

Minitom Remote

Instruction Manual

Original Instructions



CE

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Table of Contents

1	About this manual	5
2	Safety	5
2.1	Intended use	5
2.2	Minitom Remote safety precautions	6
2.2.1	Read carefully before use	6
2.3	Safety messages	7
2.4	Safety messages in this manual	7
3	Getting started	8
3.1	Device description	8
3.2	Overview	9
3.3	Accessories and consumables	11
4	Transport and storage	12
4.1	Storage	12
4.2	Transport	12
5	Installation	13
5.1	Unpacking	13
5.2	Lifting	13
5.3	Checking the packing list	14
5.4	Location	15
5.5	Power supply	15
5.6	Connecting to the control box	17
5.7	Mounting the specimen holder arm	17
5.8	Filling the cooling tank	18
5.9	Noise	18
5.10	Vibration	18
6	Operating the device	18
6.1	Changing the cut-off wheel	18
6.2	Changing the specimen holder	19
6.3	Clamping the specimen	19
6.4	Mechanical settings	20
6.5	Basic operation	21
6.5.1	Control panel functions	21
6.5.2	Starting the cutting process	22
6.5.3	Stopping the cutting process	22

7	Maintenance and service - Minitom Remote	23
7.1	Daily	23
7.1.1	Cutting machine	23
7.1.2	Cleaning the cutting area	24
7.1.3	Cleaning the cooling tank	24
7.2	Weekly	24
7.2.1	Control box	24
7.2.2	The cut-off wheel spindle and bushing	24
7.3	Monthly	24
7.3.1	Specimen holder arm	24
7.3.2	Cutting machine	24
7.4	Cut-off wheel	25
8	Spare parts	25
9	Service and repair	26
10	Disposal	26
11	Troubleshooting - Minitom Remote	27
11.1	Cutting problems	27
12	Technical data	28
12.1	Technical data - Minitom Remote	28
12.2	Noise and vibration levels	29
12.3	Diagrams	29
12.3.1	Diagrams - Minitom Remote	29
12.4	Legal and regulatory information	34
13	Pre-installation checklist	34
13.1	Prerequisites	34
13.2	Packaging specifications	35
13.3	Location	35
13.4	Dimensions	36
13.5	Recommended space	37
13.6	Unpacking	37
13.7	Lifting	38
13.8	Power supply	38
14	Manufacturer	40
	Declaration of Conformity	41

1 About this manual

Instruction Manuals

Struers equipment must only be used in connection with and as described in the instruction manual supplied with the equipment.



Note

Read the instruction manual carefully before use.



Note

If you wish to view specific information in detail, see the online version of this manual.

2 Safety

2.1 Intended use

The machine is intended for professional automatic, cutting of materials (primary non-metals) for further materialographic inspection in a closed, secured location without access for employees.

The machine must be operated only by skilled/trained personnel using manipulators.

The equipment is designed to be used only with Struers consumables specifically designed for this purpose and this type of machine.

The machine is for use in a professional working environment (e.g. a materialographic laboratory with a closed, secured area).

Do not use the machine for the following

Cutting of materials other than solid materials suitable for materialographic studies. In particular, the machine must not be used for cutting of any type of explosive and/or flammable material, or materials which are not stable during machining, heating or pressure.

The machine may not be used with cut-off wheels which are not compatible with the machine requirements (e.g. abrasive/resin bonded cut-off wheels or toothed cut-off wheels).

Model

Minitom Remote

2.2 Minitom Remote safety precautions



2.2.1 Read carefully before use

Specific safety precautions - residual risks

1. This machine must be operated and maintained only by skilled/trained personnel.

General safety precautions

1. Ignoring this information and mishandling of the equipment can lead to severe bodily injuries and material damage.
2. The machine must be installed in compliance with local safety regulations. All functions on the machine and any connected equipment must be in working order.
3. The operator must read the safety precautions and Instruction Manual, as well as relevant sections of the manuals for any connected equipment and accessories.
The operator must read the Instruction Manual and, where applicable, the Safety Data Sheets for the applied consumables.
4. Make sure that the actual electrical power supply voltage corresponds to the voltage stated on the type plate of the machine. The machine must be earthed (grounded). Always follow local regulations. Always switch off the electrical power supply and remove the plug or power cable before dismantling the machine or installing additional components.
5. The machine must be placed on a safe and stable table with an adequate working height. The table must be able to carry at least the weight of the machine and the accessories.
6. If you observe malfunctions or hear unusual noises, stop the machine and call technical service.
7. In case of fire, alert bystanders and the fire brigade. Use a powder fire extinguisher. Do not use water.
8. Struers equipment must only be used in connection with and as described in the instruction manual supplied with the equipment.
9. The equipment is designed to be used only with Struers consumables specifically designed for this purpose and this type of machine.
10. If the equipment is subjected to misuse, incorrect installation, alteration, neglect, accident or incorrect repair, Struers will accept no responsibility for damage to the user or the equipment.
11. Dismantling of any part of the equipment, during service or repair, should always be performed by a qualified technician (electromechanical, electronic, mechanical, pneumatic, etc.).
12. Always use intact cut-off wheels.
13. The workpiece must be securely fixed in a clamping device or similar.
14. When working with cooling fluid always observe the safety regulations for handling, mixing, filling, emptying and disposing of the cooling fluid additive.
15. Avoid skin contact with the cooling fluid additive.
16. The machine must always be used with the splash guard in place.
17. Do not remove the splash guard until the cut-off wheel has stopped completely.

2.3 Safety messages

Signs used in safety messages

Struers uses the following signs to indicate potential hazards.



ELECTRICAL HAZARD

This sign indicates an electrical hazard which, if not avoided, will result in death or serious injury.



DANGER

This sign indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.



WARNING

This sign indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.



CAUTION

This sign indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.



CRUSHING HAZARD

This sign indicates a crushing hazard which, if not avoided, could result in minor, moderate or serious injury.

General messages



Note

This sign indicates that there is a risk of damage to property, or a need to proceed with special care.



Hint

This sign indicates that additional information and hints are available.

2.4 Safety messages in this manual

Specific safety precautions - residual risks



WARNING

The machine must not be used for any type of explosive and/or flammable material, or materials which are not stable during machining, heating or pressure.



CAUTION

This machine must be operated and maintained only by skilled/trained personnel.



CAUTION

Do not operate the machine by hand. Use manipulators.



CAUTION

Disconnect power cables if you approach the machine physically.



CAUTION

The equipment is designed to be used only with Struers consumables specifically designed for this purpose and this type of machine.

General safety precautions



WARNING

Struers equipment must only be used in connection with and as described in the instruction manual supplied with the equipment.



ELECTRICAL HAZARD

Switch off the electrical power supply before installing electrical equipment. The machine must be earthed (grounded). Make sure that the actual electrical power supply voltage corresponds to the voltage stated on the type plate of the machine. Incorrect voltage can damage the electrical circuit.



WARNING

Switch off the machine, disconnect the electrical power cable and wait 5 minutes before you dismantle the machine or install additional components.



CAUTION

Prolonged exposure to loud noises may cause permanent damage to a person's hearing. Use hearing protection if the exposure to noise exceeds the levels set by local regulations.



CRUSHING HAZARD

Take care of your fingers when handling the machine. Wear safety shoes when handling heavy machinery.

3 Getting started

3.1 Device description

Minitom Remote is a semi-automatic cut-off machine designed for cutting solid, stable (non-explosive) materials (primary non-metals) and must be operated by manipulators.

The equipment is divided into two parts connected by two cables. Part I, the cutting part, must be placed in a closed, secured location without access for employees and must be operated by manipulators. Part II, the control box, must be placed next to the operator outside the closed, secured location.

