

## Manual



## Medeas

# Directory

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# Foreword

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The *Medeas* footcare unit was produced according to strict quality criteria and uses the latest technology in its design. The images in this manual may vary slightly from the product you have bought as we are constantly developing our products.

This user manual includes a detailed description and explanation of how to use the *Medeas* unit. If you have any questions or suggestions, you can contact us by telephone or email.

This user manual belongs with the *Medeas* unit. Keep it somewhere safe. If you give this product to someone else, please include this document as it includes important information on how to correctly use the product.

## *Short description of functions*

The *Medeas* is a device for the treatment of callus and nails. The handpiece is compatible with rotating tools such as diamond polishers, steel cutters and ceramic cutters. These can be worked with up to a speed of 30,000 rpm (*Medeas Chrome*) respectively 40,000 rpm (*Medeas Plus*) thus providing an efficient way of removing tissue. The direction of rotation can be changed by pressing a button. The integrated filtered suction function effectively sucks up any dust particles. The rotation speed and suction function can be adjusted using the keyboard. All other functions can be accessed with the touch display. The device display will notify you when the filter needs to be changed and when the device is due for inspection. Functions and maintenance steps will be described with pictures and videos shown in the display. You can further use an USB stick featuring your own pictures. For example, you may want to show your customers the separate successful steps from treatment to treatment.

## Safety Instructions

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The installation of the working area has to correspond to the relevant regulations. Set up the unit in such a way, that the air slits are not blocked and the extracted air can escape well.



This device shall only be used by persons who are familiar with feature and function of the unit.



This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children should be supervised not to play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.



To avoid the risk of electrocution only connect the device to the main power supply. If you pull the power plug, it will stop the connection to the main power supply. Set up the unit so that the power plug is always accessible. The power switch should also always be easily accessible.



Only switch on the unit, if the handpiece rests secured in the handpiece holder, or if you hold it safely in your hand.

## Safety Instructions

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-  Prevent any liquids from entering into the control unit, since this could damage the electronic elements. Clean the outside of the box only with a dampened cloth. Make sure, that you have unplugged the unit before.
-  Only when pulling the mains cable, you can ensure that the device will be completely disconnected from mains. Check the mains cable regularly for damages and in case of such, have it changed or repaired by an authorized service center.
-  Prevent your hair from wrapping itself around moving parts. If applicable, wear a hair net.
-  When working with materials, which might create dust or moisture, use a drilling unit with suction or spray technique. Wear a nose and mouth protection. Always follow the safety instructions, provided by the manufacturer of the materials being formed and used.
-  For safety reasons, you must always wear disposable gloves and protective glasses when operating this unit. In addition, a face mask conforming to EN 14683 type IIR or EN 149 FFP 2 must also be worn.
-  When changing the filter, it is advisable to wear a face mask conforming to EN 14683 type IIR or EN 149 FFP 2.

## Safety Instructions

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Ensure that the patient's foot and the handpiece are held firmly in place during the operation. To prevent injury, work with extreme caution on the foot of the patient, and use only light pressure.



To ensure that the bur/tool sits firmly in the chuck, do not work with tools which

- have an oily shaft.
- are worn.
- are bent.



Before using the equipment, assure that

- the tool can be pushed far enough into the chuck  
(test this with a dipstick and clean if necessary),
- the inserted tool sits properly in the chuck and will not cant/jam while clamping it,
- the tool is approved for using it at the max speed (see manufacturer's instructions), or only use the speed required by the instrument,
- the tool is absolutely dry.



For safety reasons, do not change the tool while the motor is running.



Switch off the unit immediately if

- the bur comes off during the treatment itself,
- the motor blocks during the treatment.

## Safety Instructions

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While doing any footcare, only operate the unit with the suction turned on.



Only use the suction function if you have installed the dust filter. Check filter bag every 10 operating hours. If it is full, please exchange it. A filter bag should be exchanged at least after 50 operating hours.



*Medeas Plus*: The light on the handpiece is for lighting the area being treated. Do not look directly into the light.



Never use the suction to vacuum any liquids (or air/water fog which contains particles of liquids).



Always follow the operating instructions. Do not carry out any repairs, modifications or maintenance work yourself. This is only to be accomplished by an authorized specialist. The mains cable may also only be changed by the manufacturer, or an authorized specialist. Maintenance records may be supplied to repair workshops and trained technicians upon request. Never remove the housing, especially not while the equipment is plugged into the socket, since some components are under electric voltage. Any unauthorized or improper handling (e.g. trying to repair the unit) of the equipment will immediately nullify the guarantee/warranty, and any other liabilities of the manufacturer.

