

# Dear reader,

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## **Introduction**

Thank you for the trust you have placed in our company and congratulations on buying this high-quality Fronius product. These instructions will help you familiarise yourself with the product. Reading the instructions carefully will enable you to learn about the many different features it has to offer. This will allow you to make full use of its advantages.

Please also note the safety rules to ensure greater safety when using the product. Careful handling of the product will repay you with years of safe and reliable operation. These are essential prerequisites for excellent results.



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# Safety rules

## Explanation of safety symbols



**DANGER!** Indicates immediate and real danger. If it is not avoided, death or serious injury will result.



**WARNING!** Indicates a potentially dangerous situation. Death or serious injury may result if appropriate precautions are not taken.



**CAUTION!** Indicates a situation where damage or injury could occur. If it is not avoided, minor injury and/or damage to property may result.



**NOTE!** Indicates a risk of flawed results and possible damage to the equipment.

**IMPORTANT!** Indicates tips for correct operation and other particularly useful information. It does not indicate a potentially damaging or dangerous situation.

If you see any of the symbols depicted in the "Safety rules" chapter, special care is required.

## General



The device is manufactured using state-of-the-art technology and according to recognised safety standards. If used incorrectly or misused, however, it can cause:

- injury or death to the operator or a third party,
- damage to the device and other material assets belonging to the operating company,
- inefficient operation of the device.

All persons involved in commissioning, operating, maintaining and servicing the device must:

- be suitably qualified,
- read and follow these operating instructions carefully.

The operating instructions must always be at hand wherever the device is being used. In addition to the operating instructions, attention must also be paid to any generally applicable and local regulations regarding accident prevention and environmental protection.

All safety and danger notices on the device:

- must be in a legible state,
- must not be damaged,
- must not be removed,
- must not be covered, pasted or painted over.

For the location of the safety and danger notices on the device, refer to the section headed "General remarks" in the operating instructions for the device. Before switching on the device, remove any faults that could compromise safety.

**This is for your personal safety!**

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## Specific areas of risk



Keep hands, hair, clothing and tools away from moving parts, for example:

- Cogs
- Rollers
- Shafts
- Joints

Do not reach into rotating drive components.



Danger of crushing!

Do not put hands or any other parts of the body between the pressing parts.



Risk of cutting!

Wear safety gloves when handling sharp objects.

Covers and side panels may only be opened/removed while maintenance or repair work is being carried out.

During operation

- ensure that all covers are closed and all side panels are fitted properly.
- keep all covers and side panels closed.

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## Proper use



The device is to be used exclusively for its intended purpose.

Any use above and beyond this purpose is deemed improper. The manufacturer shall not be held liable for any damage arising from such usage.

Proper use also includes:

- carefully reading and obeying all the instructions and all the safety and danger notices in the operating instructions
- performing all stipulated inspection and servicing work
- installation as specified in the operating instructions

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## Environmental conditions



Operation or storage of the device outside the stipulated area will be deemed as not in accordance with the intended purpose. The manufacturer shall not be held liable for any damage arising from such usage.

Ambient temperature range:

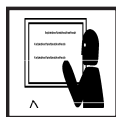
- during operation: + 5 °C to + 40 °C (41 °F to 104 °F)
- during transport and storage: -15 °C to +55 °C (5 °F to 131 °F)

Relative humidity:

- up to 50 % at 40 °C (104 °F)
- up to 80 % at 20 °C (68 °F)

Ambient air: free from dust, acids, corrosive gases and substances, etc.

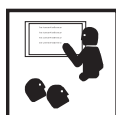
## Obligations of the operator



- The operator must only allow persons to work with the device who:
- are familiar with the fundamental instructions regarding safety at work and accident prevention and have been instructed in how to use the device
  - have read and understood these operating instructions, especially the section "safety rules", and have confirmed as much with their signatures
  - are trained to produce the required results.

Checks must be carried out at regular intervals to ensure that operators are working in a safety-conscious manner.

## Qualified and trained technicians



Only qualified technicians, who have attended the appropriate Fronius training course, are permitted to commission and operate the device. The information in these operating instructions is only intended for these persons. Do not carry out any procedures apart from those described in the operating instructions. This applies even if you are qualified to do so.

## Obligations of personnel



- Before using the device, all persons instructed to do so undertake:
- to observe the basic instructions regarding safety at work and accident prevention
  - to read these operating instructions, especially the "Safety rules" section and sign to confirm that they have understood them and will follow them.

Before leaving the workplace, ensure that people or property cannot come to any harm in your absence.

## Maintenance and repair



Maintenance and repair work must only be carried out by authorised personnel. Use only original spare and wearing parts (also applies to standard parts). It is impossible to guarantee that bought-in parts are designed and manufactured to meet the demands made on them, or that they satisfy safety requirements.

Do not carry out any modifications, alterations, etc. to the device without the manufacturer's consent.

In addition to following the maintenance instructions, the device must be carefully monitored and any malfunctions must be rectified immediately. The manufacturer accepts no liability for consequential damage caused by inadequate maintenance or incorrect operation of the device.

## Copyright



Copyright of these operating instructions remains with the manufacturer.

The text and illustrations are all technically correct at the time of printing. We reserve the right to make changes. The contents of the operating instructions shall not provide the basis for any claims whatsoever on the part of the purchaser. If you have any suggestions for improvement, or can point out any mistakes that you have found in the instructions, we will be most grateful for your comments.

# General

## Device description

The device is used for sharpening and cutting the tungsten electrodes that are used as the electrodes for TIG welding torches.

The angle of the tip is infinitely variable and is digitally displayed.

The separator allows electrodes of any minimum length to be created.

The flat side of the grinding disc is used to grind lengthwise along the electrode. This produces optimum tip formation.

A choice of 3 grinding tracks is available to increase the service life of the grinding disc.

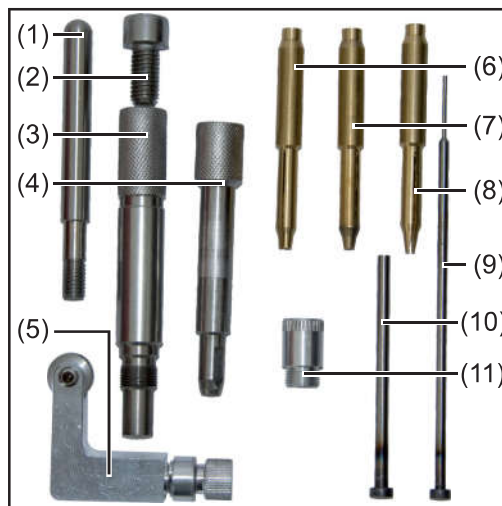
The electrode holder accurately positions the electrodes for grinding. This ensures precise and repeatable creation of the electrode tip.

There is a separate clamping sleeve for each electrode diameter; this ensures that the electrode is securely located in the electrode holder.

The use of grinding fluid and a container avoids grinding dust emissions.

## Scope of supply

In addition to the base unit, the following elements are included in the scope of supply:



- (1) Handle for the separator
- (2) M10 screw for the stop pin
- (3) Back part of electrode holder
- (4) Front part of electrode holder
- (5) Length stop
- (6) Clamping sleeve 3.2 mm
- (7) Clamping sleeve 2.4 mm
- (8) Clamping sleeve 1.6 mm
- (9) Stop pin for 30 mm electrode
- (10) Stop pin for 92 mm electrode
- (11) Electrode guide 1.0 - 1.6 mm

Not illustrated:

- 250 ml grinding fluid
- 500 ml grinding fluid
- Electrode guide 2.4 - 3.2 mm (already fitted on the back of the separator)