Minitom Remote can cut a majority of solid and stable (non-explosive) materials, primarily non-metals. It has a built-in cooling tank which is filled with water and cutting additive before use.

The operator starts the cutting process by selecting and mounting the cut-off wheel on the cutting part, and secures the workpiece to be cut by using the clamping tool mounted on the specimen holder arm by using the manipulator. The cut-off wheel rotation speed is manually set to minimum on the control box.

The width of the cut-off piece is adjusted by the micrometer screw on the cutting part.

The splash guard must be in place before the process is started.

The operator starts the cut-off wheel manually by pressing **Start** on the control box, and the cut-off wheel starts to rotate.

The specimen holder arm with the workpiece to be cut is slowly moved down towards the cut-off wheel.

The operator adjusts the cutting force by using the weight on the specimen holder arm, and then adjusts the cut-off wheel rotation speed on the control box.

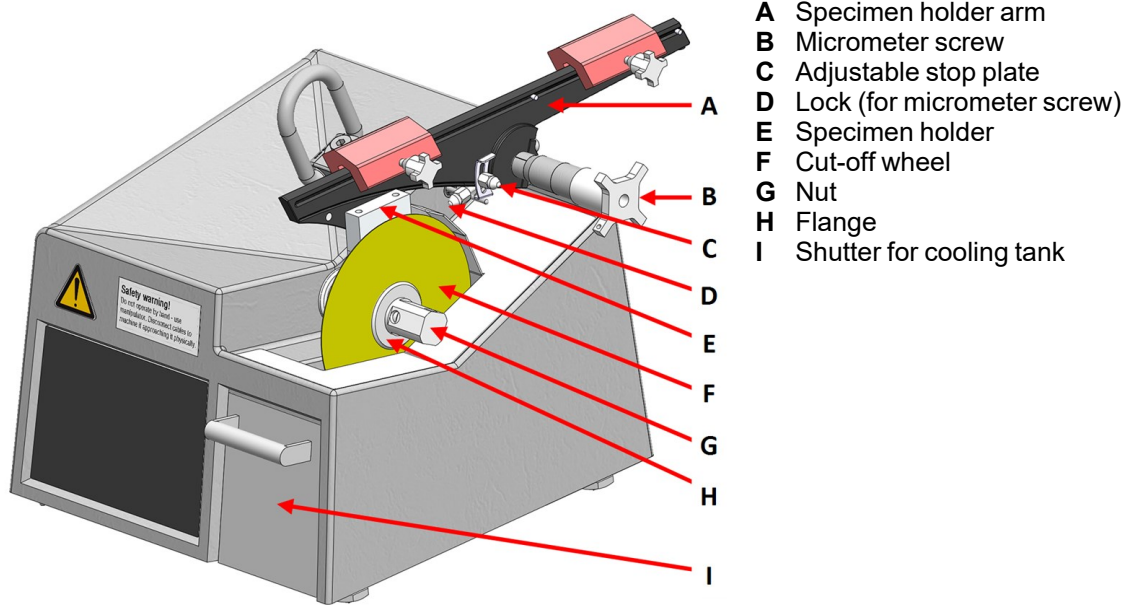
The cut-off wheel stops automatically when the specimen holder arm touches the stop pin, and the operator uses the manipulator to remove the cut off specimen. The operator can adjust the automatic stop position by moving the stop plate up or down. The operator can also stop the cut-off wheel by pressing **Stop** on the control box.

The cut off part (the specimen) is ready for cleaning, mounting, preparation or inspection.

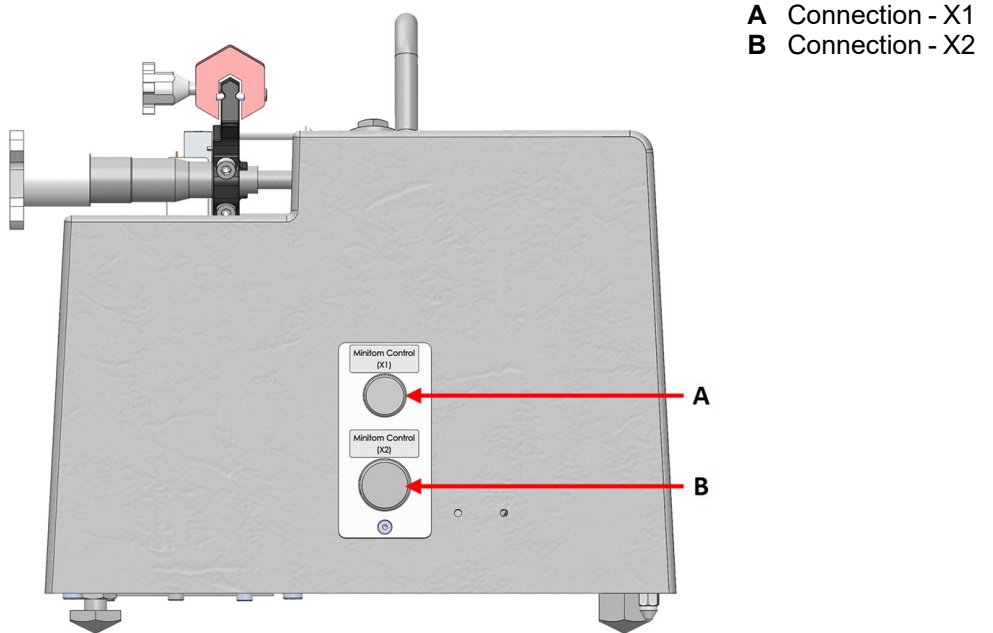
3.2 Overview

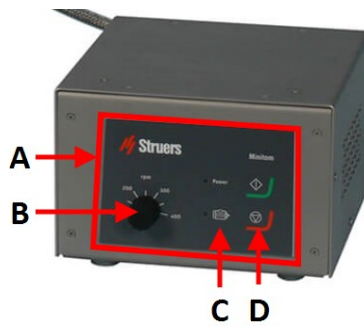


Front view

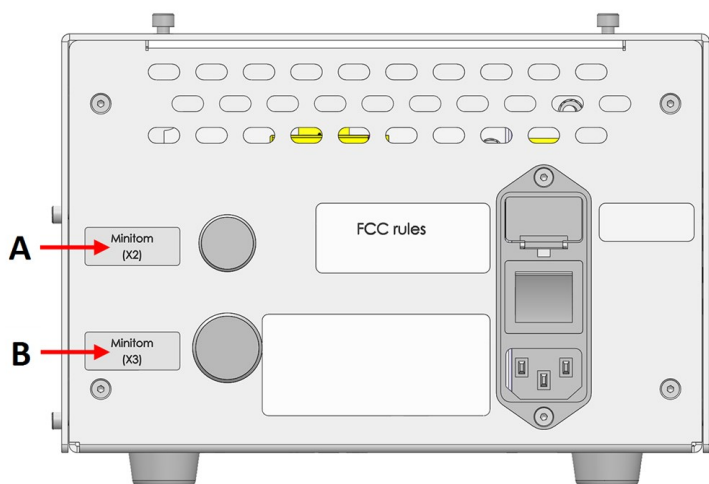


Rear view



Control box - Front view

- A** Control panel
- B** Cutting speed control
- C** Status indicators
- D** **Start** and **Stop** buttons

Control box - Rear view

- A** Connection - X2
- B** Connection - X3

3.3 Accessories and consumables

Accessories

For information about the available range, see the brochure for Minitom Remote:

- [The Struers Website](http://www.struers.com) (<http://www.struers.com>)

Consumables

The equipment is designed to be used only with Struers consumables specifically designed for this purpose and this type of machine.

