

V40PRO

brushless
Handpiece



Important instructions and warnings

1. For your safety, please read all operating instructions before putting the device into operation.
2. Observe the occupational health and safety regulations of the employer's liability insurance.
3. Before starting, ensure the supply voltage corresponds to the data on the type plate.
4. Remove the chuck/service tools before switching the device on.
5. Provide good lighting, safety glass shields, eye protection and an extraction system at the workplace.
6. The handpiece is intended exclusively for dry grinding.
7. Before using the handpiece, make sure the tool is seated firmly and cannot be pulled out.
8. Use only functional, certified tools (drill bits, milling bits, cutting disks, polishing tools, grinding tools, etc.) and observe the tool manufacturer's instructions for use (e.g. maximum permissible speed of rotation).
9. Make sure that the handpiece does not start unintentionally or run unsupervised.
10. Operate the handpiece only with a tool or pin locked in.
11. Do not turn the chuck while the handpiece is rotating.
12. Clean the chuck regularly according to the instructions (never use compressed air for cleaning / see section 2.1).
13. Repair and maintenance work on the electrical part of the equipment may only be performed by an approved or certified repair technician.
14. Electrical devices may not be used in a damp or wet environment.
15. For 115V, use the grounded power cable SVT3x18AWG with IEC socket and grounded plug.
16. Any interruption in the protective ground conductor inside and outside the device or loosening of the protective ground connection can lead to the device posing a threat to the operator. Intentional interruption is not permitted.
17. In case of defects or damage where safe operation is no longer ensured, the device must be secured against unintentional use.
18. This device is not suitable for use in potentially explosive environments or on patients.

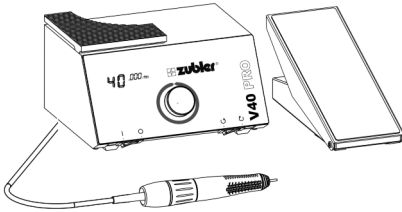
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0. Introduction

Thank you!

We are delighted that you have chosen the Zubler V40PRO and we hope that you will enjoy working with it. The constant further development of our technology is based on cooperation with experienced dental technicians. Our primary goal is to construct dental equipment of maximum quality, flexibility and sustainability. Performance and profitability are the basic prerequisites for this.



In order to ensure trouble-free usage, please read the operation manual carefully.

0.1 Declaration of conformity

We, Zubler Gerätebau GmbH
Buchbrunnenweg 26
89081 Ulm Jungingen
Germany

hereby declare that the product named below,

V40PRO

conforms to the regulations of the following EU directives:

2006/42/EC Machinery Directive

2006/95/EC Low-voltage Directive

2004/108/EC EMC Directive

This declaration loses its validity if the product is modified without our agreement.



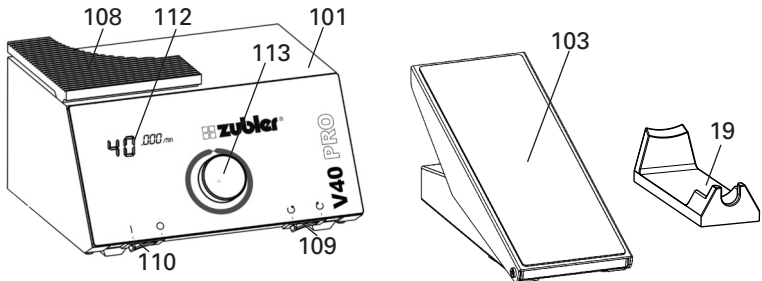
Kurt Zubler
Chief Executive Officer

0.2 General notes

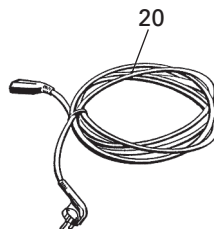
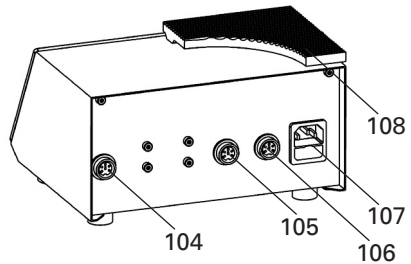
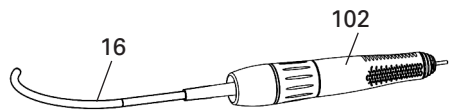


Functional principle: Thanks to its special brushless design, the V40PRO handpiece enables smooth, fatigue-free and thus economical working in continuous operation. The device is constantly monitored for overload through microprocessor control. An additional thermal fuse provides the handpiece with increased safety.