**NOTE!** If required, ask the manufacturer for the material safety data sheets for the grinding fluid.

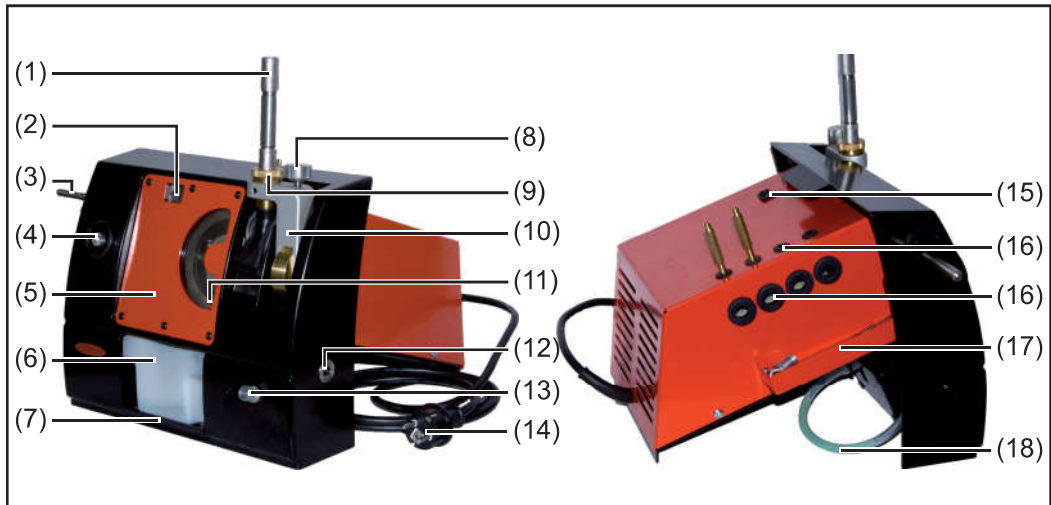
## Proper use

The device is intended exclusively for grinding and/or cutting tungsten electrodes. Any other form of usage is deemed "not in accordance with the intended purpose". The manufacturer shall not be held liable for any damage arising from such usage



# Control elements and connections

## Control elements and connections



- |                                                 |                                       |
|-------------------------------------------------|---------------------------------------|
| (1) Electrode holder                            | (10) Angle adjustment                 |
| (2) Digital display                             | (11) Fill level indicator             |
| (3) Handle for the separator                    | (12) Length stop guide bushing        |
| (4) Separator guide bushing                     | (13) Length stop                      |
| (5) Cover plate                                 | (14) Mains plug                       |
| (6) Tank for grinding fluid                     | (15) Main switch                      |
| (7) Key for fixing tank in place                | (16) Tool storage                     |
| (8) Knurled screw for securing angle adjustment | (17) Collecting cup                   |
| (9) Grinder guide bushing                       | (18) Drain hose for emptying the tank |

# Installation

## Safety



**WARNING!** Operating the equipment incorrectly can cause serious injury and damage. Do not use the functions described until you have thoroughly read and understood the following documents:

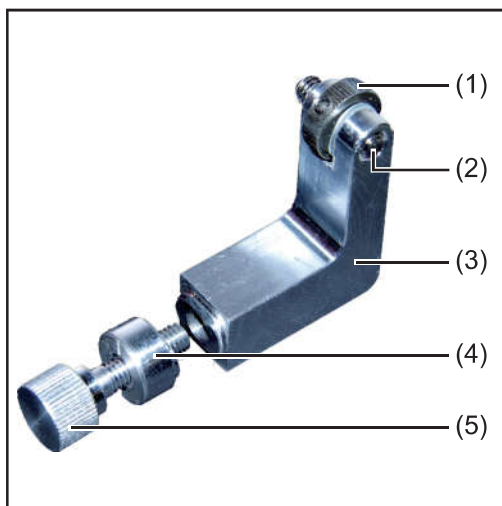
- these operating instructions
- all the operating instructions for the system components, especially the safety rules



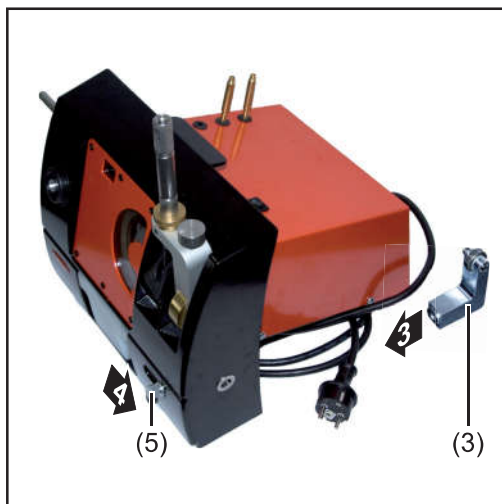
**WARNING!** An electric shock can be fatal. If the machine is plugged into the mains electricity supply during installation, there is a high risk of very serious injury and damage. Do not carry out any work on the device unless

- the mains switch is in the "O" position,
- the device is unplugged from the mains.

## Fitting the length stop



- 1 Turn the knurled nut (1) until the clamping screw (2) finishes flush with the wide side of the stop angle (3)
- 2 Remove the clamping screw (5) and the sleeve (4) from the stop angle (3)



- 3 Insert the stop angle (3) into the device from the back
- 4 Fix the stop angle (3) in place with the sleeve (4) and the clamping screw (5)



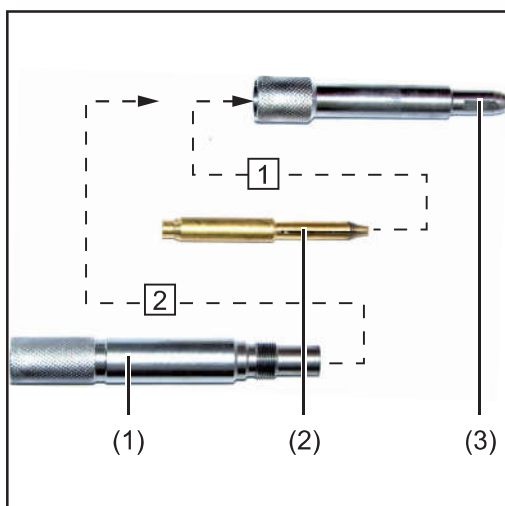
**NOTE!** Make sure that the position indicator notch on the sleeve (4) is at the top and that the stop angle is at the far right (in the zero position).

### Fitting the handle for the separator



- 1 Screw the handle for the separator into the left side of the device and tighten it

### Assembling the electrode holder

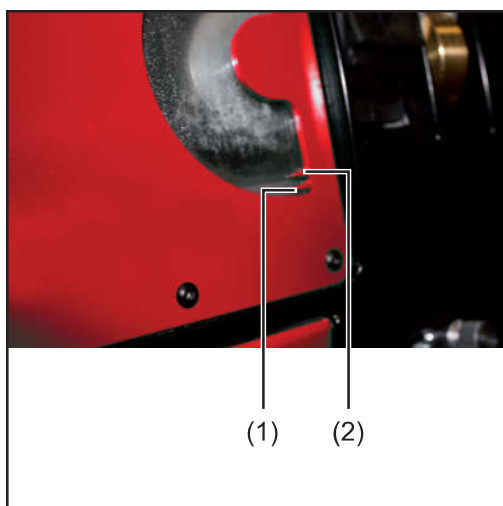


- 1 Insert the clamping sleeve (2) with the diameter of the electrode to be ground into the lower part (3) of the electrode holder
- 2 Screw the top part (1) of the electrode holder into the lower part (3), but do not tighten it

### Adding grinding fluid



- 1 Check that the key is holding the tank securely in place
- 2 Pour the grinding fluid for the grinder through the guide bushing

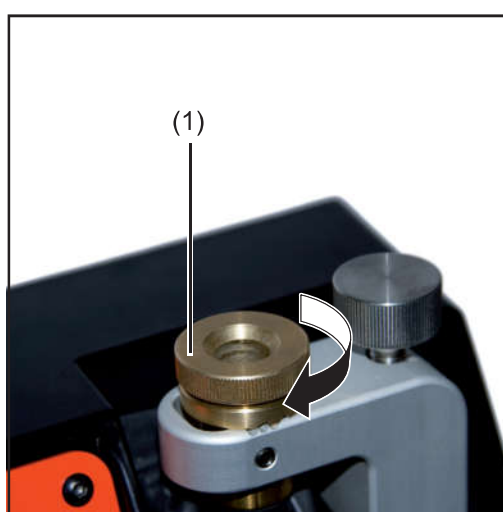


- 3** The fluid level must lie between the minimum mark (1) and the maximum mark (2)



**NOTE!** Some of the grinding fluid will be taken up by the disc. Always check the fluid level before using the device and adjust if necessary.