## Safety Instructions

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Attention! Only use burs/tools which are permitted for speed level saved under (12) to (14)!



When the device is brought out of standby mode, it will run with the rotation speed and suction power used last. Take care to not start the mill at an overly high rotation speed. Select the required rotation speed before changing the milling tool.



In case the touch display shows a damage or does not work properly the device may not be used any longer. Please send it to a qualified service workshop for repair.

## Cleaning & Disinfection

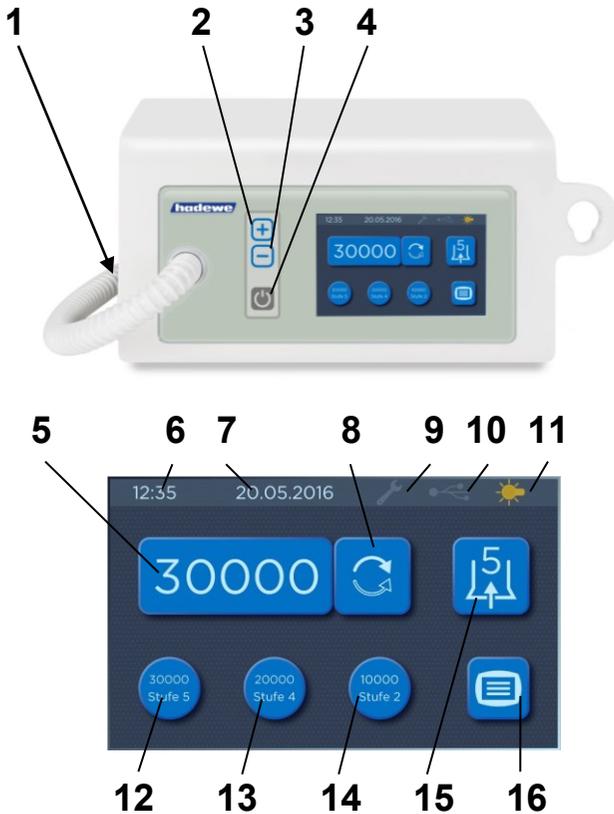
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The device is designed to be compatible with rotating instruments which do not penetrate the skin or mucosal or inadvertently may still cause injuries. For this application please adhere to the cleaning and disinfection instructions provided below. After every treatment please carry out the following steps:

- Remove the rotating tool (e.g. bur, capper etc.) first. Then handle the tool according to the instructions of its manufacturer.
- Remove tissue remains by wiping off the unit with a mildly moistened paper cloth. Afterwards clean all surfaces with disinfection cloth (e.g. Mikrozyd AF Tücher of Schülke and Mayr). There is no limit to the number of times this device can be cleaned and disinfected during its recommended lifespan.

# Discover Device



- 1 main power switch
- 2 increase speed
- 3 reduce speed
- 4 press briefly: switch unit on  
press again briefly: turn on the handpiece  
press long (keep pressed): switch unit off (standby)
- 5 speed display
- 6 time
- 7 date
- 8 changing the direction of rotation (left/right switch)
- 9 maintenance required
- 10 USB stick plugged in (green light)
- 11 *Medeas Plus*: light (yellow when switched on)
- 12,13,14 memory keys for speed/suction
- 15 suction stage set
- 16 bringing up menu with additional functions

# Before First Use

Please read through the instructions carefully before using the unit and carefully note the safety advice. Always keep this manual accessible to any users of the drill.

## Area of Application

This device should only be used by people who have completed a foot-care qualification. Before use the operator should make themselves familiar with the device by reading this manual or being instructed by another.

The device must only be used in closed spaces. It may be used in hospitals, in a commercial environment or in patient's homes. The device is not intended for use in operating rooms.

The control unit can be set up in a cabinet, or can be used as a portable unit (e.g. in a carry case). It is suitable for the following scopes:

- foot care (milling, trimming and polishing),
- manicure (grinding, milling and polishing works).

 The device is determined of operating rotating instruments, which will not penetrate the skin or mucous membrane if used appropriate, but could evoke damages accidentally.

 Caution: In the area of pedicure you have to work with suction techniques.

## Operation

The working area must conform to the conditions described. Set up the unit in such a way, that the air slits are not blocked and the extracted air can escape well. To guarantee unhindered air flow there must a gap of at least 12cm to the right of the device. Position the device so that the operating buttons are easy to reach and the outlet of the hose is a maximum distance of 60cm from the patient's foot. The unit should be placed 30 - 90cm above the floor.