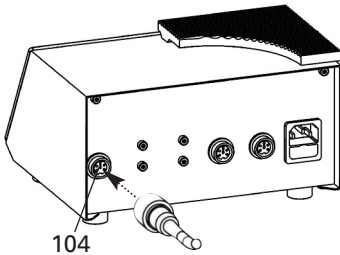
0.3 Scope of delivery



- 16 Motor Cable
- 19 Handpiece Stand
- 20 Power Cord
- 101 Controller
- 102 Handpiece
- 103 VARIO Foot Pedal
- 104 Socket for Handpiece
- 105 Socket for Vario Foot Pedal
- 106 Socket for Data Cable/
Automatic Switching
- 107 Power Cord Connection
- 108 Tool Tray
- 109 Direction Switch
- 110 On/Off Switch
- 112 Digital Speed Display
- 113 Speed Knob

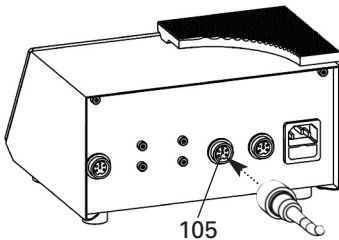


0.4 Commissioning



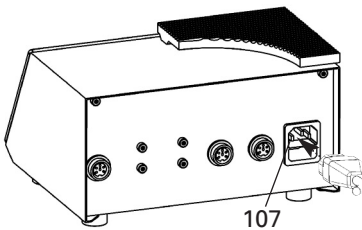
Connection of the handpiece

Connect the [VARIOstar](#) handpiece Motor Cable 16 to socket 104 (align to notch and secure by turning).



Connection of the VARIO foot pedal

Connect the [VARIOstar](#) Foot Pedal 103 to socket 105 (align to notch and secure by turning).



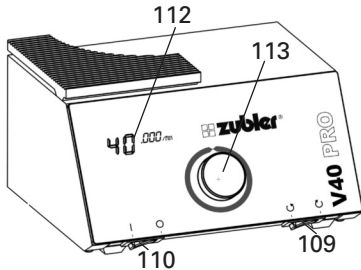
Connecting the mains cable

After comparing the Power Supply data with the Voltage requirement data on the type plate, plug the Power Cord 20 into Power Cord Connection 107, then into the Power Supply or Wall Outlet.

- 104 Socket for Handpiece
- 105 Socket for VARIO Foot Pedal
- 107 Power Cord Connector

1. Operation

1.1 Handling the controller



Turn the controller on using the On/Off switch 110.

The speed display 112 indicates the pre-selected speed. Use the speed knob 113, to set the desired maximum speed.

Select the desired rotation direction of the handpiece motor using direction switch 109 (forward/backwards)

Depress the VARIO Foot Pedal 103 to start handpiece 102 rotation. Release the Foot Pedal 103 to stop handpiece 102 rotation.

While in usage, the speed can be varied within the preselected speed range by varying the pressure on the foot pedal 103.



109 Direction switch

110 On/Off switch

112 Digital speed display

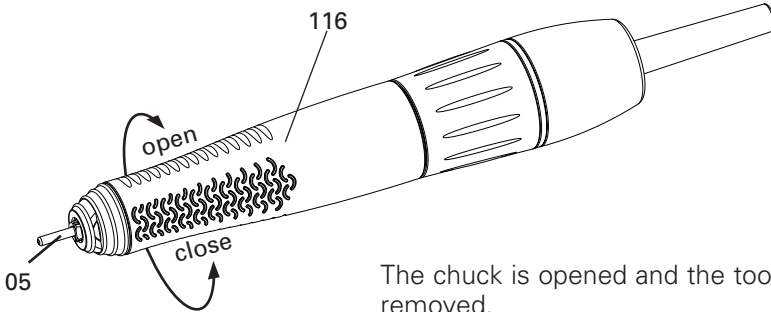
113 Speed knob

Caution: Observe the tool manufacturers specified speeds.

1.2 Handling the handpiece

Tool change:

The chuck on the handpiece is opened or closed by turning the grip 116.



05 Pin
116 Grip

The chuck is opened and the tool can be removed.

After inserting the tool the chuck is closed again by turning the grip in the opposite direction.

An optional 3.00 mm chuck can be used (see 2.1)



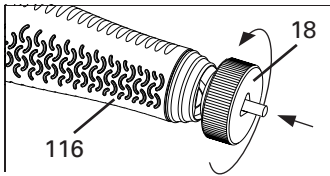
Only change the tool with the motor turned off!

Check before using the handpiece that the tool is seated firmly and cannot be pulled out.

In order to avoid deformation of the chuck, a tool or the pin provided must always be inserted in the chuck.