### Adjusting the guide bushing



- 1** Turn the guide bushing (1) down as far as the stop

# Start-up

## Safety



**WARNING!** Incorrect operation may result in serious injury or damage. Do not use the functions described here until you have thoroughly read and understood the following documents:

- these operating instructions
- the safety data sheets for the materials used, particularly for the electrodes to be ground

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## Setup regulations

- Place the device on a firm and level surface
- Position the device so that cooling air can flow unhindered through the air ducts underneath and on the back
- Ensure that the workplace is adequately lit
- Do not use the device outdoors

## Mains connection

The rating plate contains details of the permitted mains voltage and frequency and is located on the underside of the housing. The device is only designed for these values. The mains lead fuse protection specification must be appropriate to the device output. The device output can be found on the rating plate and in the "Technical data" section. The device must only be operated with the pre-fitted mains lead and mains plug.



**NOTE!** An inadequately dimensioned electrical installation can cause serious damage. The mains lead and its fuse must be dimensioned to suit the local power supply. The technical data shown on the rating plate applies.

## Starting up

- 1 Move the main switch to the - O - position
- 2 Plug in the mains plug
- 3 Insert the electrode holder into the guide bushing of the grinder to prevent the grinding fluid spraying out
- 4 Switch on the device for approx. 5 seconds  
The grinding fluid will spread through the device
- 5 Check the fluid level and top up with grinding fluid if necessary

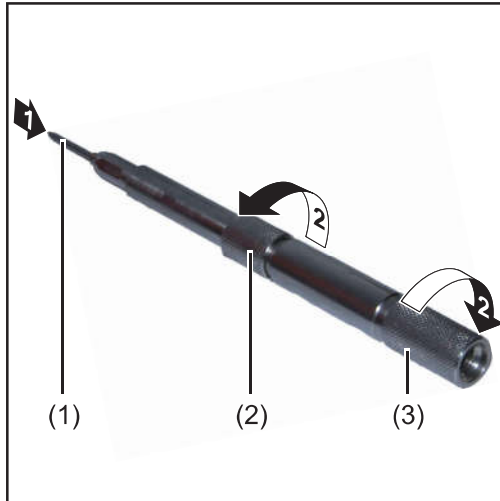
# Grinding the electrode

## General



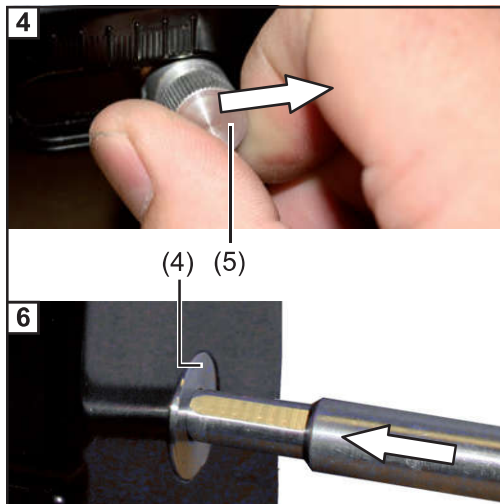
**NOTE!** To be able to grind an electrode, it must be at least 30 mm long. The processing of shorter electrodes is described in the "Creating an electrode shorter than 25 mm" section.

## Preparing the electrode



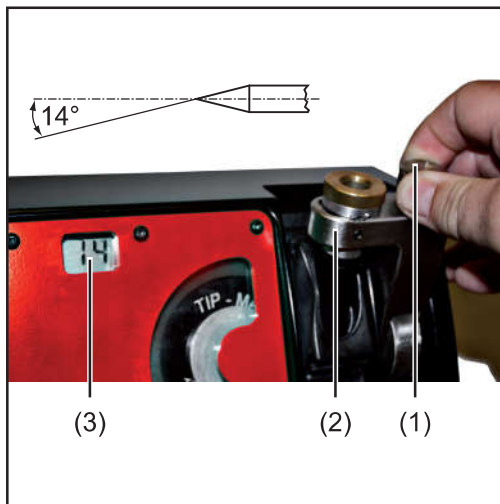
- 1** Insert the electrode (1) into the clamping sleeve of the electrode holder from the front
  - Approx. 25 mm of the electrode must still protrude at the front
- 2** Twist the front part (2) and back part (3) of the electrode holder as shown and lightly clamp the electrode

The electrode should then not be able to slip by itself, but it must still be possible to move it by hand



- 3** Open the clamping screw (5)
- 4** Move the length stop to the zero position
- 5** Tighten the clamping screw (5)
- 6** Insert the electrode holder into the guide bushing (4) of the length stop as far as the stop
  - This accurately sets the length of the electrode
- 7** Tighten the back part of the electrode holder (3)
  - This clamps the electrode in the electrode holder

## Grinding the electrode



- 1 Open the knurled screw (1) and set the angle adjustment (2) to the required angle

- Read the set angle on the digital display (3)



**NOTE!** The set angle corresponds to half the tip angle. The tip angle in the example shown would be 28°.

- 2 Re-tighten the knurled screw (1)

- 3 Switch on the device



- 4 Introduce the electrode holder into the guide bushing of the grinder



**NOTE!** Do not exert any pressure on the electrode during the grinding process. The weight of the electrode holder is enough to run the grinding process.

- 5 As soon as the electrode makes contact with the grinding disc, turn the electrode holder slowly

Grinding is completed when

- the cone of the electrode holder touches the cone of the guide bushing and
- there is no longer any grinding noise

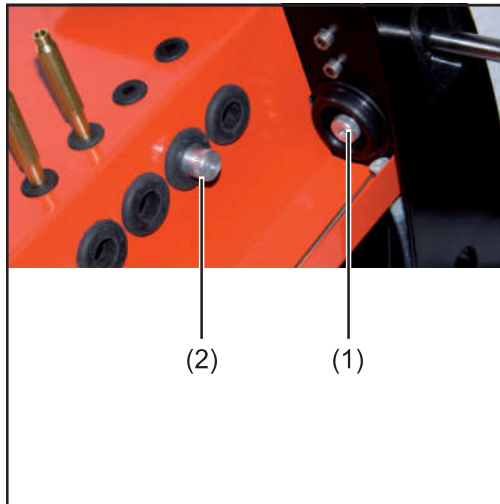
- 6 Remove the electrode holder and switch off the device

# Cutting the electrode tip

## General

To cut an electrode, the correct electrode guide must be fitted on the separator.  
The electrode guide fitted at the factory is for electrode diameters 2.4 mm to 3.2 mm.

## Changing the electrode guide

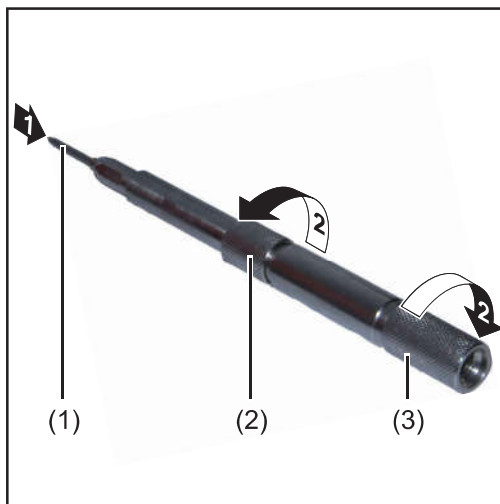


- 1 If required, unscrew the installed electrode guide (1)
- 2 Screw in the required electrode guide (2)



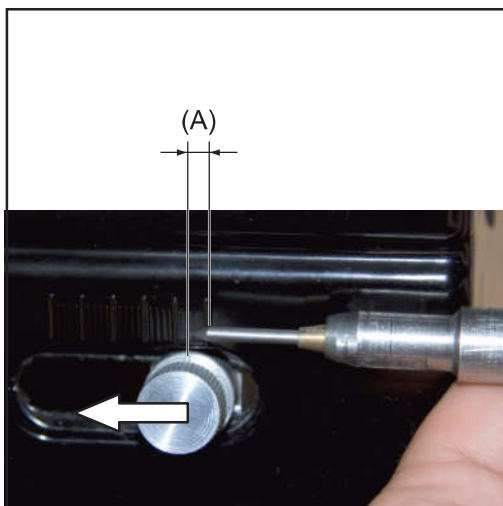
**CAUTION!** If cutting is performed with too big an electrode guide, the electrode could be damaged.