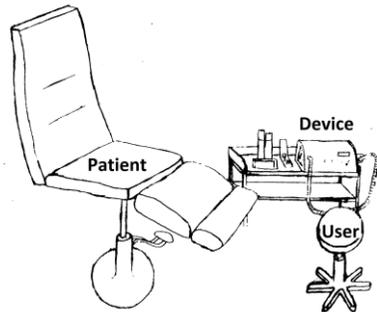


Image: Example of positioning of footcare unit in treatment room

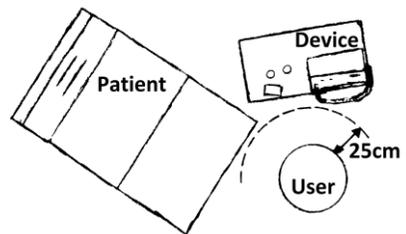


Image: Bird's-eye view of work area

# Before First Use

If you have a foot switch, insert its plug into the port on the right of the device which displays this symbol .

Check if the filter bag and control unit filter are correctly fitted. Ensure that the tool is fixed.

On the left side of the device you will find the main power switch. Press this switch to turn the unit on.



The display prompts you to set the device language:



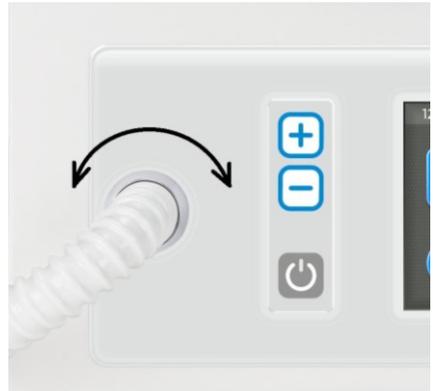
This is followed by 5 other pages with important clues. With  (continue) you proceed to the next page.

On the last page press  to start the device. The counter for calculat-

ing the maintenance proposal will automatically be set to zero.

The display will shut down now and the unit is in standby.

Take the handpiece in hand. If the hose is twisting the handpiece, the exit point at the control unit can be turned around to adjust:



To start the handpiece and the suction, press button (4) on the front page.

# Usage

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In the following section the order in which you should use the device is described. Additionally, the individual steps will be explained in detail. Read the complete manual before use.

## Operating Steps

Once you have clamped in the instrument, press the standby button (4) to turn on the screen. Select with the keys (2) and (3) for the desired speed. The instrument manufacturers often give out recommendations for the optimum speed. In any case, it must be ensured that the maximum permissible speed is not exceeded. Now press the standby button (4) again to rotate the handpiece.

By means of the icon (8) you can choose the direction of rotation. As a rule, it works clockwise. Also, most rotational instruments (steel instruments with cross cutting) are optimized for the clockwise rotation. In diamond cutters or grinders, the direction of rotation does not affect the removal rate. Working in reverse may be useful if the resulting milling dust is swirled in a clockwise direction in the field of view.

Now switch to suction. By means of the icon (15) you can adjust the strength of suction.

Frequently used speed and suction capacity can be saved. First set the desired speed and suction. Save this by pressing one of the three

memory keys (12), (13) or (14) for 4 seconds. To recall the stored speed and suction power quickly, briefly press the corresponding memory key.

After speed and suction power are set you can start working.

If you want to interrupt or finish the job, press the standby button (4). Handpiece and suction switch off then. You can put the handpiece on the handpiece holder present at the right side of the device. Alternatively, by holding down the switch on the handpiece or by pressing the button on the footswitch either can be turned off.

By long pressing the standby button (4) the device turns off and is in standby mode.

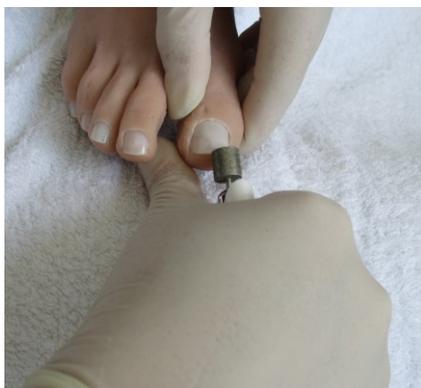
We recommend you to disconnect the device from the mains power supply if it's not going to be used for a while. This will save electricity. The mains plug must also be removed when it comes to retiring the device.

# Usage

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## Work Positioning

The following images are examples of how to work on various parts of the foot. Always make sure that the foot is firmly gripped and that you can work freely and without strain.



# Usage

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# Usage

## Suction

Set the suction by using the icon (15). The suction power can be regulated in 5 steps. The suction stage selected is displayed.

In case of overheating of the suction motor, this switches off automatically. Allow the unit to cool down, to put it into operation again. Send the device for inspection if the error occurs again.

## Exchange Micro Filter



When changing the filter, it is advisable to wear a face mask conforming to EN 14683 type IIR or EN 149 FFP 2.