Other products may contain aggressive solvents, which dissolve e.g. rubber seals. The warranty may not cover damaged machine parts (e.g. seals and tubes), where the damage can be directly related to the use of consumables not supplied by Struers.

For information about the available range, see:

- [The Struers Consumables Catalogue](http://www.struers.com/Library) (<http://www.struers.com/Library>)

4 Transport and storage

If, at any time after the installation, you have to move the unit or place it in storage, there is a number of guidelines we recommend that you follow.

- Package the unit securely before transportation.
Insufficient packaging could cause damage to the unit and will void the warranty. Contact Struers Service.
- Struers recommends that all original packaging and fittings are kept for future use.

4.1 Storage



CRUSHING HAZARD

Take care of your fingers when handling the machine.
Wear safety shoes when handling heavy machinery.



Note

Struers recommends that all original packaging and fittings are kept for future use.

1. Disconnect the unit from the electrical power supply.
2. Remove any accessories.
3. Empty and clean the cooling tank.
4. Clean and dry the unit before storage.
5. Place the machine and accessories in their original packaging.

4.2 Transport



CRUSHING HAZARD

Take care of your fingers when handling the machine.
Wear safety shoes when handling heavy machinery.



Note

Struers recommends that all original packaging and fittings are kept for future use.

To transport the machine safely, follow these instructions.

Preparing for transport

1. Disconnect the unit from the electrical power supply.
2. Remove any accessories.
3. Empty and clean the cooling tank.
4. Clean and dry the unit.

- Lift the machine by the lifting eye.

5 Installation



WARNING

Struers equipment must only be used in connection with and as described in the instruction manual supplied with the equipment.

5.1 Unpacking



CRUSHING HAZARD

Take care of your fingers when handling the machine.
Wear safety shoes when handling heavy machinery.



Note

Struers recommends that all original packaging and fittings are kept for future use.

- Cut the packing tape on the top of the box.
- Remove the loose parts.
- Remove the unit from the box.

5.2 Lifting



CRUSHING HAZARD

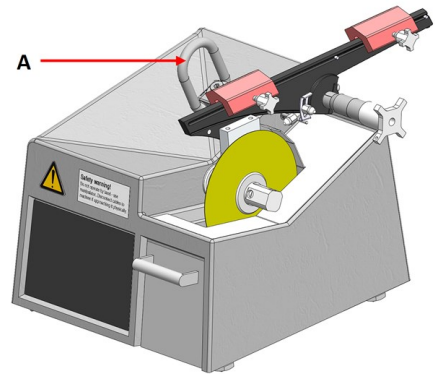
Take care of your fingers when handling the machine.
Wear safety shoes when handling heavy machinery.

Weight

Minitom Remote	8 kg (17.5 lbs)
Control box	5 kg (11 lbs)

Lifting points

1. Lift the unit by the lifting eye on the unit. **(A)**



At the new location

1. Place the machine on a rigid, stable workbench with a horizontal surface and an adequate height.
2. Make sure that the unit is level and rests securely on the workbench.

5.3 Checking the packing list

Optional accessories may be included in the packing box.

The packing box contains the following items:

Pcs.	Description
1	Minitom Remote
1	Control box
1	Panel for mounting the control box in a rack
1	Specimen holder arm with universal specimen holder
1	Splash guard
1	Grid plate for collecting the specimen
1	Cooling water tank with grid plate
1	Set of flanges. Diameter: 42 mm
1	Allen key. 2.5 mm
1	Allen key. 4 mm
2	Hexagonal socket screws M5x40 for mounting large workpieces in the universal specimen holder
1	Supply cable (between control box and cutting machine). Standard length: 8 m (26')
1	Communication cable (between control box and cutting machine). Standard length: 8 m (26')
2	Electrical power supply cables
1	Instruction Manual set

5.4 Location



CRUSHING HAZARD

Take care of your fingers when handling the machine.
Wear safety shoes when handling heavy machinery.

- Make sure that the following facilities are available:
 - Power supply (outside the enclosed area)
 - Illumination: Make sure that the machine is adequately lit up. A minimum of 300 Lumen is recommended to illuminate the controls and other work areas.

Specimen holder arm

Mount the specimen holder arm on the machine before placing the machine in the enclosed area.

Cutting machine

- Place the machine on a level and stable surface inside the enclosed area.

Control box

- Place the control box outside the enclosed area.
- Place the control box close to the power supply.
- Place the control box on a stable surface, or mount it in a rack system, outside the enclosed area.

5.5 Power supply



WARNING

Switch off the machine, disconnect the electrical power cable and wait 5 minutes before you dismantle the machine or install additional components.



ELECTRICAL HAZARD

Switch off the electrical power supply before installing electrical equipment.
The machine must be earthed (grounded).
Make sure that the actual electrical power supply voltage corresponds to the voltage stated on the type plate of the machine.
Incorrect voltage can damage the electrical circuit.

Power socket

The electrical power supply socket must be easy to access. The electrical power supply socket must be located at a height ranging from 0.6 m to 1.9 m (2½" to 6') above floor level. Not higher than 1.7 m (5' 6") is recommended.

Note
 The equipment is shipped with 2 types of electrical power cables. If the plug supplied on these cables is not approved in your country, the plug must be replaced with an approved plug.

Single-phase supply

The 2-pin plug (European Schuko) is for use on single-phase electrical power connections.



The leads must be connected as follows:

Yellow/Green	Earth (ground)
Black/Brown	Line (live)
Blue	Neutral

2-phase supply

The 3-pin plug (North American NEMA) is for use on 2-phase electrical power connections.



The leads must be connected as follows:

Green	Earth (ground)
Black	Line (live)
White	Line (live)

Residual Current Circuit Breaker (RCCB)

Note
 Local standards may override the recommendations for the main electrical power supply cable. If needed, contact a qualified electrician to verify which option is suitable for the local installation setup.

Residual Current Circuit Breaker (RCCB) Type A, 30 mA (or better) is recommended

Powering the control box

The control box powers the cutting unit.

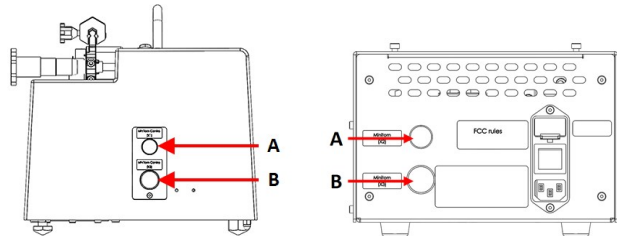
ELECTRICAL HAZARD
 Switch off the electrical power supply before installing electrical equipment. The machine must be earthed (grounded). Make sure that the actual electrical power supply voltage corresponds to the voltage stated on the type plate of the machine. Incorrect voltage can damage the electrical circuit.

1. Connect the electrical power cable to the control box (IEC 320 connector).
2. Connect the other end of the cable to the electrical power supply socket.



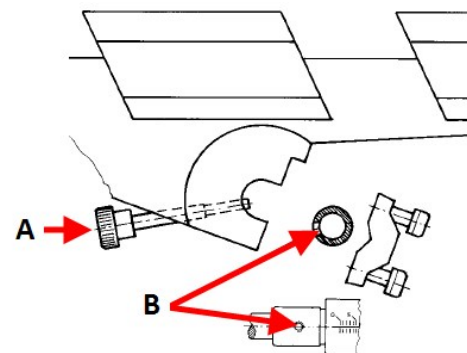
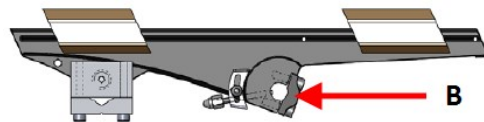
5.6 Connecting to the control box

1. Use the communication and supply cables to connect the machine to the control box.
 - Connect **(A)** to **(A)**.
 - Connect **(B)** to **(B)**.