## Preparation



- 1 Insert the electrode (1) into the clamping sleeve of the electrode holder from the front  
Approx. 25 mm of the electrode must still protrude at the front
- 2 Twist the front part (2) and back part (3) of the electrode holder as shown and lightly clamp the electrode  
The electrode should then not be able to slip by itself, but it must still be possible to move it by hand



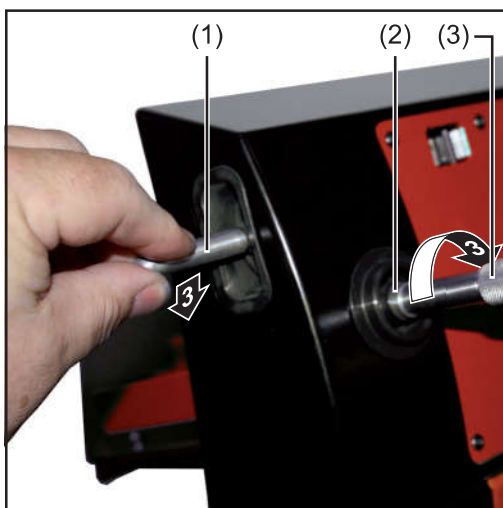


- 3** Set the length stop to the tip length (A)
- 4** Insert the electrode holder into the guide bushing of the length stop as far as the stop

This accurately sets the length of the electrode

- 5** Tighten the back part of the electrode holder (3)
  - This clamps the electrode in the electrode holder

### Cutting the electrode tip



- 1** Introduce the electrode holder (3) into the guide bushing (2) of the separator as far as the stop
- 2** Switch on the device
- 3** Turn the electrode holder (3) and slowly press the handle (1) down
  - This cuts the electrode
- 4** Switch off the device



**NOTE!** Electrode grinding can now start immediately. It is no longer necessary to set the length.

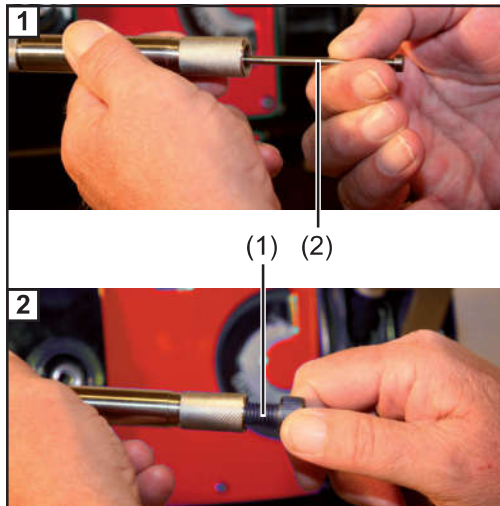
# Creating an electrode of a specific length

## General

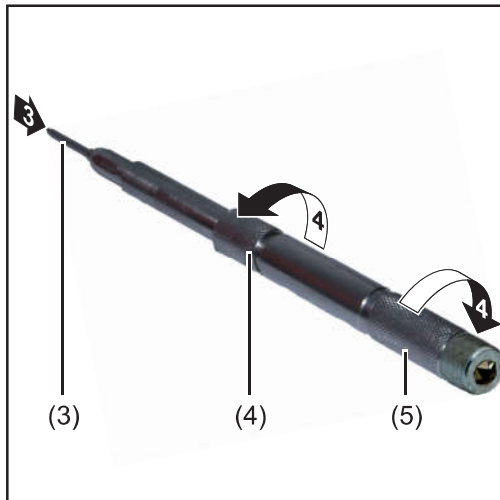
Electrodes with a specific length of 92 mm or 30 mm can be created with the enclosed stop pins.

The electrode clamped in the electrode holder is cut to the defined length by the separator and can then be ground immediately.

## Preparation

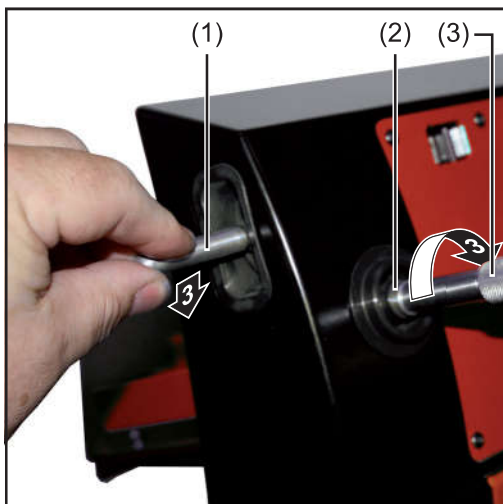


- 1** Place the stop pin (2) for the required length into the back part (5) of the electrode holder
- 2** Fix the stop pin in place with the M10 screw (1)



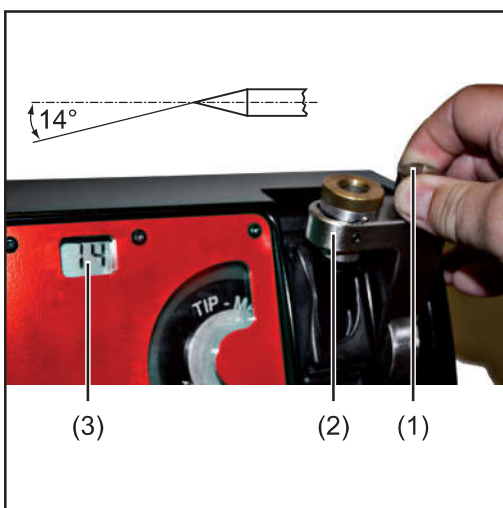
- 3** Push the electrode (3) into the electrode holder from the front as far as the stop
- 4** Twist the front part (4) and back part (5) of the electrode holder as shown and tightly clamp the electrode

### Creating an electrode of a specific length



- 1 Introduce the electrode holder (3) into the guide bushing (2) of the separator as far as the stop
- 2 Switch on the device
- 3 Turn the electrode holder (3) and slowly press the handle (1) down
  - This cuts the electrode

### Grinding the electrode



- 1 Open the knurled screw (1) and set the angle adjustment (2) to the required angle
  - Read the set angle on the digital display (3)

**NOTE!** The set angle corresponds to half the tip angle. The tip angle in the example shown would be 28°.

- 2 Re-tighten the knurled screw (1)
- 3 Switch on the device



- 4 Introduce the electrode holder into the guide bushing of the grinder

**NOTE!** Do not exert any pressure on the electrode during the grinding process. The weight of the electrode holder is enough to run the grinding process.

- 5 As soon as the electrode makes contact with the grinding disc, turn the electrode holder slowly

Grinding is completed when

- the cone of the electrode holder touches the cone of the guide bushing and
- there is no longer any grinding noise

- 6 Remove the electrode holder and switch off the device



# Creating an electrode shorter than 25 mm

## General

When creating an electrode shorter than 25 mm, the electrode is first ground as described in the "Grinding an electrode" section.

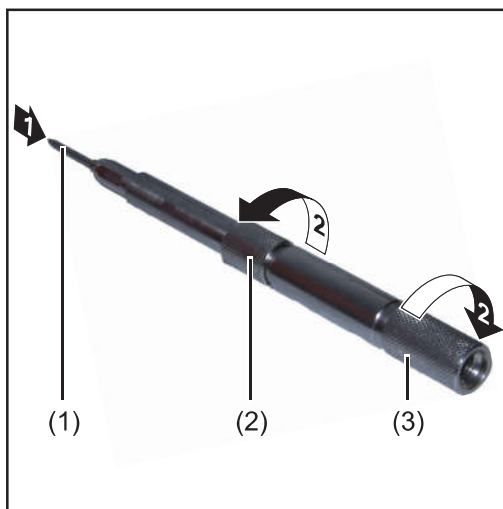
The ready-ground electrode is then cut to the required length.



**NOTE!** To create an extremely short electrode, the base material must be at least 30 mm longer than the desired final length.