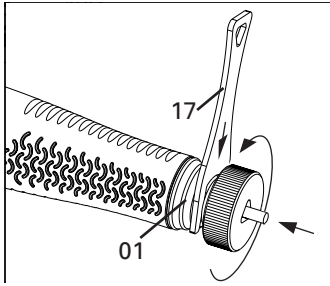
2. Maintenance

2.1 Cleaning or replacement of the chuck

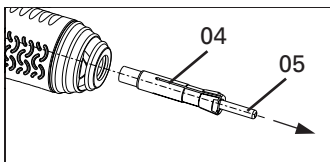


2.1.1 Removing the chuck

Open the chuck 04 and remove the tool. Push the chuck holder 18 onto the chuck 04. Fix the chuck 04. Turn the chuck 04 with the help of the chuck holder 18 until the flanks of the spindle are visible at the tip 01 and the flat spanner 17 can be inserted. Insert the flat spanner 17 and hold it tight. Turn the chuck holder 18 counter-clockwise to loosen and unscrew the chuck 04.

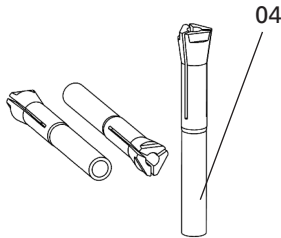


To reinstall, follow the above instructions in reverse order. Screw in the chuck 04 in the clockwise direction up to the end stop and lightly tighten it.



2.1.2 Cleaning the chuck

Remove accumulated dirt if possible using a suitable twist drill (max. 2 mm). Then clean in an ultrasonic bath, repeating if necessary. Dry the chuck well with compressed air!



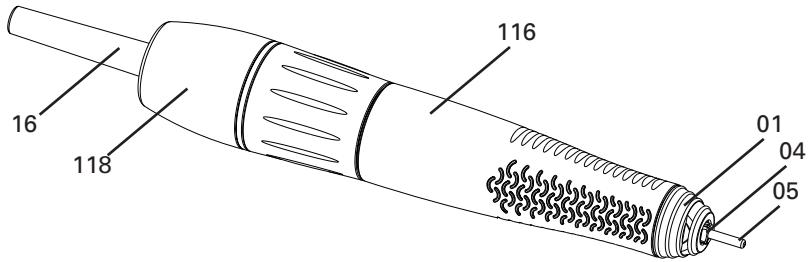
Also clean the cone before inserting. To do this, dip one end of a Q-Tip in cleaning agent (petroleum ether). Ensure that the handpiece opening is held vertically downwards in order to prevent liquid getting into the ball bearing. Clean the cone with rotary movements. Subsequently, dry the cone using the dry end of the Q-Tip.

Do not blow out with air! Lightly grease the chuck all round on the cone and on the thread side and insert in the shaft.

- 01 Tip
- 04 Chuck
- 05 Pin
- 17 Flat Spanner
- 18 Chuck Holder
- 116 Grip

Do not clean handpieces with compressed air!

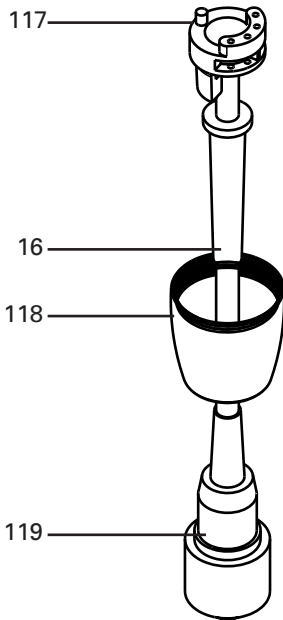




2.2 Replacing the Motor Cable

Unscrew the cap 118 from the motor and release the cable by pulling off the motor cable plug connector 117.

Plug in a new handpiece cable 16 and secure it with the cap 118. Use only an original motor cable with a new cap 118.



16 Motor Cable

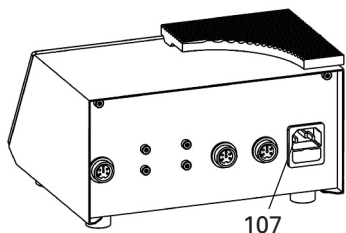
117 Motor Cable Connector

118 Cap

119 Handpiece Connector

2.3 Spindle change is simple

2.4 Changing the fuse in the controller



The fuse is located in the fuse drawer in the power input connector 107. Open the drawer and replace the fuse. The fuse value is marked on the type plate.

Reasons for a blown fuse: short-circuit in the device or overvoltage.

Return the device to Zubler USA for evaluation if the cause is unclear.

2.5 Malfunctions

If the handpiece is overloaded or blocked, the device switches off for safety reasons. Switch the device off and on again. The device is ready for use again immediately.

Zubler accepts no warranty claims if the Handpiece V40PRO is not operated in accordance with the operation manual.

Repair and maintenance work on the electrical part of the device may only be carried out by technical personnel or by persons trained in the factory who have been instructed about the safety regulations. For maintenance work, disconnect the power cord or isolate the device from the power supply so there is no electrical current.