5.7 Mounting the specimen holder arm

1. Use the 4 mm Allen key to unscrew the fitting on the back of the specimen holder arm.
2. Place the specimen holder arm on the micrometer screw.
3. Screw the fitting loosely back onto the back of the specimen holder arm.
4. Push the specimen holder arm against the shoulder of the micrometer screw.
5. Keep the specimen holder arm in horizontal position.
6. Make sure that the locking screw **(A)** is aligned with the hole in the micrometer screw **(B)**.
7. Tighten the fitting.



- A** Locking screw
B Hole in micrometer screw

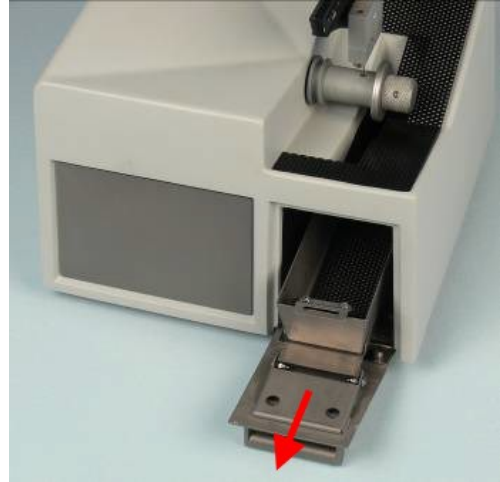
5.8 Filling the cooling tank



CAUTION

The equipment is designed to be used only with Struers consumables specifically designed for this purpose and this type of machine.

1. Pull out the shutter for the cooling tank.
2. Fill the cooling tank with a 250 ml mix of water and Struers additive in the correct mixing ratio.
3. Close the shutter.



5.9 Noise

For information on the sound pressure level value, see this section: [Noise and vibration levels ▶ 29](#)



CAUTION

Prolonged exposure to loud noises may cause permanent damage to a person's hearing.

Use hearing protection if the exposure to noise exceeds the levels set by local regulations.

5.10 Vibration

See [Noise and vibration levels ▶ 29](#).

6 Operating the device

6.1 Changing the cut-off wheel

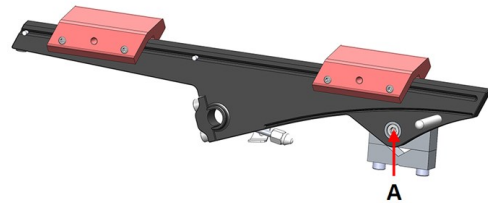
1. Remove the grid plate.
2. Unscrew the nut.
3. Remove the cut-off wheel and the flanges.
4. Mount the new cut-off wheel between the two flanges.
5. Screw on the nut. Tighten it gently.

6. Place the grid plate in its original position.

6.2 Changing the specimen holder

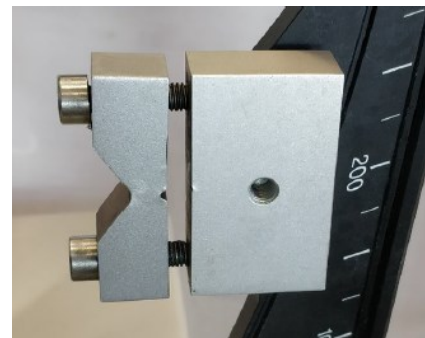
Make sure that the cut-off wheel can cut through the specimen without the flanges coming into contact with the specimen holder. The specimen must protrude at least 6 mm from the specimen holder.

1. Use a 4 mm Allen key to unscrew the specimen holder.
2. Remove the specimen holder.
3. Use a screw to position the new specimen holder on the specimen holder arm.
4. Use a 4 mm Allen key to tighten the screw.



6.3 Clamping the specimen

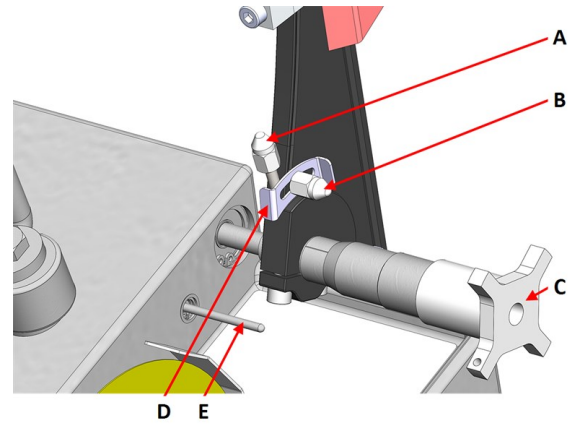
1. Use a 4 mm Allen key to fasten the specimen in the specimen holder. It must be fastened tightly to prevent vibrations during cutting.
2. For a round specimen, flip the specimen holder allowing the large notch to secure it.



6.4 Mechanical settings

Stop position

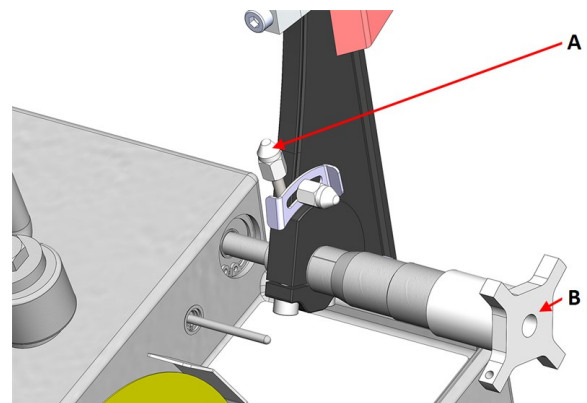
1. Adjust the stop plate up or down so that the process stops when the specimen has been cut through.
2. Adjust the stop plate position:
 - Loosen the locking screw.
 - Move the stop plate until it rests on the stop pin.
 - Tighten the locking screw.



- A** Locking screw - micrometer
- B** Locking screw - Stop plate
- C** Micrometer screw
- D** Stop plate
- E** Stop pin

Specimen holder position

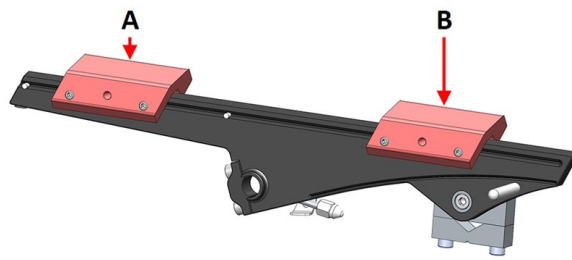
1. Loosen the micrometer locking screw. (**A**)
2. Adjust the position of the cut by turning the micrometer screw.
3. When the position has been adjusted, turn the lock clockwise to lock the screw.



- A** Locking screw - micrometer
- B** Micrometer screw

Cutting pressure

1. Push the weights of the specimen holder arm towards the rear.
2. Adjust the rear weight so that the arm with the specimen holder and the specimen are horizontal and in balance.
3. Adjust the cutting pressure with the front weight.
4. Tilt the arm carefully back to a vertical position.



A Rear weight
B Front weight

6.5 Basic operation



CAUTION

This machine must be operated and maintained only by skilled/trained personnel.



CAUTION

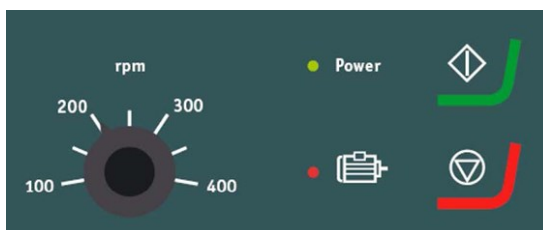
Do not operate the machine by hand. Use manipulators.








