

MT A

Original Instructions

Schick GmbH



Thank you for purchasing a high-quality technical device from SCHICK GmbH. We hope you will enjoy working with your new **MT A** handpiece and wish you the best of success. We have prepared this operating manual in order to acquaint you with your new device and to provide the necessary information for operation and maintenance.

Project data:

Project designation: **MT A**

Trade name: **Schick MT A**
Product name: **MT A**

Serial number: Axxx xxx
Model: **MT A**

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1 About this operating manual

You must read this operating manual before using the MT A for the first time.

In particular, you must observe Section 2 "General safety regulations".

1.1 General notes

These instructions are intended to acquaint you with your MT A and provide information on its proper use.

It contains important tips on how to operate the MT A safely and correctly.

Compliance will:

- Avoid dangers
- Keep repair costs and downtimes to a minimum
- Increase the reliability and service life of the product

This manual must be read and adhered to by each person tasked with working with the MT A.

In addition to this operating manual, the regulations on accident prevention and environmental protection applicable at the place of installation must also be observed.

1.2 Related documentation

The latest version of this manual as well as up-to-date product information is always available under www.schick-industrie.de.

1.3 Signs and symbols used

The following signs and symbols are used in this manual:

- Activity symbol: The text after this sign describes handling instructions that must be carried out in the order indicated, from top to bottom.
- ✓ Result symbol: The text after this sign describes the result of an action.



Info symbol: Additional Information

1.4 Structure of warnings

Warning levels	Signal word	Use in case of ...	Possible consequences if the safety advice is not observed:
	DANGER	Personal injury (imminent danger)	Death or severe injuries!
	WARNING	Personal injury (potentially hazardous situation)	Death or severe injuries!
	CAUTION	Personal injury	Slight or minor injuries!

Tab. 1.1 Warning levels

The warnings are structured as follows:

- Pictogram with signal word corresponding to warning level
- Description of danger (type of hazard)
- Description of consequences of the danger (resulting hazards)
- Measures (activities) to prevent the danger



DANGER!

Type of danger (text)

Consequences of danger (text)

- Prevention of danger (text)

Warning signs Special safety instructions are provided at the relevant locations. These are marked with the following symbols.



General danger point

This symbol is indicated before activities that may result in personal injury or extensive property damage.

If the source of the danger is unambiguous, this symbol is preceded by one of the following symbols.



High voltage

This symbol is indicated before activities which pose a risk of electric shock, possibly with fatal consequences.



Hand injuries

This symbol is indicated before activities that pose a risk of hand injury.

2 General safety regulations

2.1 Principles

Use only with the maximum speeds specified by the manufacturer. Use only tools which are approved by the manufacturer/dealer for the application and performance data of MT A.

The MT A is exclusively designed for universal use in dental laboratories for the dry processing of solid workpieces, such as crowns and bridges, as well as plastic and cast-models. Only tools that are intended for the processing of such materials may be used.

2.2 Foreseeable misuse

The system may not be used under the following circumstances:

- in potentially explosive atmospheres
- for medical use on the patient
- processing of wet materials
- for flammable and combustible materials
- any use other than that specified by the manufacturer is considered misuse
- do not clean the handpiece with compressed air

2.3 Selection and qualification of the personnel

Qualifications of personnel: Trainees and interns must be instructed by an experienced operator.

2.4 Safety equipment

The MT A features a display showing the pre-set speed directly.

2.5 Safety signs

Reference to rating plate on the control unit.



Explanation

Thoroughly read the operating manual before commissioning.

2.6 Safety measures

Do not wear long hair untied.

Always use extraction.

Personal protective equipment

Protective goggles.

Extraction at the workplace.

2.7 Safety regulations

General information

Caution!

Risk of injury from sharp and/or rotating tools!

Wear safety goggles.

During transport

Transport or shipping only in the original packaging or a suitable shipping box.

During operation

Operate only with a sufficiently dimensioned extraction system and while wearing proper protective clothing.



In left-hand rotation, the chuck may loosen, as a result of which the tool is no longer securely fixed.



Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.



Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.



When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.



Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.



Do not use a battery pack or tool that is damaged or modified. Damaged or modified 5 batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.



Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130 °C may cause explosion. g) Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

Care and control work

- In accordance with the operating manual.
- Trainees and interns must be instructed by an experienced operator.

Maintenance and repair work

- Only by the manufacturer.
- Only trained personnel with specialist knowledge of the respective device class may implement configuration and teach-in tasks.

Structural modifications

Structural changes to the product are not permitted.

3 List of contents

	art.no.
MT A cpl. w. charging dock	9605
MT A	9600
control unit MT A cpl.	9603
charging dock MT A incl. tools	9601

3.1 Optional Accessories

- 9654 MT A tool belt (without content)
- 9604 connecting cable

4 Technical description

4.1 Overview

The mobile rechargeable handpiece **MT A** is a modern and powerful hand-held electric grinder to process a wide variety of materials in a dental practice or laboratory. The particularly precise concentricity in conjunction with the high possible speeds enables very good grinding patterns, even on challenging materials. The tool-free quick-clamping system makes it possible to change the tool for economical working.

Function description

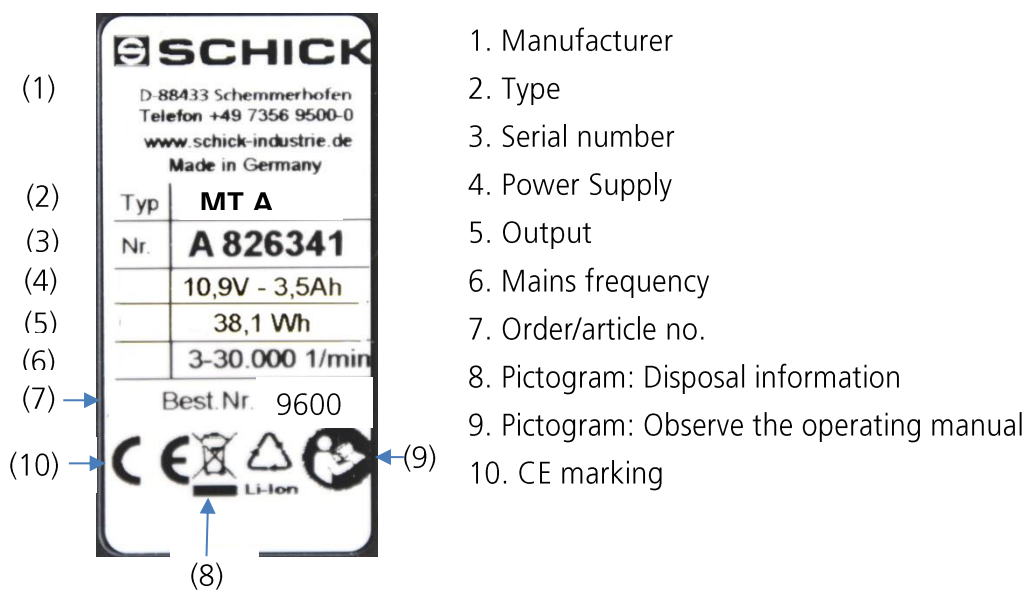
The rechargeable handpiece **MT A** is used as a mobile hand-held grinding or separating tool. It has a removable battery that also contains the control and charging electronics. The speed and direction of rotation can be preselected via the control panel on the battery. The LCD display provides information on the preset speed, the current speed when the motor is running, the direction of rotation and the charging status of the battery. During breaks, the **MT A** is switched off in the charging cradle.

The optionally available connecting cable allows the handpiece can be operated separately from the battery.

4.2 Characteristics of the tools

Only tools with perfect concentricity may be used. The shaft diameter may be 2.35 mm or 3 mm, depending on the chuck variant.

4.3 Name plate



5 Transport and storage

5.1 Transport

If external damage to the packaging is visible upon delivery of the goods, this must be immediately communicated to the carrier and confirmed in writing. The damage must then be immediately reported to Schick GmbH.

Installation site requirements

Highly cooled appliances must be brought to room temperature before commissioning.
Danger of condensation.

5.2 Storage

Storage site requirements

In the original packaging, only indoors, protected from moisture.

5.3 Installation

The MT A is delivered ready to use. The battery is already partially charged and can be used immediately.