Only operate the unit with a filter bag assembled. Control the bag after every 10 operating hours. Exchange a full filter bag immediately. A filter bag should be exchanged at least after 50 operating hours.

At first, unfold the paper of the filter bag (art. 5179) and push your finger into the opening in the front.



Pull out the lid of the dust chamber and remove the old filter. Hold the

filter in the middle to prevent it from bending and sliding off.



Therefore, you avoid it from coming off again.

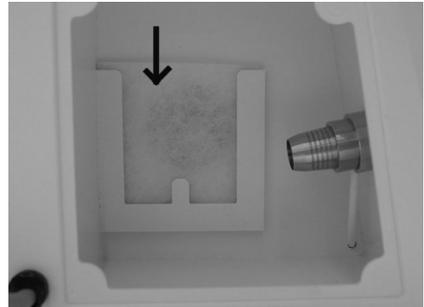


It is important to use micro filter bag (art. 5179). You may not use paper filter bag (art. 5115).

After the filter has been changed, this must be entered in the device. See chapter **Confirm Filter Change** on page 20.

## Exchange Control Unit Filter

This filter (Art. 3752) has to be exchanged after every 200 operating hours. Remove the old filter and place the new one in its.



# Usage

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## Clamping the Tool / Bur (Medeas Plus)

The handpiece is equipped with a chuck, which can hold all burs with a diameter of 2.35 mm (this is the diameter usually used for tools in podiatry). To open the chuck, push the knob forward with your thumb and leave it there.



Now insert the tool as far as possible. Pull back the knob and the tool will be firmly clamped.



For security reasons, only change the tool, if the handpiece is turned off.

## Clamping the Tool / Bur (Medeas Chrome)

Clamp the tools/bur only when the handpiece is not working. Insert the tool/bur until it stops. Ones can use all tools/burs which has a shaft according to DIN EN ISO 1797-1 with a diameter of 2,35 mm.



For security reasons, only change the tool, if the handpiece is turned off.

## Adjusting the Speed

Take the handpiece (with tools) in the hand or put it into the handpiece holder.

Select button (4) of the device. Now you can set the desired speed with the buttons (3) and (4) to adjust and select with the icon (8) the direction of rotation.

# Usage

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## Memory Keys

Frequently used speed/suction capacity can be saved. But there are only 3 memory spaces available. First set the desired speed/suction. Save this by pressing one of the three memory keys (12), (13) or (14) for 4 seconds. The saved speed/suction is now directly available on pressing the memory key. To recall the stored speed/suction quickly, briefly press the corresponding memory key (12), (13) or (14).

## Foot Switch

### Operation of the footswitch

Only use the original hadewe footswitch (Art. No. 0970) to avoid any damages. Insert the plug of the foot switch into the socket with the symbol .

### Function of footswitch

By holding down the footswitch, the power can be switched ON/OFF.

Briefly press the left memory key (12) to recall the speed/suction. Another quick press of the central lock key (13) will recall the speed/suction. Another quick press of the first memory key (12) can also be used.



This only work with tools that are approved for the (12) to (14) stored speeds!



When the display is switched off, you can turn it on by keeping the foot switched pressed (keep pressed long).

## Switch on the Handpiece (Medeas Plus)

By holding down the switch, the power can be switched ON/OFF. Briefly press the left memory key (12) to recall the speed/suction. Another quick press of the central lock key (13) will recall the speed/suction. Another quick press of the first memory key (12) can also be used.



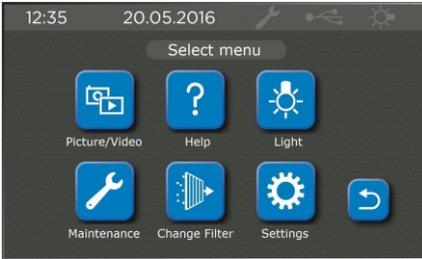
This only work with tools that are approved for the stored speeds!



When the display is off, you can activate it by pressing the footswitch.

# Usage

## Select Menu



In the select menu, you can use the following functions:

Picture/Video: viewing pictures or videos from your USB stick

Help: instructions, help tutorials, troubleshooting

Light (Medeas Plus): turn light ON/OFF

Maintenance: shows the last maintenance and error messages

Change Filter: enter date of change of the filter bag and display the date of last change

Settings: for setting the time, date and language

By means of this button  you can return to the previous menu.

## Help Menu



Manual: Here is a short form of the manual. This does not replace the original manual in paper form, as the latter contains more detailed instructions and safety instructions.