CAUTION

Disconnect power cables if you approach the machine physically.

6.5.1 Control panel functions



Button/LED	Function
	Cutting speed control
	Lit when the main switch is turned on.

Button/LED	Function
	Red warning lamp indicates motor overload. When the warning lamp is lit the machine cannot be started.
	Start Starts the machine. The cut-off wheel starts rotating. You cannot activate this function if the cutting motor is overloaded.
	Stop Stops the machine. The cut-off wheel stops rotating.

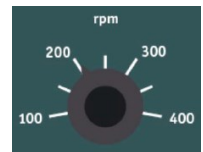
6.5.2 Starting the cutting process



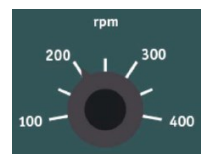
WARNING

The machine must not be used for any type of explosive and/or flammable material, or materials which are not stable during machining, heating or pressure.

1. Mount the splash guard.
2. Switch on the machine.
3. On the control box, set the cutting speed to the lowest speed.



4. Press **Start**.
5. Move the specimen holder arm slowly down towards the cut-off wheel.
6. Adjust the speed of the cut-off wheel.



Note

For 127 mm (5") cut-off wheels the speed should not exceed 300 rpm.



Note

Reduce the speed if the specimen moves up and down or the cut-off wheel vibrates when cutting.

6.5.3 Stopping the cutting process

You can stop the cutting process at any time during the cutting process.



Note

The cut-off wheel may stop rotating if the speed is set to the lowest level. Do not use this function to stop the cutting process.

1. Press **Stop** to stop the cut-off wheel.



7 Maintenance and service - Minitom Remote

Proper maintenance is required to achieve the maximum up-time and operating lifetime of the machine. Maintenance is important in ensuring continued safe operation of your machine.

The maintenance procedures described in this section must be carried out by skilled or trained personnel.

Technical questions and spare parts

If you have technical questions or when you order spare parts, state serial number and voltage/frequency. The serial number and the voltage are stated on the type plate of the machine.

**CAUTION**

This machine must be operated and maintained only by skilled/trained personnel.

**CAUTION**

Do not operate the machine by hand. Use manipulators.

**CAUTION**

Disconnect power cables if you approach the machine physically.

7.1 Daily

To ensure a longer lifetime for your machine, Struers strongly recommends regular cleaning.

7.1.1 Cutting machine

Clean all accessible surfaces with a soft, damp cloth.

**Note**

Do not use a dry cloth as the surfaces are not scratch resistant.

**Note**

Do not use acetone, benzol or similar solvents.

The micrometer screw is a precision tool. Clean the micrometer screw daily from cutting waste and coat it with a thin layer of acid-free oil.

7.1.2 Cleaning the cutting area

1. Remove cutting debris and swarf from the grid plate.
2. Clean all accessible surfaces with a soft, damp cloth.

If the machine is not to be used for a longer period of time

- Thoroughly clean the machine, and in particular the cutting area.

7.1.3 Cleaning the cooling tank

1. Empty the grit plate in the cooling tank.
2. Refill/replace the cooling water if needed.

7.2 Weekly

7.2.1 Control box

Clean all accessible surfaces with a soft, damp cloth.



Note

Do not use a dry cloth as the surfaces are not scratch resistant.



Note

Do not use acetone, benzol or similar solvents.

7.2.2 The cut-off wheel spindle and bushing

Lubricate the spindle and bushing where the cut-off wheel is mounted with acid-free oil once a week.

7.3 Monthly

7.3.1 Specimen holder arm

- Keep all specimen holder screws clean. Lubricate the specimen holder screws with acid-free oil at regular intervals.
- If the weights slide too easily or too tightly on the specimen holder arm, use the screws on the left side of the weights to adjust the movement.

7.3.2 Cutting machine

- If needed, adjust and lubricate the shutter and platform with acid-free oil.

7.4 Cut-off wheel

Storing cut-off wheels

A clean and dry cut-off wheel does not corrode.

Use ordinary household detergents.

1. Make sure that the cut-off wheel is clean and dry.
2. Store the cut-off wheel in a horizontal position on a plane surface, preferably under light pressure.

Dressing cut-off wheels

A newly dressed cut-off wheel will give an optimum cut. A badly dressed cut-off wheel is the most frequent reason for damage to the cut-off wheel.

A badly maintained and dressed cut-off wheel requires higher cutting pressure, which results in more frictional heat. The wheel can bend and cause an irregular cut. This can damage the cut-off wheel.

Procedure

1. Make sure that there is enough cooling fluid in the cooling tank. See [Filling the cooling tank](#) ► 18.
2. Clamp the dressing stick in the specimen holder: If available, use the double parallel vice to hold the dressing stick more securely.
3. Let the cut-off wheel rotate at minimum speed.
4. Cut the dressing stick like a regular specimen.

Testing diamond/CBN cut-off wheels

Cut-off wheels must be tested before use.

To test a diamond/CBN cut-off wheel, perform a ring test.

1. Let the cut-off wheel hang over your index finger.
2. With a pencil (not metal), gently tap the cut-off wheel around the edge.
3. The cut-off wheel passes the test if it gives a clear metallic tone when tapped. If the cut-off wheel sounds dull or muted, it is cracked and unsafe to use and must be replaced.

8 Spare parts

Technical questions and spare parts

If you have technical questions or when you order spare parts, state serial number and voltage/frequency. The serial number and the voltage are stated on the type plate of the machine.

For further information, or to check the availability of spare parts, contact Struers Service. Contact information is available on [Struers.com](https://www.struers.com).

9 Service and repair

Struers recommends that a regular service check be carried out yearly or after every 1500 hours of use. 1500 hours correspond to a single work shift during one year.



Note

Service must only be performed by a Struers engineer or a qualified technician (electromechanical, electronic, mechanical, pneumatic, etc.). Contact Struers Service.

10 Disposal



Equipment marked with a WEEE symbol contains electrical and electronic components and must not be disposed of as general waste.

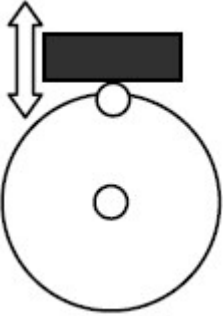
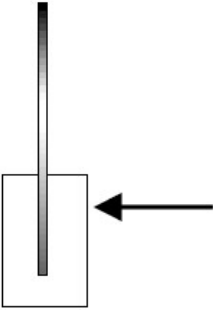
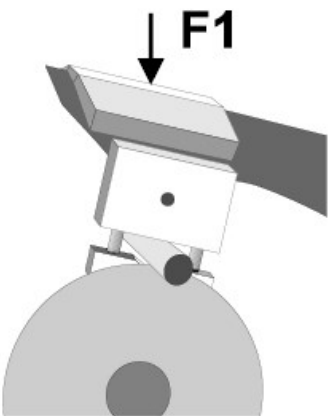
Contact your local authorities for information on the correct method of disposal in accordance with national legislation.



For disposal of consumables and recirculation fluid, follow local regulations.