Charger:



Before using the charger for the first time, check whether the mains voltage and mains frequency specified on the name plate match the data for your mains supply.

5.4 Charging

- To charge, place the MT A in the charging cradle connected to the mains socket.
- ✓ The display shows the current charging status in %.



Please note the safety instructions under 2.7!



For charging only use the supplied charging dock art.no. 9601

6 User interface

6.1 Features



6.2 MT A switch on

- Press the green On/off button once for at least one second.

6.3 Operating the handpiece and controller

After pressing the ON/OFF button on the control panel, the MT A is ready for operation.

Default display:

Maximum speed



Charging status

Direction of rotation

The preset speed is abbreviated on the display. The speed shown must be multiplied by 1,000.

Example:



100% charging status, 9,000 1/min., clockwise rotation

The speed of the motor can be adjusted in two ways:

1. Default settings before starting
2. Setting while the MT A is running



You must observe the maximum permissible speed of the clamped tool before starting the handpiece!

6.4 Displaying of additional information:

The MT A can provide information about additional parameters using key combinations:

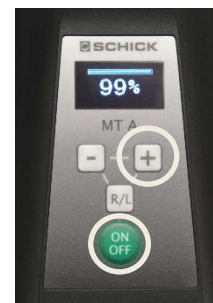
- Press and hold the ON/OFF key, then press and hold the corresponding additional key.
- ✓ The additional information is displayed for approx. 3 sec.
- ✓



Operating hours



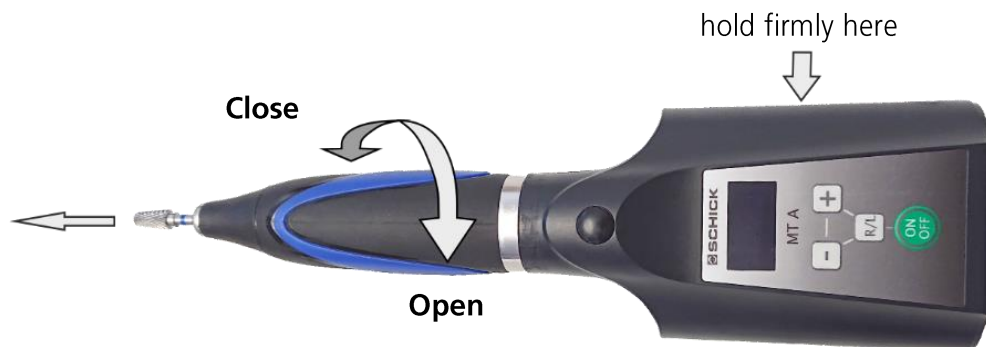
Operating temperature



Battery capacity in %

6.5 Tool change on handpiece

The chuck can be opened or closed by turning the handle on the handpiece.



Note:



You must switch off the motor before changing tools! In order to preserve the chuck's accuracy and service life, a tool or the protective pin provided from factory must always be clamped - even when the unit is not being operated.



Caution: To avoid bending of the tool shafts at high speeds, always insert the tools used as far as possible into the chuck in order to achieve the maximum holding force!





When using directional milling cutters, the correct operating mode (right-hand or left-hand rotation) must be observed.

6.6 Changing the handpiece rotation direction

The MT A handpiece can be changed from right-hand to left-hand rotation via the switch on the control panel. The direction of use intended by Schick is clockwise.

Changing the direction of rotation:

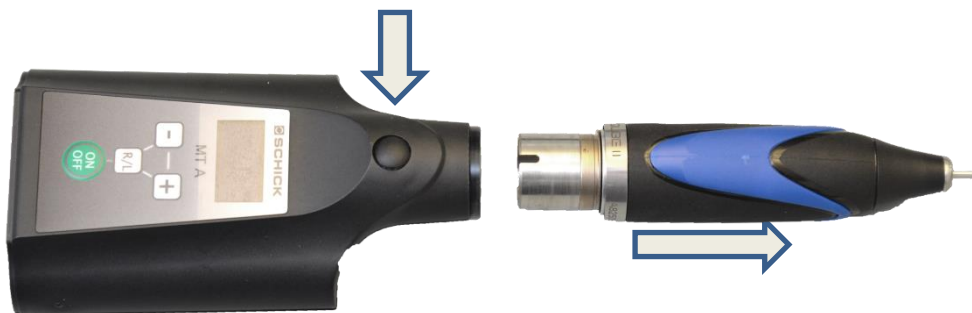
- Press the R/L switch on the control panel.
- ✓ The direction of rotation is indicated by an arrow on the display,  or 



If the MT A handpiece is subjected to greater forces in left-hand rotation, the collet chuck may become loose, causing the clamped tool to no longer be fixed securely.