Insert Burs: this clip demonstrates the clamping of rotary tools

Clean Chuck: video clip that demonstrates the cleaning of the chuck

Filter Change: video clip that shows how to change the filter bag

Troubleshooting: solutions to known problems

By means of this button  you can return to the previous menu.

# Usage

## Settings Menu



Time: set the system time

Date: set the system date

Language: set the language for the device

Safety Precaution: Set whether a safety message is to appear from a speed increase of 10,000 rpm, which has been caused by the memory keys. If you only use instruments that are approved for a speed of 40,000rpm, the safety message can be deactivated.

## Confirm Filter Change

Every 50 hours of operation you will get the message to "Check filters". After the filter change, the following must be entered into the instrument. On the start screen, click the icon for the select menu:



Then click "Change Filter". Confirm the filter change with YES.

## Turn Light ON / OFF (Medeas Plus)

To turn the light on or off, click the top of the bar on the light icon:



Alternatively, you can switch the light on or off in the menu. Just click the icon for the Select menu on the start screen:



Then click "Light". Now confirm with YES or NO.

# Usage

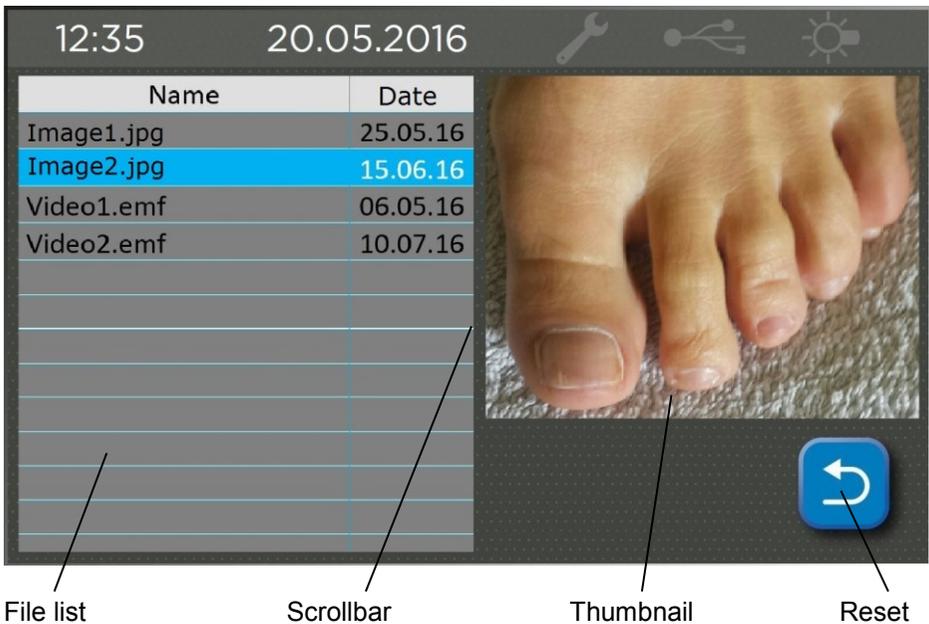
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## Pictures & Videos

The image and video viewer can be used to view images in JPG format. Videos can be displayed in the EMF format from the USB stick. Preferably, use the supplied USB stick (4 GB, Art. No. 6354). USB sticks from other manufacturers are mostly compatible. The sticks must have the FAT16 or FAT32 file formatting. Sample files are uploaded on the supplied stick. Deleting these files does not affect the function of the device.

Please note that a maximum of 100 files may be located in the directory for the image viewer.

Click <Picture/Video> in the select menu to start the viewer.



In the file list, you can see the files from the USB stick. By scrolling down, you can browse through the list. Select an image and a small preview is shown on the right. Click on thumbnail to enlarge it. Click once more on the enlarged view of the image to return to the thumbnail view.



You can use the program to show the customer the images relating to the progress. To do this, the file name, the customer name and a serial number are required. Use the sorting feature to find the desired image.

# Usage

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## Sort the images

By tapping <Name> the file list is sorted in ascending order by file name. By repeatedly tapping <Name> the file list is sorted in descending order by file name.

By tapping on <Date>, the file list is sorted in ascending order by date. By repeatedly tapping <Date>, the file list is sorted in descending order by date.

## Available video formats

The EMF format can be viewed. At <http://www.hadewe.net/video-library/> we provide a program ready to convert your own videos from other formats to EMF format.

Open the file to begin installation. Follow the instructions on the monitor.

## The conversion program to be used is File Converter



*Input:* Select a source file. The following formats are supported: MP4, WMV. The source files should be proportionate to 4:3 to be taken so as to avoid distortion when converting.

*Output:* Specify the destination folder. A file name must not be specified. We assume the file name of the source file.