11 Troubleshooting - Minitom Remote

11.1 Cutting problems

Error	Cause	Action
Vibrations	The diamond layer is worn down to the level of the metal disc	Replace the cut-off wheel with a new cut-off wheel
The workpiece moves radically up and down when cutting 	The cut off wheel is worn and therefore less round	Reduce the speed until cutting is steady. Failure to do so can damage the cut-off wheel
	The workpiece forces the cut-off wheel to the side when cutting. Heavy friction causes vibrations	Reduce the cutting force
	The cutting arm is not balanced	Balance the cutting arm and use sufficient force on F1
	Incorrect cut-off wheel	Choose the correct cut-off wheel. See Accessories and consumables ▶ 11
	The cut-off wheel needs dressing	Dress the cut-off wheel

12 Technical data

12.1 Technical data - Minitom Remote

Subject		Specifications
Cutting	Motor	46 W (0.06 hp)
	Cut-off wheels	Diameter: 100-127 mm (4"-5")
	Output axle	Rotational speed: 100-420 rpm Diameter: 12.7 mm (½")
	Arm	Balancing specimen holder with specimen: Up to 200 g Cutting pressure: 0-350 g Axial movement: 0-25 mm
	Cooling tank	Volume: 250 ml
Safety standards	See the Declaration of Conformity	
Operating environment	Surrounding temperature	5-40°C (41-104°F)
	Humidity	0 - 85 % RH non-condensing
Storage and transport conditions	Surrounding temperature	0 – 60°C (32 – 140°F)
	Humidity	0 - 85 % RH non-condensing
Power supply	Voltage/frequency	100-240 V, 50/60 Hz
	Power, nominal load	90 W
	Power, idle	1 - 2 W
	Current, nominal load	0.5 - 0.9 A
	Current, maximum load	0.5 - 0.9 A
	Number of phases	1
Residual Current Circuit Breaker (RCCB)	Type A, 30 mA (or better) is recommended	
Dimensions and weight	Width	28 cm (11") + rack 48.5 cm (19.1")
	Depth	40 cm (15.5") + rack 22.5 cm (8.9")
	Height	40 cm (15.5") + rack 22.5 cm (8.9")
	Weight	8 kg (17.5 lbs) + rack 5 kg (11 lbs)

12.2 Noise and vibration levels

Noise level	A-weighted sound emission pressure level at workstations	$L_{pA} = 58 \text{ dB(A)}$ (measured value) Uncertainty $K = 4 \text{ dB}$ Measurements made in accordance with EN ISO 11202
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Vibration level	N/A
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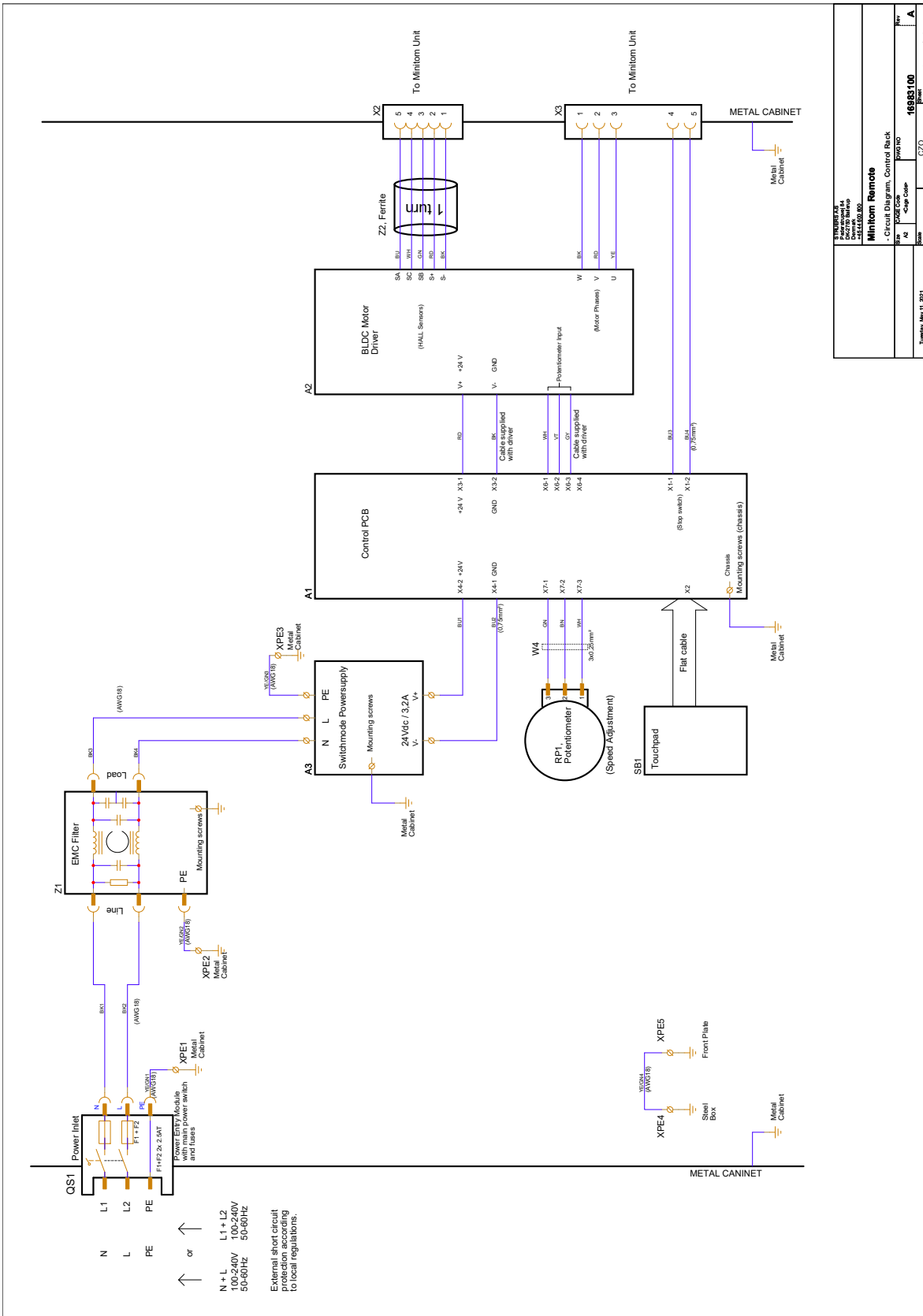
12.3 Diagrams

If you wish to view specific information in detail, see the online version of this manual.

12.3.1 Diagrams - Minitom Remote

Title	No.
Block diagram	16983050
Circuit diagram	16983100 - Page 1

16983100 - Page 1



12.4 Legal and regulatory information

FCC notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

13 Pre-installation checklist

13.1 Prerequisites

- Screwdrivers
- Workbench
- Electrical power supply cables
- External short circuit protection
- Residual current circuit breaker

Accessories and consumables

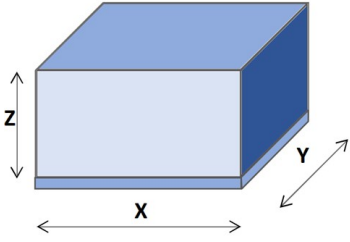
Required accessories and consumables that have been ordered separately.

The use of Struers consumables is recommended.

For information about the available range, see:

- [The Minitom Remote brochure \(https://www.struers.com\)](https://www.struers.com)
- [The Struers Consumables Catalogue \(http://www.struers.com/Library\)](http://www.struers.com/Library)

13.2 Packaging specifications

X:	50 cm (19.5")	
Y:	50 cm (19.5")	
Z:	31 cm (12")	
Weight	Approx. 23 kg (50.5 lbs)	

13.3 Location



CRUSHING HAZARD

Take care of your fingers when handling the machine.

Wear safety shoes when handling heavy machinery.

- Make sure that the following facilities are available:
 - Power supply (outside the enclosed area)
 - Illumination: Make sure that the machine is adequately lit up. A minimum of 300 Lumen is recommended to illuminate the controls and other work areas.

Supply requirements

- The control box must be placed close to the electrical power supply.