For example: required final length 10 mm = original length min. 40 mm)

## Preparing the electrode

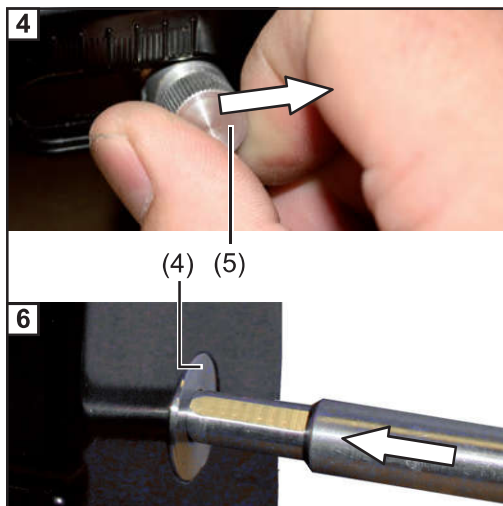


- 1** Insert the electrode (1) into the clamping sleeve of the electrode holder from the front

- Approx. 25 mm of the electrode must still protrude at the front

- 2** Twist the front part (2) and back part (3) of the electrode holder as shown and lightly clamp the electrode

The electrode should then not be able to slip by itself, but it must still be possible to move it by hand



- 3** Open the clamping screw (5)

- 4** Move the length stop to the zero position

- 5** Tighten the clamping screw (5)

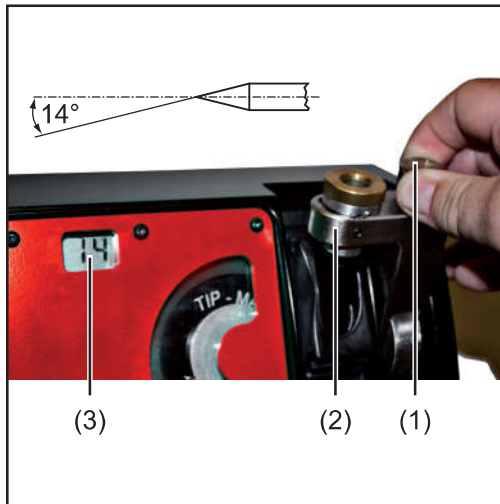
- 6** Insert the electrode holder into the guide bushing (4) of the length stop as far as the stop

- This accurately sets the length of the electrode

- 7** Tighten the back part of the electrode holder (3)

- This clamps the electrode in the electrode holder

## Grinding the electrode



- 1 Open the knurled screw (1) and set the angle adjustment (2) to the required angle

- Read the set angle on the digital display (3)



**NOTE!** The set angle corresponds to half the tip angle. The tip angle in the example shown would be 28°.

- 2 Re-tighten the knurled screw (1)

- 3 Switch on the device



- 4 Introduce the electrode holder into the guide bushing of the grinder



**NOTE!** Do not exert any pressure on the electrode during the grinding process. The weight of the electrode holder is enough to run the grinding process.

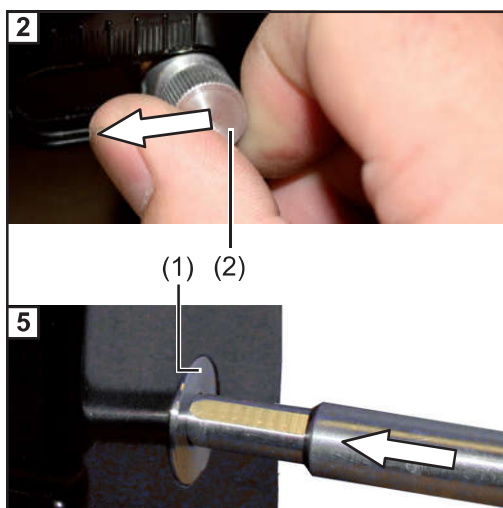
- 5 As soon as the electrode makes contact with the grinding disc, turn the electrode holder slowly

Grinding is completed when

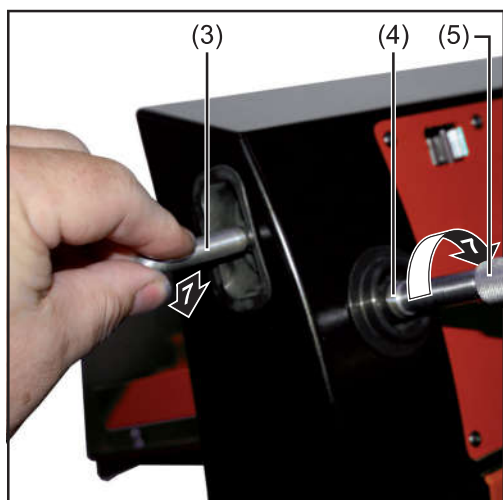
- the cone of the electrode holder touches the cone of the guide bushing and
- there is no longer any grinding noise

- 6 Remove the electrode holder and switch off the device

## Creating an electrode shorter than 25 mm



- 1** Open the clamping screw (2)
- 2** Set the length stop to the required final length of the electrode + 3 mm (e.g. final length 10 mm = value set 13 mm)
- 3** Tighten the clamping screw (2)
- 4** Open the electrode holder slightly and pull out more than the set length of electrode
- 5** Insert the electrode holder into the guide bushing (1) of the length stop as far as the stop  
This accurately sets the length of the electrode
- 6** Tighten the back part of the electrode holder  
– This clamps the electrode in the electrode holder



- 5** Introduce the electrode holder (5) into the guide bushing (4) of the separator as far as the stop
- 6** Switch on the device
- 7** Turn the electrode holder (5) and slowly press the handle (3) down  
– This cuts the electrode
- 8** Switch off the device

# Creating a blunt electrode tip

## General

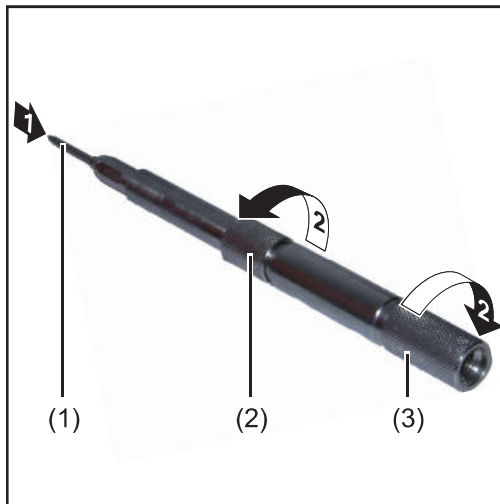
The practice of blunting a ground electrode tip is used mainly for automated welding processes.

Blunting the tip increases the service life of the electrode.

## Preparation



**NOTE!** The electrode tip can only be blunted properly if the electrode has previously been ground. See the "Grinding the electrode" section.



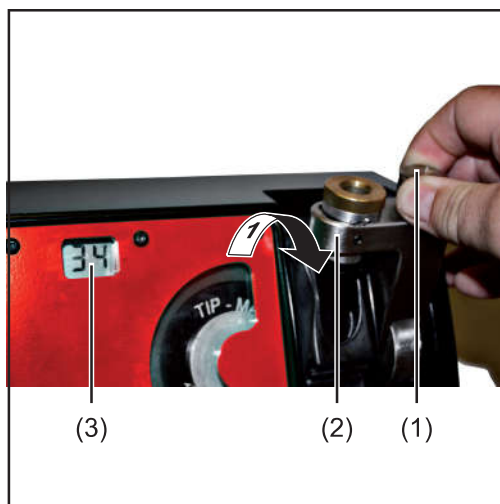
- 1 Insert the ground electrode (1) into the clamping sleeve of the electrode holder from the front

The end with the ground tip should protrude forwards by about 25 mm

- 2 Twist the front part (2) and back part (3) of the electrode holder as shown and lightly clamp the electrode

The electrode should then not be able to slip by itself, but it must still be possible to move it by hand