*Frame rate:* Number of frames per second. Values between 10 and 40 are possible. Recommended value: 25.

## Usage

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*Recording quality:* Values between 1 and 31 are possible. The higher the value, the higher the compression, the lower the quality and the lower the file size. Recommended value: 20.

Clicking Convert starts the conversion. The video file [\*.emf] is written in the destination folder.

### Video library

At <http://www.hadewe.net/video-library/> you can download videos and pictures on the subject of footcare for your device. Download this on the USB flash drive in order to consider the devices.

In the video library, you can find videos and pictures that help you to explain the treatment to your customers. Especially new customers are often unsecure, because they do not know what to expect during a treatment. It is helpful to explain the treatment steps to the patient. This is often difficult, especially when the patient cannot see the treatment site. Pictures speak louder than words. Take advantage of our videos to explain to the patient, what steps you will take during the treatment.

In addition, located in the video library, are instructions describing the operation and maintenance of the appliance.

# Messages

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## REMINDER: CHECK CHUCK



→ Every month you will receive a reminder about cleaning the chuck. See chapter **Cleaning the Chuck** and help video "Clean Chuck" under the menu item "Help".

## RECOMMENDED MAINTENANCE

→ After prolonged use, replacement of wearing parts such as ball bearings is recommended. The control unit evaluates the period since the last maintenance and the actual operating time and, if necessary, displays a maintenance recommendation. If maintenance is required, this symbol  will appear. Tapping this icon will display the following message:



In this case, contact your distributor or repair shop.

## REMINDER: CHECK FILTER

→ Every 50 hours of operation in the suction mode, you will receive the message "Please change fil-

ter!". You will find instructions in the chapter **Exchange Micro Filter** and a help video under the menu item "Help".

**SHUTDOWN DUE TO SPEED DIFFERENCE** → The device switches off when the set hand-piece speed cannot be maintained.

**SHUTDOWN DUE TO SUCTION DIFFERENCE** → The device switches off when the speed of the suction motor cannot be complied with.

**SHUTDOWN DUE TO HIGH LOAD DEACTIVATION** → The device switches off when the handpiece has been heavily burdened over a longer period of time.

# Maintenance & Care

## Cleaning the Chuck (Medeas Plus)

In the process of time, some dirt might collect itself within the hand-piece, and might affect its functions. Therefore, the chuck has to be cleaned monthly.

### How to remove the chuck

Screw off the top of the handpiece with the spanner shown in the picture.



Now clean the inside of the hand-piece and the top with the brush.

For opening the chuck, push the button forward.



Set the screw spanner (wrench) on the axle and hold it tight. Now use the front of the second spanner to unscrew the chuck.



To assemble the chuck, follow the steps in reverse order. Make sure that the chuck is opened during the assembly (the handpiece button must be in forward position) and is firmly applied afterwards.

### How to clean the chuck

Soak the chuck in ethyl alcohol or a cleaning liquid for tools. Clean the slits of the chuck with the brush.



Use the brush to remove all dirt residues from the drill-hole of the chuck:



## Maintenance & Care

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Rinse the chuck very well, and make sure you let it dry well afterwards. Cover your index finger with a very little amount (just a drop) of oil and rub in between your thumb and index finger. Dab off the oil until your fingers is only covered with a very thin film of oil. Now move the chuck in between your thumb and index finger. There should be only a very thin film of oil left on the chuck. Please act according to the saying: Less is more.

### Cleaning the Clamping System (Medeas Chrome)

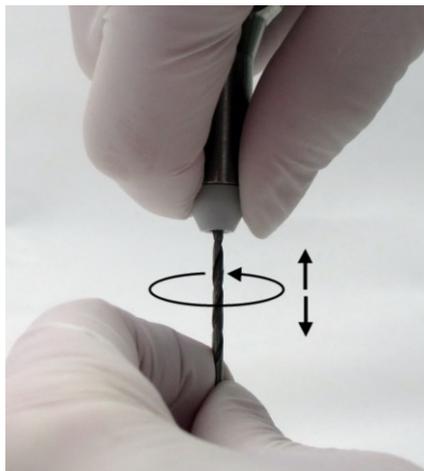
When inserting the instruments, it may happen that dust enters the clamping system. This may cause that instruments can no longer be inserted deep enough and that a tight grip is no longer granted. The result of this often is abrasive wear, and therefore the clamping system is to be cleaned every 50 hours of operation.

For this purpose, screw off the protective sleeve of the handpiece:



Clean the inside of protective sleeve and the hull with a dry scrubber or brush. Now insert care-

fully the provided special drill into the handpiece. Turn the drill clockwise while you hold fast the white plastic part:



Apply only slight pressure when inserting the drill. The stuck dust will come loose and by turning the drill it will come out. During this procedure hold the handpiece upside down so that the dust can fall down easily. After that screw on the metal sleeve again.