6.7 Separating the handpiece and battery

The battery can be easily separated from the handpiece. This allows the MT A to be used in continuous operation with multiple batteries.



- Press the locking button and pull the handpiece out of the battery.
- To assemble, insert the handpiece into the battery in the correct position up to the end stop.

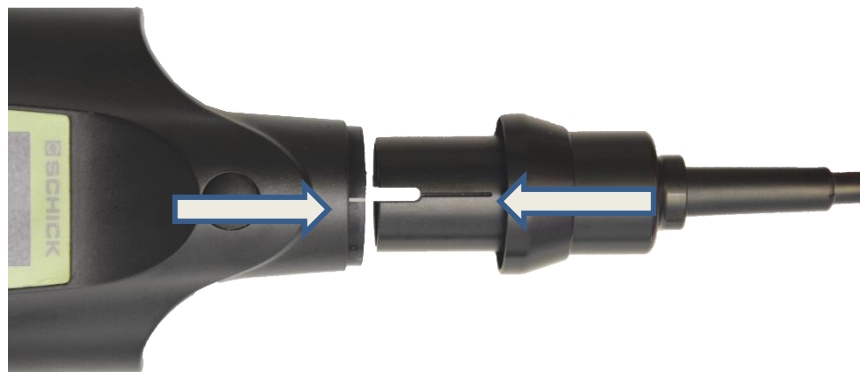
6.8 Using the intermediate cables

Using the optional intermediate cables, the handpiece and battery can be used separately.

1. Remove the battery from the handpiece as described under 6.7
2. Attach the cable to the handpiece as follows:



3. When inserting the cable into the battery, align the index line on the connector body with the white line on the battery and insert until it clicks.



6.9 MT A switch off

- Press and hold ON/OFF on the control panel for more than three seconds.

7 Troubleshooting

7.1 Fault and error messages

The MT A has intelligent electronics that detect faults and show them on the display. If, for example, the motor is blocked during starting or running, this is shown on the display as a "block".

During prolonged operation at the power limit, the MT A can switch itself off automatically to protect against overload. To put the MT A back into operation in this case, it must be placed on the charging station connected to the mains.

If a fault cannot be solved with the above procedure, please contact Schick directly under +49 7356 9500-0.

8 Care and control tasks for operators

8.1 General informations

The MT A handpiece is designed for maximum durability. Despite this, the chuck should be removed and cleaned from time to time, and the dirt underneath the handpiece tip removed with a brush.

Contamination on the plastic surfaces can be removed with a damp cloth.

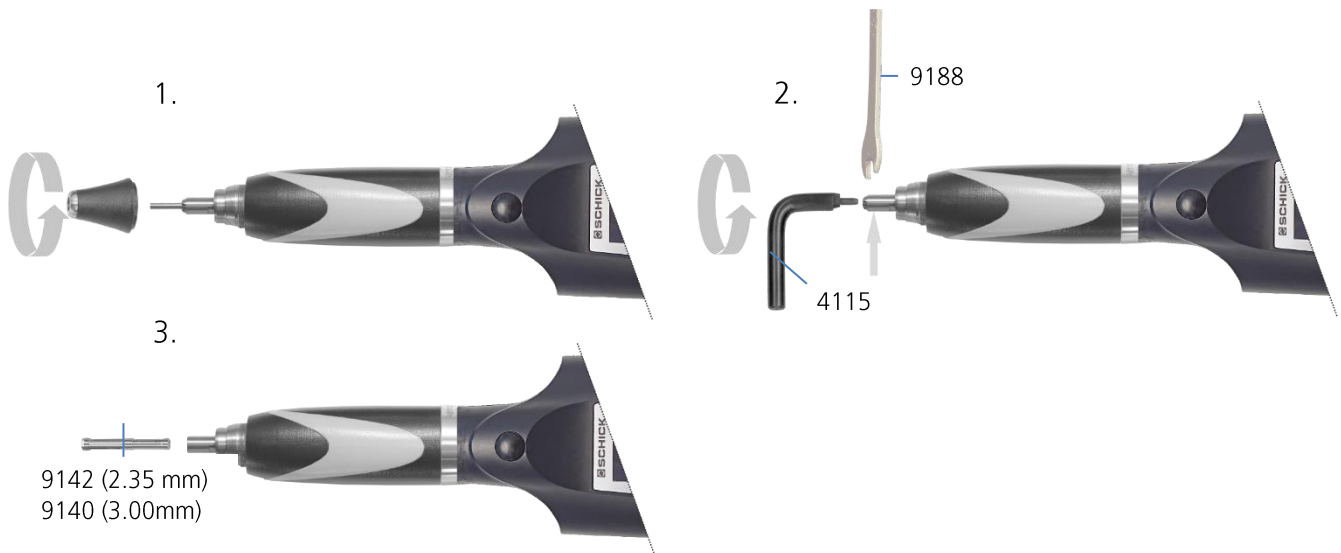
Do not use aggressive cleaning agents!