## Creating a blunt electrode tip

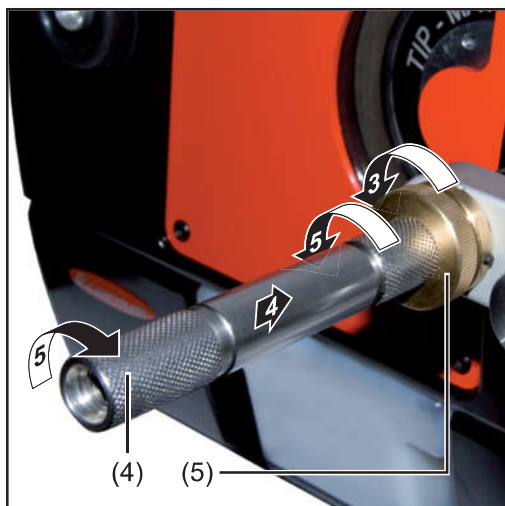


- 1 Open the knurled screw (1) and set the angle adjustment (2) to 90°

The set angle can be read on the digital display (3)

- 2 Re-tighten the knurled screw (1)





**NOTE!** The guide bushing (5) of the grinder engages as it is turned in 0.1 mm increments.

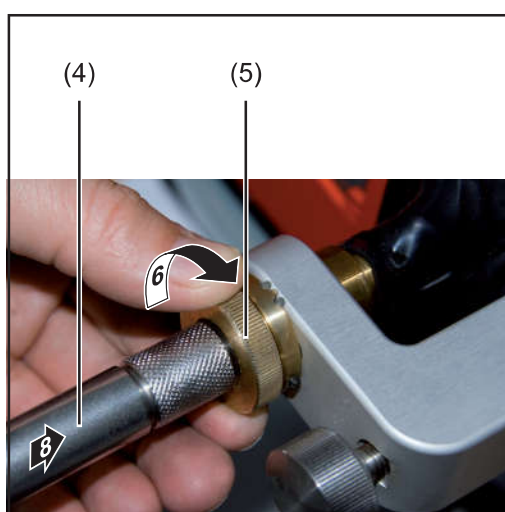
- 3** Unscrew the guide bushing (5) approx. 2 - 3 mm anti-clockwise (approx. 20 - 30 grid increments)

- 4** Introduce the electrode holder (4) into the guide bushing (2) of the grinder as far as the stop

This accurately sets the length of the electrode

- 5** Twist the front and back parts of the electrode holder (4)

– This clamps the electrode



- 6** Turn the guide bushing (5) anti-clockwise to set the required flattening of the electrode tip  
(e.g. 5 grid increments = 0.5 mm flattening)

- 7** Switch on the device

- 8** Introduce the electrode holder as far as the stop

- 9** Remove the electrode holder

- 10** Switch off the device

# Fault diagnosis

---

## Faults with the electrode

---

### Electrode is not ground to a point

Cause: Guide bushing not in the zero position

Remedy: Screw the guide bushing of the grinder right in

Cause: Length stop somewhat to the right of the zero position

Remedy: Move the length stop to the zero position

Cause: Disc is too worn

Remedy: Compensate for disc wear by fine adjustment of the length stop

---

### Electrode is not ground to a point

Disc wear compensation has already taken place

Cause: Disc wear has reached the maximum value

Remedy: Change the grinding track

---

### Electrode is not ground to a point

Disc wear compensation has already taken place; all grinding tracks have been used

Cause: Grinding disc is worn out

Remedy: Change the grinding disc

---

### Electrode is ground too much

The electrode is protruding too far out of the electrode holder, so more material than necessary is ground away from the electrode

Cause: Length stop is to the left of the zero position

Remedy: Move the length stop to the zero position

Cause: Disc wear compensation was not reset after a grinding disc change

Remedy: Reset length stop fine adjustment to the zero position

---

### Electrode goes blue during grinding

The electrode is getting too hot during the grinding process

Cause: Grinding pressure too high

Remedy: Do not exert any pressure on the electrode during the grinding process. The weight of the electrode holder is enough to run the grinding process.

Cause: Too little grinding fluid in the device

Remedy: Top up with grinding fluid; see the "Adding grinding fluid" section

---

## Faults with the device

### The separator does not cut

The electrode is not cut through or is only partially cut

Cause: Electrode was not turned enough during cutting

Remedy: Turn the electrode several more times at the end of the cutting process

Cause: Cutting wheel is worn out

Remedy: Change the cutting wheel

Cause: The drive belt is faulty

Remedy: Contact After-Sales Service

### Grinding fluid is escaping

Cause: Drain hose is not sealed

Remedy: Seal the tank drain hose and attach it in the collecting cup on the left side of the device

Cause: The seal between the viewing window and the housing is leaking

Remedy: Drain the grinding fluid; remove the housing cover; clean or change the seal

Cause: The tank seal is leaking

Remedy: Drain the grinding fluid; remove the tank; clean or change the seal

### The digital display is not showing anything

Cause: The battery in the digital display is flat

Remedy: Change the digital display battery

Cause: The digital display is faulty

Remedy: Contact After-Sales Service

# Troubleshooting

## Safety



**WARNING!** Incorrect operation may result in serious injury or damage. Do not use the functions described here until you have thoroughly read and understood the following documents:

- these operating instructions
- the safety data sheets for the materials used, particularly for the electrodes to be ground



**WARNING!** An electric shock can be fatal. Before opening the device:

- Move the device mains switch to the - O - position
- Unplug the device from the mains
- Put up an easy-to-understand warning sign to stop anybody inadvertently switching it back on again

## Troubleshooting overview

"Troubleshooting" is composed of the following sections

- Required tools and materials
- Compensating for disc wear
- Changing the grinding track
- Draining the grinding fluid
- Removing the cover plate
- Changing the grinding disc
- Changing the cutting wheel
- Fitting the cover plate
- Adding grinding fluid
- Changing the digital display battery

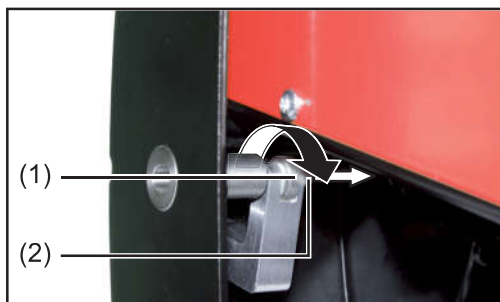
## Required tools and materials

The following tools and materials are required:

- 2.5 mm Allen key
- 5 mm Allen key (for the grinding disc)
- 6 mm Allen key (for the cutting wheel)
- TX25 Torx screwdriver
- A container for the grinding fluid (min. capacity 500 ml)

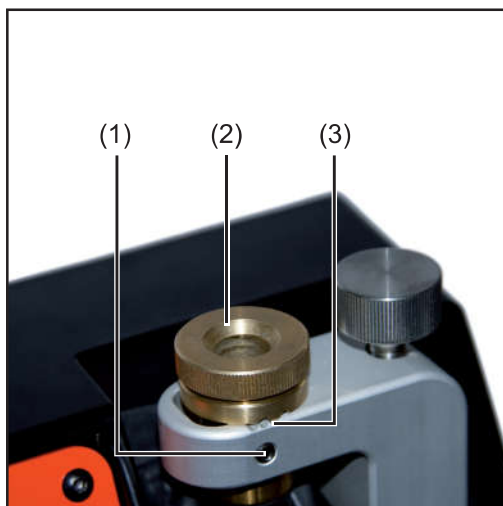
## Compensating for disc wear

Disc wear is compensated for by a fine adjustment of the length stop.