# Maintenance & Care

## Upload Firmware

When you turn on the device using the power switch, the version number will appear briefly on the display:

```
Firmware Version: 1.00.24 compile date: Aug 3
```

1. Download the firmware from <http://www.hadewe.net/video-library>. Save the file on a USB stick. The file must be located in the root directory. The file name *encrypted\_blt0\_m7.bin* must not be changed.
2. Turn on the device with the power switch and insert the USB stick.



3. Simultaneously press the + / - buttons and hold down while you switch on the device using the power switch.
4. Display during the update:

```
Bootloader version: 1.00.00 compile date: Feb 22
SDRAM TEST... OK!
SD Card Version: Version: 1.00.0

Searching usb device... found
Copy file1:/bootloader_data/Dateiname.jpg to 0:0
```

This process takes approximately 15 minutes.



Never turn off the device during the update. Otherwise it could be damaged.

5. As soon as the last line "Please restart device" is displayed, the update is complete and you can switch the device off using the power switch.

```
Bootloader version: 1.00.00 compile date: Feb 22
SDRAM TEST... OK!
SD Card Version: Version: 1.00.0

Searching usb device... found
Load file to memory... done

----- BOOT FILE DATA -----
HW Id: 1
FW Version: 1.0.24
CRC: 7a3
-----

Decrypt Data... done
Calculated CRC: 7a3 --> CRC CHECK OK!
FW update complete
Please restart device
```

6. The device can now be used again as normal.

## Maintenance Overview

What has to be done?	How often? Done by whom?
cleaning the chuck	monthly by user
changing the filter bag	each 50 hours of operation by user (check after each 10 hours)
changing the control unit filter	each 200 hours of operation by user
maintenance by repair workshop (changing worn parts; housing; cleaning; check leakage current)	each 500 hours of operation by repair workshop

# Handling Instructions

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Never put the handpiece into any kind of liquid, and never oil or grease the handpiece. Clean its surface with a damp cloth. Pay attention, that no moisture or liquid enters the handpiece. Never use spray disinfection.



Never put any wet burs or instruments into the handpiece. Its moisture could damage the interior parts of the handpiece.



Any materials used by hadewe prevent a formation of rust. In cases in which a rust infestation was found within the handpiece, thorough inspections and examinations always have proved that the rust had a foreign origin (which was usually caused by the tools used in these circumstances). Even in high-grade steel instruments of well known manufacturers, formation of rust can appear, e.g. through wrong treatment with chemical cleaning and disinfection liquids. This extraneous rust affects internal parts of the handpiece in form of rust bloom and causes pitting. Therefore, when you not working with the handpiece, always remove the tool/bur from it.



Always make sure that you do not let the handpiece fall down or exposes it to any shocks. The ballbearings and the motor could be damaged by this.



Only work with tools, which are flawless. Do not work with tools which

- are bent or out of balance
- whose shaft is worn out or
- are rusty.



Working with faulty tools will cause a stronger vibration of the handpiece. A damage of the ball bearings, clamping technique or motor could be the consequence.



Working with high pressure will not improve the outcome of your work, since the motor will even be slowed down. A second disadvantage is the stronger impact on the ball bearings and the motor, which will shorten their life span in the long run.



In case of sending the device by mail remove the dust filter before.



Only suck up dust or milling waste, never suck up larger particles such as small bits of cotton wool as this may be get caught in the handpiece and lead to blockages.

# Troubleshooting

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## **Handpiece vibrates, is very noisy and/or becomes warm in the front part.**

Use of bent burs/tools. → Use a different bur/tool to test this. The bur/tool itself can be tested with the hadewe Bur Shaft Tester (Art. No. 4990, to see if it is bent).

Maximum allowed speed of the tool was exceeded, which caused a stronger vibration. → Pay attention to the tool (e.g. bur, capper and instrument) manufacturers handling details.

## **Bur/tool can be inserted only with difficulty or not at all.**

Use of bent burs/tools. → Use a different bur/tool to test this. The bur/tool itself can be tested with the hadewe Bur Shaft Tester (Art. No. 4990, to see if it is bent).

Chuck is dirty. → Clean the chuck according to the instructions in the manual.

## **Medeas Plus: Bur does not clamp or does not spin.**

Chuck is not tightened well. → Tighten the chuck firmly according to the instruction in the manual.

## **Medeas PlusKnob of the handpiece cannot be moved easily.**

Chuck is dirty. → Clean the chuck according to the instructions in the manual.

