

**hadewe**

# Manual



## Laboratory Device LAB-40

Art. 0142  
FB 04-241 Rev. 2  
Last revision: 18.01.2019

CE

# Contents

---

<b>Safety Instructions</b>	<b>3</b>
<b>Cleaning &amp; Disinfection</b>	<b>7</b>
<b>Getting to Know the Unit</b>	<b>8</b>
<b>Before First Use</b>	<b>9</b>
Area of Application	9
Installation/Starting Up	9
<b>Using the Unit</b>	<b>10</b>
Clamping the Bur/Tool	10
Adjusting the Speed	10
<b>Maintenance &amp; Care</b>	<b>11</b>
Cleaning the Chuck	11
<b>Handling Instructions</b>	<b>12</b>
<b>Troubleshooting</b>	<b>13</b>
<b>Technical Data</b>	<b>14</b>

## Safety Instructions

---



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.



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.



To avoid the risk of electrocution only connect the device to the mains power supply.



If you pull the power plug it will stop the connection to the mains power supply. Set up the unit so that the power plug is always accessible. The power switch should also always be easily accessible.

## Safety Instructions

---



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



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 be 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, wear a nose and mouth protection. Always follow the safety instructions, provided by the manufacturer of the materials being formed and used.

## Safety Instructions

---



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.



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.

## Safety Instructions

---



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.



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.

## Cleaning & Disinfection

---

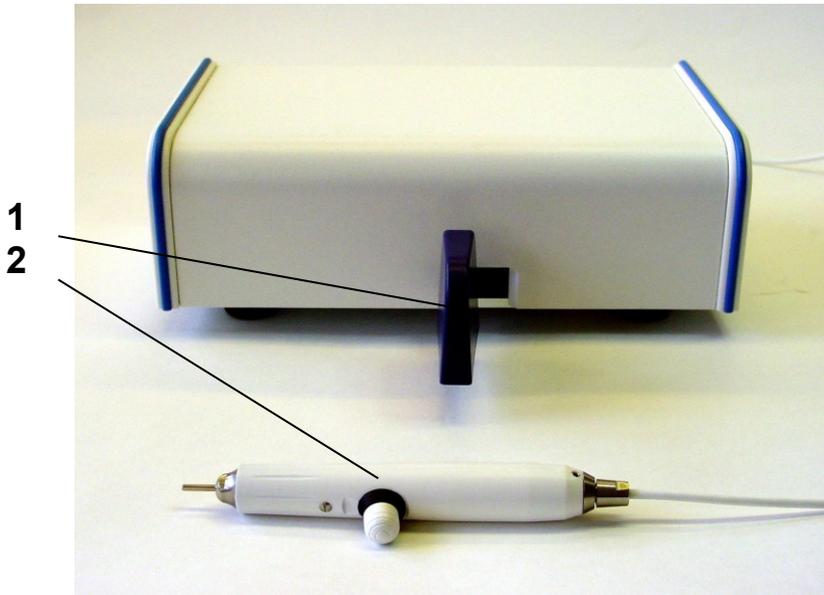


After working on contaminated workpiece carry out the following steps:

- Remove the rotating tool (e.g. bur, capper etc.) first. Then handle the cleaning of the tool according to the instructions of its manufacturer.
- Remove remained material 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).

# Getting to Know the Unit

---



- 1 foot pedal to adjust the speed
- 2 handpiece
- 3 socket for handpiece
- 4 main switch

## 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.

vice to a grounded supply system. Switch it on at main switch at back of housing. The device is ready to operate now.

### Area of Application

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

- dental technique / -laboratory:  
milling-, trimming and polishing work at plaster casts and models (Do not use this unit for dentist purposes, i.e. working directly on the patient.)
- hearing device industry:  
milling-, trimming and polishing work
- industry: grinding, milling and polishing works

### Installation/ Starting Up

The installation of the workroom must correspond to any regulations according to your country laws. Set up the control unit, so that the ventilation slits are not covered or blocked, and the exhaust air can escape well. The device may only be operated in confined spaces.

Put the handpiece away in a safe position (i.e. handpiece holder) to avoid damage in case of an unintended start. Put the plug of the handpiece into the socket at the back of housing. Connect the de-

# Using the Unit

---

## Clamping the Tool/Bur

The handpiece is equipped with a chuck, which can hold all burs with a diameter of 2,35 mm. To open the chuck, push the spanner 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.

## Adjusting the Speed

The speed is set up by using the foot pedal. Push the pedal to the right side in order to increase speed.

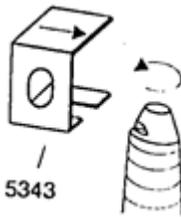
# Maintenance & Care

## Cleaning the Chuck

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.

### Dismantle chuck

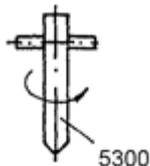
Screw off the top of the hand-piece with the tool 5343:



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

For opening the chuck, push the button forward.

Set the tool 5300 on the axle and hold it tight. Now use the front of tool 5343 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 hand-piece button must be in forward position), and is firmly applied afterwards.



### Clean chuck

Soak the chuck in ethyl alcohol or a cleaning liquid for tools. Clean the slits of the chuck with the brush 6158:



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



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.

# Handling Instructions

---



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



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 bur/ tool from it.



Always make sure that you do not let the handpiece fall down or exposes it to any shocks. The ball bearings 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 or even devastation 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.



The electronic components use energy in standby modus. To avoid unnecessary power consumption, switch the device off at main switch if it is not used for a longer time.

# Troubleshooting

---

## **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, 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.

## **Bur does not clamp, or does not spin.**

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

## **Knob of the handpiece cannot be moved easily.**

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

## **The unit has no function at all.**

If a fuse is blown, let the fuse be exchanged by a professional service point.

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

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

# Technical Data

---

## Art. No. 0142

total weight: 2,5 kg  
dimension: W262xH92xD152 mm  
incl. overhanging parts:  
W262xH92xD229mm  
supply voltage: 90-230V AC  
output voltage: 28 V  
output: 64 W  
fuse: F1 4A 250 V  
protection class I

### *handpiece:*

diameter: 17,5-20,5 mm  
length: 142 mm  
speed: 6.000 - 40.000 rpm

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

## Declaration of Conformity

We declare under our sole responsibility, that the products 0142 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

hadewe GmbH – Grambartstraße 10 –  
30165 Hannover -- Germany

## Symbols



Caution!



Important hint!



Follow instructions for use!

I / O

unit ON/OFF



alternating current



direct current



safety fuse



date of manufacture,  
name and address  
of the manufacturer

## Disposal

For disposal of this unit, please contact the site, where you bought this hadewe product.

## 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.



**hadewe**

hadewe GmbH  
Grambartstraße 10  
30165 Hannover  
Germany  
[info@hadewe.de](mailto:info@hadewe.de)  
[www.hadewe.de](http://www.hadewe.de)