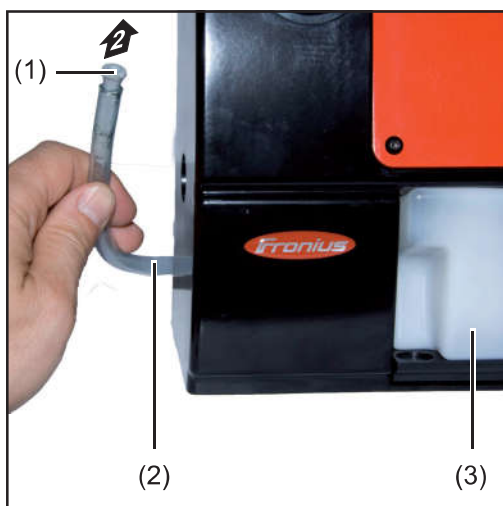
- 1 Turn the adjusting screw (1) half a turn in the specified direction to move the stop pin (2) backward
- 2 Perform a grinding operation to test the result
- 3 Keep performing steps 1 and 2 until the result is satisfactory

## Changing the grinding track



- 1 Undo the Allen screw (1) using a 2.5 mm Allen key
- 2 Turn the guide bushing (2) by one notch (3).
- 3 Tighten the Allen screw (1)  
Tightening torque = 0.5 Nm

## Draining the grinding fluid



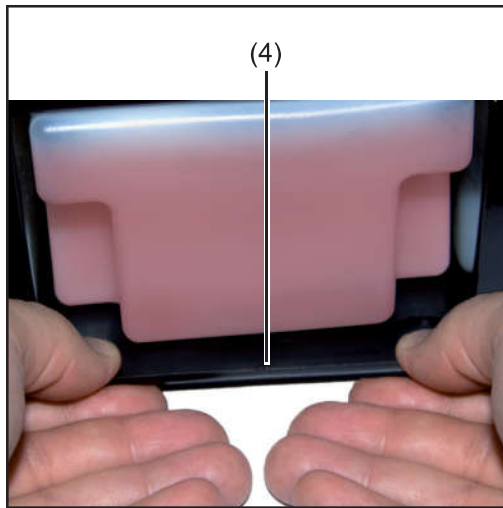
- 1 Remove the drain hose (2) from the collecting cup on the left side of the device

**NOTE!** Hold the hose higher than the fill level indicator. Otherwise grinding fluid will escape as soon as the seal (1) is opened.

- 2 Open the seal (1)
- 3 Put the hose into a receptacle with a minimum capacity of 500 ml

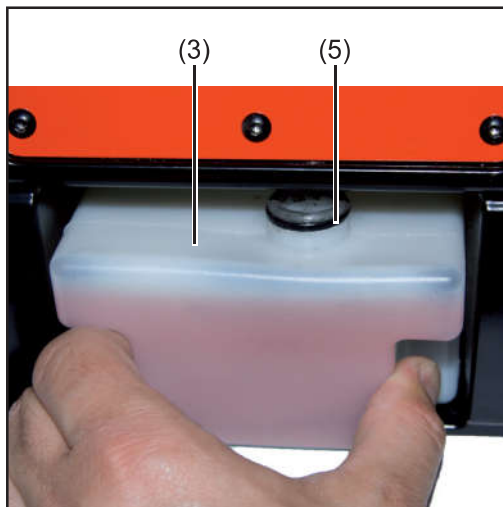


- 4 Hold the receptacle with the hose lower than the top edge of the tank (3) for the grinding fluid.
- 5 Allow the grinding fluid to escape
- 6 Once the grinding fluid stops escaping from the hose, close the seal (1) again



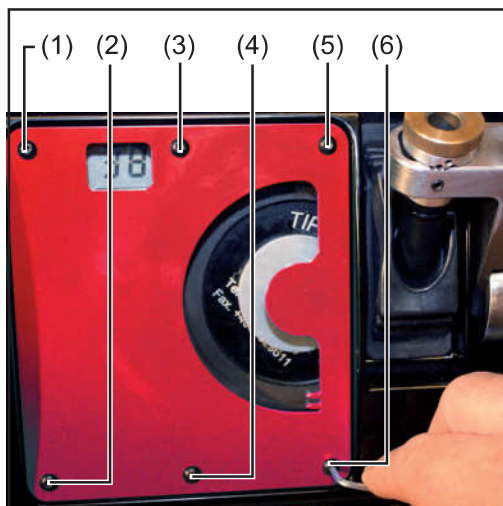
**NOTE!** There will still be some grinding fluid in the tank. Only the grinding fluid from the device housing was removed using the drain hose

- 7** Pull the key (4) for fixing the tank out towards the front



- 8** Pull the tank (3) down and out of the housing
- 9** Empty the tank completely and clean it
  - Clean and check the tank seal (5)
- 10** Replace the tank and fix it in place with the key
  - The key must engage audibly
- 11** Put the drain hose back in the collecting cup

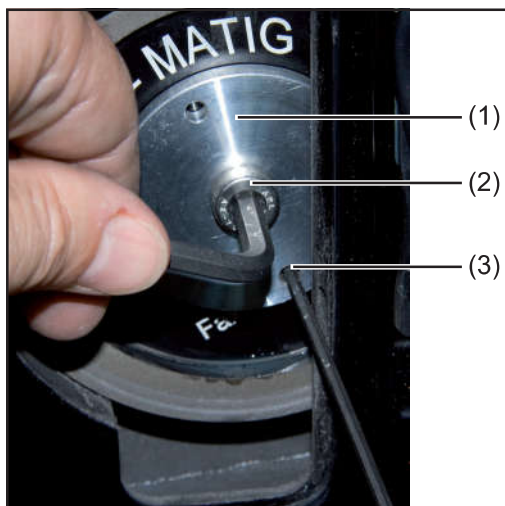
## Removing the cover plate



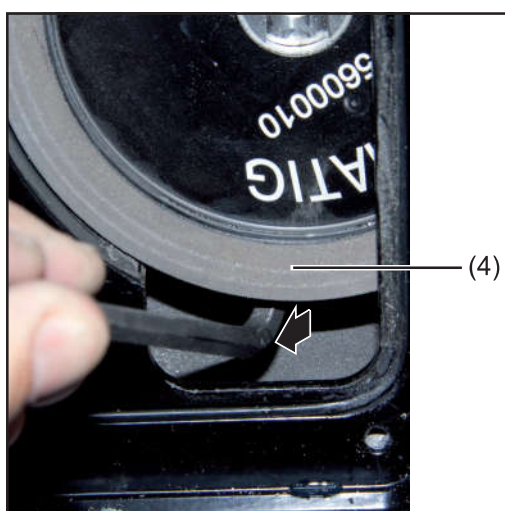
**NOTE!** Before removing the cover plate, make sure that there is no more grinding fluid in the housing.

- 1** Remove the Allen screws (1) - (6) on the cover plate using a 2.5 mm Allen key
- 2** Take off the cover plate and the viewing window

## Changing the grinding disc



- 1** Remove the fastening screw (2) from the grinding disc using a 5 mm Allen key  
Insert the 2.5 mm Allen key into a hole (3) in the disc cover (1) to hold in place
- 2** Take off the disc cover (1) and remove the grinding disc from the drive shaft

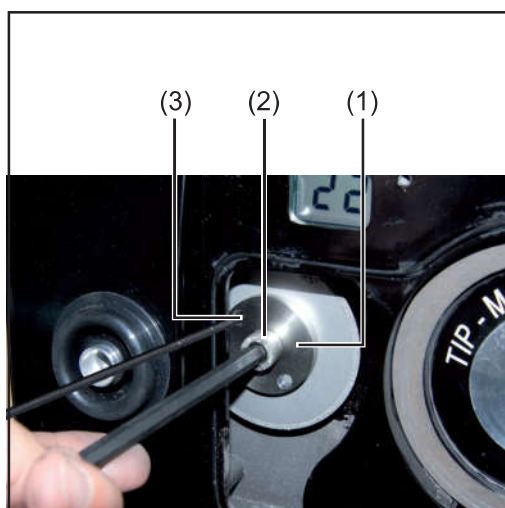


- 3** If the grinding disc (4) proves difficult to detach from the drive shaft, use the 5 mm Allen key to lever the grinding disc out slightly
- 4** Turn the grinding disc a little and repeat the levering action with the Allen key
- 5** Continue this process until the grinding disc can be removed from the drive shaft
- 6** Fit the new grinding disc, replace the disc cover (1) and secure using the fastening screw (2)  
Tightening torque = 5.0 Nm



**NOTE!** A compensator may have been fitted to the length stop to counteract the effects of grinding disc wear. This should be returned to its installation condition whenever a new grinding disc is fitted. (see "Fitting the length stop")