Ambient conditions		
Operating environment	Surrounding temperature	5-40°C/40-105°F
	Humidity	> 85 % RH non-condensing

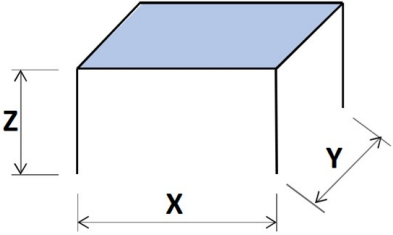
Table or workbench

The machine is designed to be placed on a table or workbench. The Struers table is optional.

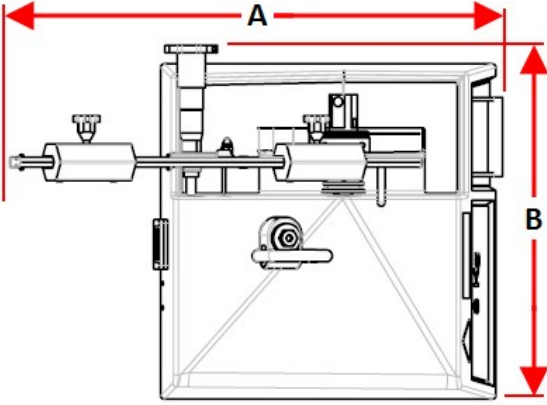
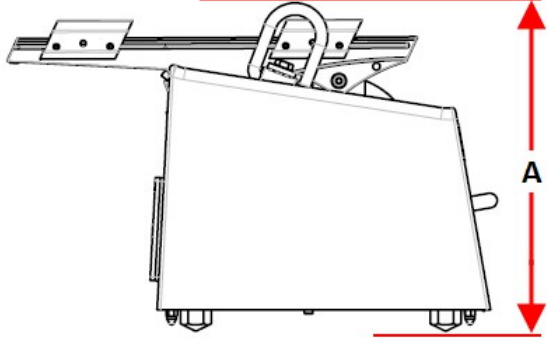
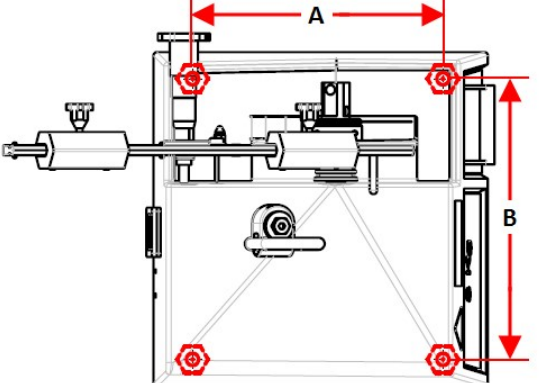
The table must be able to carry at least:

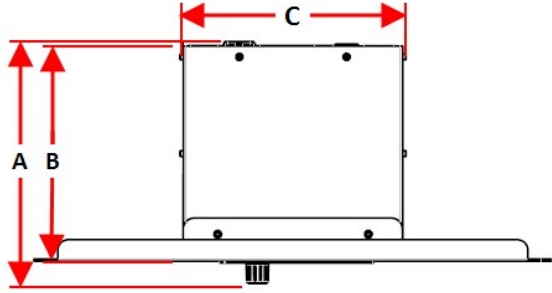
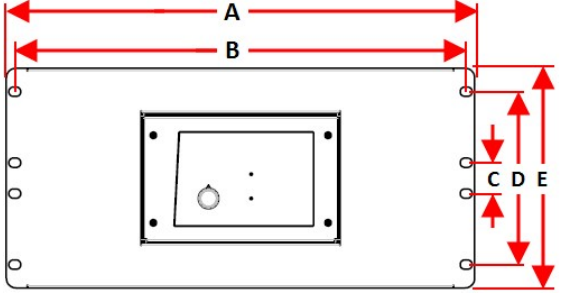
Minitom Remote	8 kg (17.5 lbs)
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Recommended table dimensions	
X:	Width: 50 cm (20")
Y:	Depth: 50 cm (20")
Z:	Height: 80 cm (31.5")



13.4 Dimensions

Minitom Remote	
A 40.5 cm (15.9") B 29.0 cm (11.4")	
A 27.0 cm (10.6")	
Footprint A 20.5 cm (8.0") B 23.0 cm (9.0")	

Minitom Remote - Control box	
<p>A 22.5 cm (8.8") B 19.8 cm (7.8") C 20.5 cm (8.0")</p>	
<p>A 48.3 cm (19.0") B 46.5 cm (18.3") C 3.2 cm (1.2") D 17.8 cm (7.0") E 22.6 cm (8.9")</p>	

13.5 Recommended space

Space in front of the machine

- Make sure that there is enough room in front of the machine. 100 cm (40")

Space at the rear of the machine

- Recommended space at the rear of the machine. 20 cm (7.9")

Space at the sides of the machine

- Recommended space at the side of the machine. 20 cm (7.9")

Space above the machine

- Minimum free height from the table. 50 cm (20")

13.6 Unpacking



CRUSHING HAZARD

Take care of your fingers when handling the machine.
 Wear safety shoes when handling heavy machinery.

Note
Struers recommends that all original packaging and fittings are kept for future use.

1. Cut the packing tape on the top of the box.
2. Remove the loose parts.
3. Remove the unit from the box.

13.7 Lifting

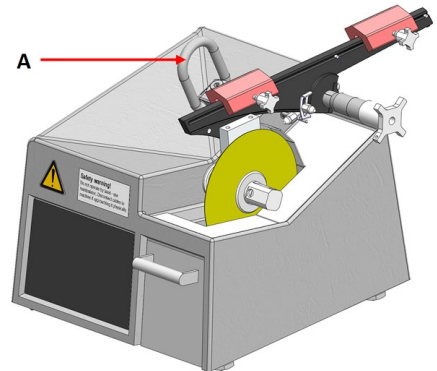
CRUSHING HAZARD
Take care of your fingers when handling the machine.
Wear safety shoes when handling heavy machinery.

Weight

Minitom Remote	8 kg (17.5 lbs)
Control box	5 kg (11 lbs)

Lifting points

1. Lift the unit by the lifting eye on the unit. (A)



At the new location

1. Place the machine on a rigid, stable workbench with a horizontal surface and an adequate height.
2. Make sure that the unit is level and rests securely on the workbench.

13.8 Power supply

WARNING
Switch off the machine, disconnect the electrical power cable and wait 5 minutes before you dismantle the machine or install additional components.

**ELECTRICAL HAZARD**

Switch off the electrical power supply before installing electrical equipment.
The machine must be earthed (grounded).
Make sure that the actual electrical power supply voltage corresponds to the voltage stated on the type plate of the machine.
Incorrect voltage can damage the electrical circuit.

Power socket

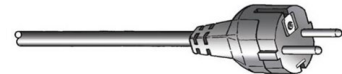
The electrical power supply socket must be easy to access. The electrical power supply socket must be located at a height ranging from 0.6 m to 1.9 m (2½" to 6") above floor level. Not higher than 1.7 m (5' 6") is recommended.

**Note**

The equipment is shipped with 2 types of electrical power cables. If the plug supplied on these cables is not approved in your country, the plug must be replaced with an approved plug.

Single-phase supply

The 2-pin plug (European Schuko) is for use on single-phase electrical power connections.



The leads must be connected as follows:

Yellow/Green	Earth (ground)
Black/Brown	Line (live)
Blue	Neutral

2-phase supply

The 3-pin plug (North American NEMA) is for use on 2-phase electrical power connections.



The leads must be connected as follows:

Green	Earth (ground)
Black	Line (live)
White	Line (live)

Residual Current Circuit Breaker (RCCB)**Note**

Local standards may override the recommendations for the main electrical power supply cable. If needed, contact a qualified electrician to verify which option is suitable for the local installation setup.

