 8 until the complete profile is scraped to the final thickness. The final thickness is reached when curve wheel set ⑦ is resting on the steel disc ④ of spindle ⑤ and not on the plastic disc ⑥.



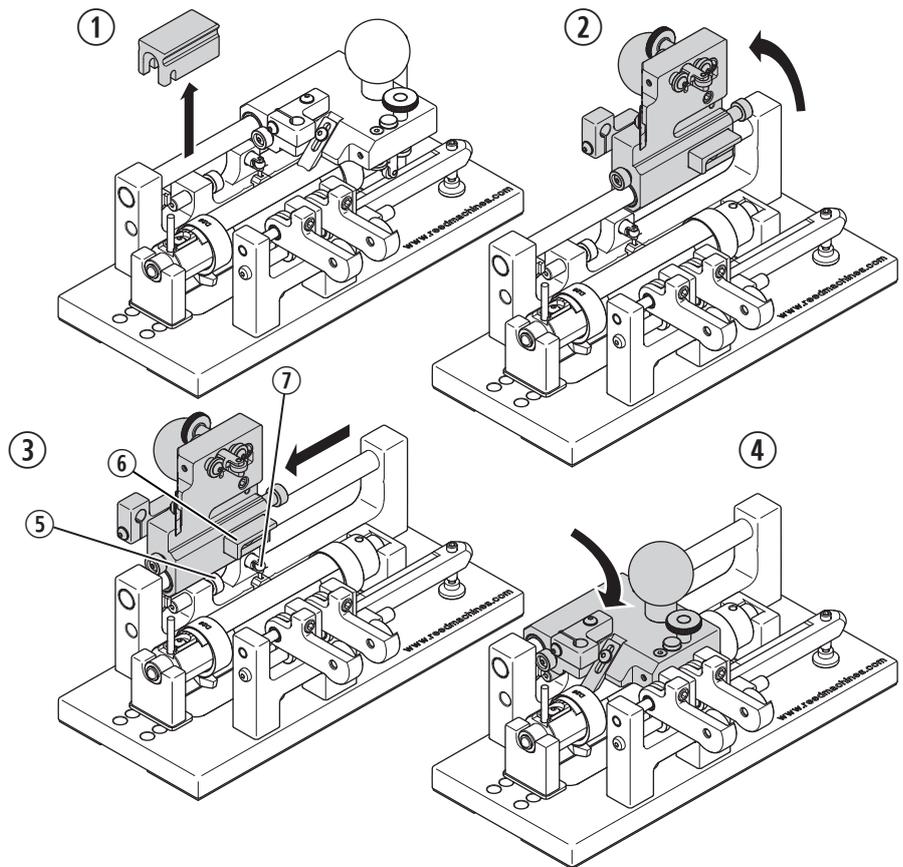
Note

Big depth steps result in high scraping forces with the risk to damage the reed. It will also result in a coarse profiled surface. In order to get a smooth profiled surface it is necessary to make a small depth step for the last scraping sequence.



7.6

Cut the collar [CCF version only]



First activate the collar cutting function:

1. Take away the stop block ①.
2. Turn the carriage set ② 90° outwards.
3. Move the carriage set, illustration ③, with the ridge of the guide block ⑥ between the collar cutting stroke-stop ⑤ and the collar cutting curve-wheel-set ⑦.
4. Turn the carriage set inwards and move the carriage set to the start point of the collar cutting stroke ④.

The proces of cutting the collar is quite similar to the profiling proces of the reed. Only the movement is smaller. To cut the collar:

1. Hold the pin on the cylinder set with the left hand.
2. Use the right hand to move the carriage set (and so the knife) to the end point (collar line) of the collar cutting stroke.
3. Move the carriage set back to the start point of the collar cutting stroke.



Note

If the stroke is not completely finished the collar cutting scrape is not made completely to the collar line of the reed

4. Move the reed for about 1 mm by rotating the cylinder set with the pin.
-

**Note**

Big movements result in a course profiled surface. In order to get a smooth profiled surface it is necessary to make small movements during the last scraping sequence.

5. Repeat step 1, 2, 3 and 4 until the complete collar is scraped.
 6. Turn the carriage set outwards.
-

**Warning**

Risk of injury. Be careful when the carriage set is turned outwards. The upwards facing knife is very sharp and can cause serious injuries. Always turn the carriage set inwards as soon as possible.

7. Take out the cylinder set, turn the cylinder set 180°, reposition the pin and insert the cylinder set.
8. Turn the carriage set inwards.
9. Repeat step 1, 2, 3, and 4 until the complete collar is scraped.



8 Maintenance

8.1 Cleaning

Remove chips frequently from the profiler during use. Use a brush or a soft cloth.

8.2 Storage

When the profiling process is finished:

- Remove chips from the profiler.
- Make the profiler dry.



9

Optional accessories

9.1

Optional accessories

- Digital dial indicator
The digital dial indicator fits in the same adaptor as the analog dial indicator. The digital dial indicator shows the measured value on a display.



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