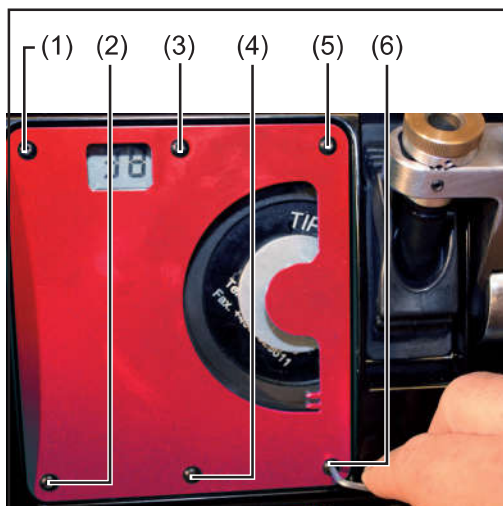
## Changing the cutting wheel



- 1** Remove the fastening screw (2) from the grinding disc using a 6 mm Allen key  
Insert the 2.5 mm Allen key into a hole (3) in the disc cover (1) to hold in place
- 2** Take off the disc cover (1) and remove the grinding disc from the drive shaft
- 3** Fit the new cutting wheel, replace the disc cover (1) and secure using the fastening screw (2)  
Tightening torque = 5.0 Nm



### Fitting the cover plate



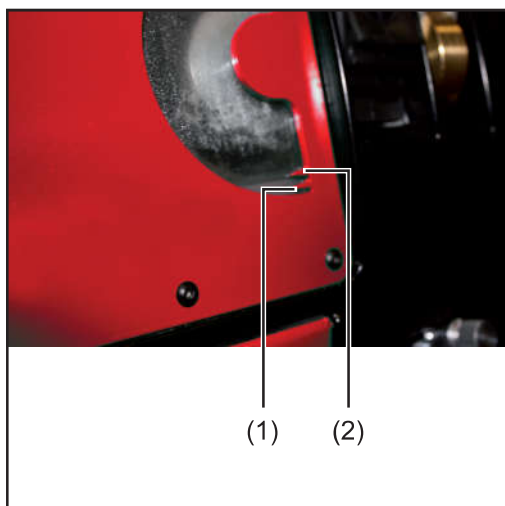
- 1 Clean the seal between the viewing window and the housing
- 2 Fit the viewing window and cover plate
- 3 Tighten the Allen screws (1) - (6) on the cover plate using a 2.5 mm Allen key

Tightening torque = 0.5 Nm

### Adding grinding fluid



- 1 Check that the key is holding the tank securely in place
- 2 Pour the grinding fluid for the grinder through the guide bushing



- 3 The fluid level must lie between the minimum mark (1) and the maximum mark (2)



**NOTE!** Some of the grinding fluid will be taken up by the disc. Always check the fluid level before using the device and adjust if necessary.

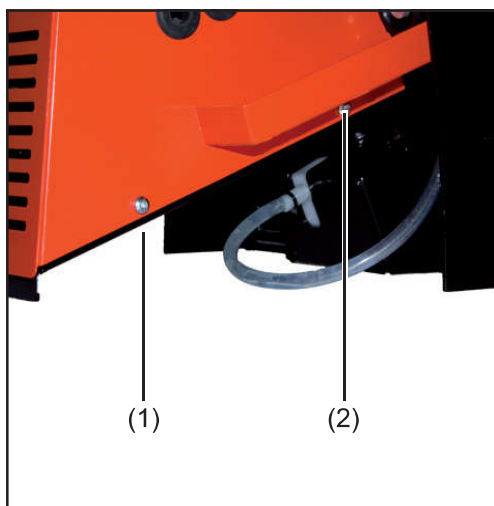


## Changing the digital display battery

A CR2032 battery will be required.



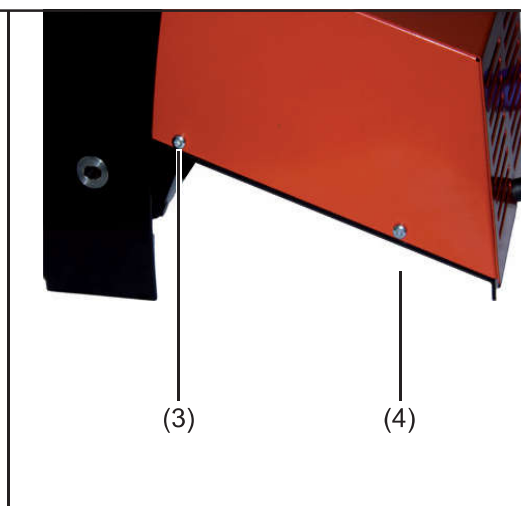
**WARNING!** Danger of injury or damage from incorrect belt tension or motor rpm. Do not alter anything inside the device. Only carry out the tasks specified.



(1)

(2)

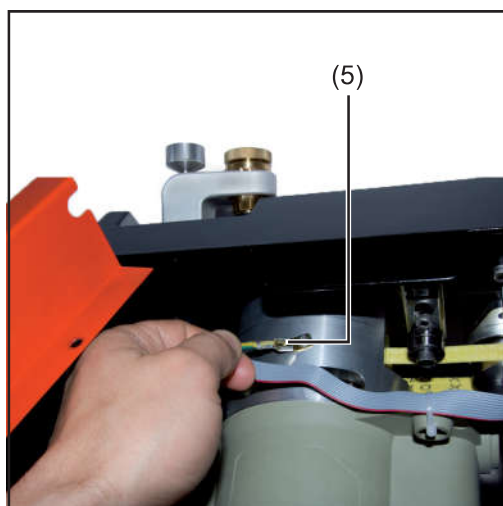
*Housing (left side)*



(3)

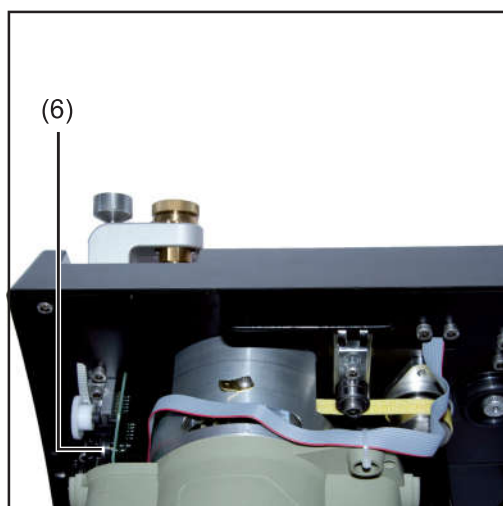
(4)

*Housing (right side)*



(5)

- 1** Remove the left and right TX25 (1) - (4) screws from the housing
- 2** Lift up the housing cover by just enough to disconnect the PE conductor (5) from the motor
- 3** Place the housing cover next to the device



(6)

- 4** Slide out the battery (6) and replace with a new CR2032 battery.  
Fit the new battery so that the negative terminal is facing outwards
- 5** Connect the PE conductor (5) and replace the housing cover
- 6** Refit the left and right TX25 (1) - (4) screws on the housing  
Tightening torque = 6.0 Nm

# Care, maintenance and disposal

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## Safety



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- these operating instructions
- the safety data sheets for the materials used, particularly for the electrodes to be ground



**WARNING!** An electric shock can be fatal. Before opening the device:

- Move the device mains switch to the - O - position
- Unplug the device from the mains
- Put up an easy-to-understand warning sign to stop anybody inadvertently switching it back on again

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## General

Under normal operating conditions, the device only requires a minimum of care and maintenance. However, it is vital to carry out the procedures described below to ensure it remains in a usable condition for many years.

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## Before each start-up

- Visually inspect the moving parts
- Check the grinding fluid level

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## Every 6 months

### or each time the grinding disc is changed

- Change the grinding fluid
- Thoroughly clean the device
- Check the condition of the grinding disc
- Check the condition of the cutting wheel

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## Disposal

Dispose of in accordance with the applicable national and local regulations.

# Technical data

## TIG Grinder

|                              |                                   |
|------------------------------|-----------------------------------|
| Mains voltage                | 230 V                             |
| Mains frequency              | 50 / 60 Hz                        |
| Motor output                 | 800 W                             |
| Rotational speed             | 10500 rpm                         |
| Grinding speed               | 60 m/s                            |
| Grinding disc diameter       | 100 mm                            |
| Cutting wheel diameter       | 60 mm                             |
| Weight                       | 12.8 kg                           |
| Permitted electrode diameter |                                   |
| in the standard version:     | 1.6 mm / 2.4 mm / 3.2 mm          |
| with accessories:            | 1.0 mm / 2.0 mm / 4.0 mm / 4.8 mm |
| Digital display battery      |                                   |
| Voltage                      | 3 V                               |
| Type                         | CR2450                            |