Rubber under the knob is tilted.  
→ Turn rubber about 90°.

## **Unit does not work at all.**

Check if the main switch of the unit is turned on at the side of the unit.

Footswitch is used constantly or faulty. → Pull out the socket of the footswitch to see if this is the cause.

Pull out the mains plug to reset the device.

## **The unit shows different sound levels at different sites of use.**

The sound level varies according to the surroundings of the unit. If you set up the unit directly in front of a wall, the sound is reflected stronger, as if it would, while standing further away from a wall.

## **Handpiece motor stutters shortly (approx. 1 sec) when turning unit on.**

In very rare cases this effect did appear. It will not harm or damage the device.

## **Suction function doesn't work.**

The suction motor will turn off automatically if it overheats. Let the device cool down before using it again. Send the device off for inspection if this occurs repeatedly.

**For descriptions of the messages on the device display see page Fehler! Textmarke nicht definiert.4.**

# Technical Details

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## 0980 Medeas Plus

*control unit:*

total weight: 2,7kg

dimension: W273xH142xD186mm

input: 100V-240V, AC voltage, 50/60Hz

power consumpt.: 1A(100V)-0,5A(240V)

fuse primary:

F1: F2: 4A delay action, fuse

fuse Sec.: Thermal fuse

protection class: I

accuracy of speed display:  $\pm 10\%$

*handpiece:*

weight: 150g

diameter: 19 – 25 mm

length: 144 mm

speed: 6000 – 40000 rpm

## Operating Time

The device is designed for continuous operation.

## Ambient Conditions

The device is intended for use in dry, closed rooms.

Operation:

Temp.: +10°C to +26°C

Rel. humidity: 25% to 75%  
(not condensed)

Air pressure: 700 hPa to 1060 hPa

Storage:

Temp: -5°C to +55°C

Rel. humidity: 10% to 95%  
(not condensed)

Air pressure: 500hPa to 1060hPa

Transport (up to 4 weeks):

Temp: -5°C to +55°C

Rel. humidity: 10% to 95%  
(not condensed)

Air pressure: 500hPa to 1060hPa

## 0981 Medeas Chrome

*control unit:*

total weight: 2,7kg

dimension: W273xH142xD186mm

input: 100V-240V, AC voltage 50/60Hz

power consumpt.: 1A(100V)-0,5A(240V)

fuse primary:

F1: F2: 4A delay action, fuse

fuse Sec.: Thermal fuse

protection class: I

accuracy of speed display:  $\pm 10\%$

*handpiece:*

weight: 140g

diameter: 19 – 25 mm

length: 118 mm

speed: 6000 – 30000 rpm

## Accessories & Spare Parts

*art.*

0970	footswitch
3752	control unit filter
5179	micro filter
5361	spanner
5374	spanner
6173	special drill
6158	cleaning brush
6354	USB stick (4 GB)

The clamping system is designed for rotating instruments, which have a shaft of 2,35 mm in accordance with DIN EN ISO 1797-1.

## Declaration of Conformity

We declare under our sole responsibility, that the product podiatry units 0980 and 0981, to which this declaration relates, are conform to the following standards or normative documents:

2014/30/EU directive EMC

2014/35/EU low voltage directive

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# Technical Details

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## Disposal



The device and filter may contain infectious material such as residual sanding dust or skin particles. Therefore, please bear in mind the following disposal instructions.

### *Disposing of the device*

Old devices bought in Germany that correspond to the electronic device law should be sent directly to the manufacturer (hadewe). We will dispose of the device free of charge. The devices should not be taken to public disposal plants (WEEE Reg. Nr. DE20392713, b2b device). For disposal of this unit out of Germany, please contact the site where you bought this hadewe product.

### *Note for the disposal of the device/ treatment system*

Wear protecting gloves of the class 2 in accordance with DIN 374-2 during the disassembling of the device. Also, wear a protective mask for your face according EN 14683 version IIR or EN 149 FFP2.

### *Disposal of filter*

The filter bag and the control unit filter are considered low contaminated waste. Dispose those in intransparent, liquid-tight, resistant plastics sacks and do not dispose them compressed in the regular household garbage.

## Symbols



Caution!



Important note!



Follow instructions for use!



Temperature limit (indicates the lower and upper temperature limit)



Air pressure: permissible range



Air humidity: permissible range



Keep dry!



ON/OFF button (standby)  
(no disconnection from main power supply)



change direction



alternating current



direct current



safety fuse



socket footswitch



date of manufacture,  
name and address  
of the manufacture

## Safety Check

A safety check must be done in compliance with the regulations of the country where the device is used. The inspection interval is once a year.

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