8.2 Care and inspection plan

Interval	Care and inspection tasks	Remarks
Weekly	Dismantle the tip and remove dirt	Do not use compressed air!
Once a month	Dismantle the chuck, clean and lubricate	Lubricate with Art.No. 51/1

8.3 Performing care and control work

Dismantling and cleaning of the chuck



1. Remove the tool and unscrew the tip.
2. Insert the chuck key (Art.No. 4115) into the open chuck, hold in place on the wrench grip surface of the shaft with the open-ended spanner (Art.No. 9188) and pull out the chuck with a sudden movement or by knocking on the chuck key, if necessary.
3. Remove the chuck from the shaft

- i** After thoroughly cleaning the chuck, slightly grease it on the outside with special grease (Art.No. 51/1) before re-installation.
- i** Tighten the chuck only slightly when re-installing! In normal operation (right-hand rotation), the chuck tightens itself.
- i** In order to preserve the chuck's accuracy and service life, a tool or the protective pin provided from factory must always be clamped - even when the unit is not being operated.
- i** Never clean the handpiece with compressed air!
- i** The corresponding chuck tools can be found on the underside of the hand-piece rack.

9 Technical data

Handpiece:

Speed range	3.000 – 30.000 1/min
Torque max.	5.5 Ncm
Diameter	29 mm
Length without cable	120 mm
Weight	194 g
Cooling system	self sealing system without cooling
Drive system	brushless DC motor
Concentricity	< 0.02 mm
Chuck	Ø 2,35 mm (standard) and 3,0 mm (optional)
Tool change	Quick release

Battery pack:

Dimensions:

Width:	71 mm
Height:	125 mm
Depth:	43 mm
Weight:	250 g
Capacity	3.500 mAh
Charging temperature	5° - 40° C

The oscillation total value during operation is below 2,5 m/s²

10 Annex

10.1 Service address

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E-mail: info@schick-dental.de

Internet: www.schick-dental.de

For service, please send your device directly to Schick GmbH at the above address.



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10.2 Declaration of Conformity

We, Schick GmbH
Lehenkreuzweg 12
D-88433 Schemmerhofen

declare herewith, that the product

MT A cpl. with charging dock 9605 consisting of
MT A 9600 in connection with
9601 charging dock
9603 control unit



Is in conformity with the following provisions of Directive:

2006/42/EG (machinery directive)
2014/30/EU (EMC directive)
2011/65/EU (RoHS)

Name and address of person
in charge

Wolfgang Schick
Lehenkreuzweg 12
D-88433 Schemmerhofen

Schemmerhofen, March 2019



W. Schick
director

Subject to technical modifications

This unit complies with the current VDE (German association of electrical technicians) regulations concerning safety and suppression.

These operating instructions should be readily accessible and are best kept close to the unit itself.

We would like to take this opportunity to advise you that a proper repair service and suitable qualified personnel are required for such highly developed technical equipment. SCHICK GmbH guarantees to carry out perfect repairs using original spare parts.