Residual Current Circuit Breaker (RCCB)

Type A, 30 mA (or better) is recommended

Powering the control box

The control box powers the cutting unit.



ELECTRICAL HAZARD

Switch off the electrical power supply before installing electrical equipment.

The machine must be earthed (grounded).

Make sure that the actual electrical power supply voltage corresponds to the voltage stated on the type plate of the machine.

Incorrect voltage can damage the electrical circuit.

1. Connect the electrical power cable to the control box (IEC 320 connector).
2. Connect the other end of the cable to the electrical power supply socket.



14 Manufacturer

Struers ApS
Pederstrupvej 84
DK-2750 Ballerup, Denmark
Telephone: +45 44 600 800
Fax: +45 44 600 801
www.struers.com

Responsibility of the manufacturer

The following restrictions should be observed, as violation of the restrictions may cause cancellation of Struers legal obligations.

The manufacturer assumes no responsibility for errors in the text and/or illustrations in this manual. The information in this manual is subject to change without notice. The manual may mention accessories or parts not included in the supplied version of the equipment.

The manufacturer is to be considered responsible for effects on safety, reliability, and performance of the equipment only if the equipment is used, serviced, and maintained in accordance with the instructions for use.

Struers ApS
Pederstrupvej 84
DK-2750 Ballerup, Denmark

Declaration of Conformity

EU / UE / EL / EC / EE / ES / EÜ / AB

Manufacturer / Προϊοδοιτ / Výrobce / Producent / Hersteller / Κατασκευαστής / Fabricante / Tootja / Valmistaja / Fabricant / Proizvođač / Gyártó / Fabricante / Gamintojas / Ražotājs / Fabrikant / Producent / Fabricante / Producătorul / Výrobca / Proizvajalec / Tillverkare / 販売元 / 제조사 / Producent / Изготовитель / Imalatçı / 制造商

Декларация за съответствие Prohlášení o shodě Overensstemmelseserklæring Konformitätserklärung Δήλωση συμμόρφωσης Declaración de conformidad Vastavusdeklaratsioon	Vaatimustenmukaisuusvakuutus Déclaration de conformité Izjava o skladnosti Megfelelőségi nyilatkozat Dichiarazione di conformità Atitikties deklaracija Atbilstības deklarācija	Verklaring van overeenstemming Deklaracja zgodności Declaração de conformidade Declarație de conformitate Vyhlásenie o zhode Izjava o skladnosti Intyg om överensstämmelse	適合宣言書 적합성 선언서 Samsvarserklæring Заявление о соответствии Uygunluk Beyanı 符合性声明
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Name / Име / Název / Navn / Name / Όνομα / Nombre / Nimetus / Nimi / Nom / Naziv / Név / Nome / Pavadinimas / Nosaukums / Naam / Nazwa / Nome / Denumirea / Názov / Ime / Namn / 名前 / 제품명 / Наименование / Adı / 名称	Minitom Remote
Model / Модел / Model / Model / Modell / Μοντέλο / Modelo / Mudel / Malli / Modèle / Model / Modell / Modello / Modelis / Modelis / Model / Model / Modelo / Modelul / Model / Model / Modell / モデル / 모델 / Modell / Модель / Model / 型号	N/A
Function / Функция / Funkce / Funktion / Funktion / Λειτουργία / Función / Funksioon / Toiminto / Fonction / Funkcija / Funkció / Funzione / Funkcija / Funkcija / Functie / Funkcja / Função / Funcția / Funkcia / Funkcija / Funktion / 機能 / 기능 / Funksjon / Назначение / Fonksiyon / 功能	Precision cut-off machine
Туре / Тип / Тур / Туре / Тур / Τύπος / Tipo / Túüp / Тууپی / Туре / Tip / Tipus / Tipo / Tipas / Tips / Туре / Тур / Tipo / Tipul / Тур / Тр / Тур / 種類 / 유형 / Туре / Тип / Tür / 类型	06986116
Serial no. / Серийн номер / Výrobní číslo / Seriennummer / Seriennummer / Σειριακός αριθμός / N.º de serie / Seerianumber / Sarjanro / No de série / Serijski broj / Sorozatszám / N. seriale / Serijos Nr. / Sērijas Nr. / Serienr. / Numer serjyny / N.º de série / Nr. serie / Výrobné č. / Serijska št. / Seriennummer / シリアル番号 / 일련번호 / Serienr. / Серийный номер / Serí no. / 序列号	



Module H, according to global approach

en We declare that the product mentioned is in conformity with the following directives and standards:	es Declaramos que el producto mencionado cumple con las siguientes directivas y normativas:	it Dichiariamo che il prodotto citato è conforme ai seguenti standard e direttive:	pt Declaramos que o produto mencionado está em conformidade com as seguintes normas e diretivas:	ja 弊社はこの指定製品が以下の指令および基準に適合することを宣言します。
bg Декларираме, че посоченият продукт е в съответствие със следните директиви и стандарти:	et Kinnitame, et nimetatud toode vastab järgmistele direktiividele ja standarditele:	lt Pareiškiame, kad nurodytas gaminy s atitinka šias direktyvas ir standartus:	ro Declarăm că produsul menționat este în conformitate cu următoarele directive și standarde:	ko 해당 선언서 상의 제품은 다음 지침 및 기준에 적합함을 선언합니다.
cs Tímto prohlašujeme, že uvedený výrobek je v souladu s následujícími směrnici a normami:	fi Vakuutamme, että mainuttu tuote on seuraavien direktiivien ja standardien mukainen:	lv Mēs apstiprinām, ka minētais produkts atbilst šādām direktīvām un standartiem:	sk Vyhlasujeme, že uvedený výrobok je v súlade s týmito smernicami a normami:	no Vi erklærer at produktene som er nevnt er i samsvar med følgende direktiver og standarder:
da Vi erklærer herved, at det nævnte produkt er i overensstemmelse med følgende direktiver og standarder:	fr Nous déclarons que le produit mentionné est conforme aux directives et normes suivantes :	nl Wij verklaren dat het vermelde product in overeenstemming is met de volgende richtlijnen en normen:	sl Potrjujemo, da je omenjeni izdelek v skladu z naslednjimi direktivami in standardi:	ru Настоящим заявляем, что указанная продукция отвечает требованиям перечисленных далее директив и стандартов:
de Wir erklären, dass das genannte Produkt den folgenden Richtlinien und Normen entspricht:	hr Izjavljujemo da je spomenuti proizvod sukladan sljedećim direktivama i standardima:	pl Oświadczamy, że wymieniony produkt jest zgodny z następującymi dyrektywami i normami:	sv Vi intygar att den angivna produkten överensstämmer med följande direktiv och standarder:	tr Belirtilen ürünün aşağıdaki direktiflere ve standartlara uygun olduğunu beyan ederiz:
el Δηλώνουμε ότι το εν λόγω προϊόν είναι σύμφωνο με τις ακόλουθες οδηγίες και πρότυπα:	hu Kijelentjük, hogy jelen termék megfelel a következő irányelveknek és szabványoknak:			zh 我们特此声明上述产品符合以下指令和标准:

2006/42/EC	EN ISO 12100:2010, EN 60204-1:2018, EN 60204-1-2018/Corr.:2020
2014/30/EU	EN 61000-6-2:2005, EN 61000-6-2:2005/Corr.:2005, EN 61000-6-3:2007, EN 61000-6-3-A1:2011, EN 61000-6-3-A1-AC:2012
2011/65/EU	EN 63000:2018
Additional standards	NFPA 79:2018, FCC 47 CFR Part 15 Subpart B

Authorized to compile technical file/
Authorized signatory

VP Operations

Date: [Release date]