3. Data

3.1 Technical data:

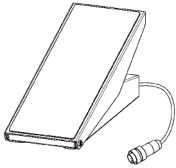
Dimensions:	V40PRO
Controller	
Width	220 mm (8.6 inches)
Height	108 mm (4.25 inches)
Depth	190 mm (7.48 inches)
Weight	4.1 kg (9.0 lbs.)
Rated voltage	115 V
Rated frequency	60 Hz
Power consumption (max.)	240 W
VARIOstar handpiece	VARIOstar
Speed range	1,000 – 40,000 rpm
Protection class	I
Length	162 mm (6.37 inches)
Diameter	24 mm (0.94 inches)
Weight	235 g (8.29 ounces)

3.2 Scope of delivery:

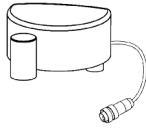
V40PRO controller	804-1066
V40PRO VARIO foot pedal	804-1016
V40PRO handpiece with chuck 2.35 mm	804-3002
Chuck tool 2	896-1018
Flat spanner tool 1	896-1017
Handpiece holder	896-1019
Operation Manual	

3.3 Accessories:

VARIO Foot Pedal, standard	804-1016
VARIO Rotary Foot Lever	804-1015
VARIO Knee Pedal (can be mounted left or right)	804-1017
Handpiece Stand	896-1019



804-1016



804-1015



804-1017

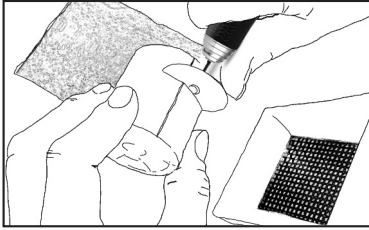


804-1019

3.4 Spare parts:

Tip	896-1001
O-ring for tip	896-1002
Spindle, completely assembled	896-1003
Chuck, 2.35 mm	896-1004
Protection pin, 2.35 mm	896-1005
Chuck, 3.00 mm	896-1006
Protection, pin 3.00 mm	896-1007
Ring, red	896-1015
Motor cable	896-1016
Flat spanner, tool 1	896-1017
Chuck holder, tool 2	896-1018
V40PRO tabletop controller 230 V	804-1066
VARIOstar handpiece only	804-3002
Handpiece Stand	896-1019
Power cable	896-1020

4. ■ Safety notes



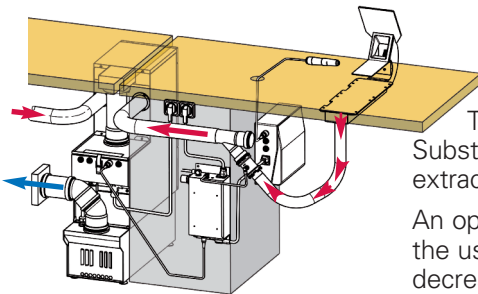
Even if you barely remove any material and cannot see dust particles, milling and grinding generates fine dust that is suspended in the air throughout the entire room. The distance between your face and the grinding position is so small that you inhale high concentrations of this dust, even if you consider the grinding amount to be insignificant. The fine components of the dust in particular penetrate deeply into the lungs with ease. Alveolar dust particles with a size of less than 5 μm can settle in the lungs and lead to permanent asthmatic suffering and serious lung diseases.

Remember, it's your job. You are exposed to this contamination every day!

Dust in dental technology – a great danger!

Dental technicians are especially endangered. According to statistics held by the employer's liability insurance association, occupationally-related skin and lung diseases are considerably higher here than the average in the industries united in the employer's liability insurance association for fine mechanics and electrical engineering.

Fine dust in the air is particularly dangerous. Damaging effects on the skin and the respiratory organs have also been found with dental gypsum, embedding compounds and unclassified mixed dusts that are assigned to the general dust limit values.



The Ordinance on Hazardous Substances principally prescribes the extraction of dusts as a legal requirement.

An optimisation of the intake systems and the use of modern dust collectors can decrease the dust concentration many times over.

Zubler offers a dust collection solution to suit laboratories of all sizes.

5. Warranty terms

In accordance with its General Terms and Conditions of Business, Zubler Gerätebau GmbH (Zubler) guarantees the perfect function of the equipment and its freedom from material and manufacturing defects for a period of 12 months from the date of purchase certified by the seller.

We give a lifetime guarantee on armature and winding.

In case of valid complaints, Zubler provides replacement parts or repairs free of charge.

The warranty does not cover defects and their consequences if they are caused or could have been caused by: natural wear and tear; inappropriate treatment, cleaning or maintenance; disregard of the maintenance, operating or connection instructions; corrosion; contamination; chemical or electrical effects that are unusual or impermissible.

The warranty claim will not be accepted if defects or their consequences are due to interference with or modifications to the product. Warranty claims can only be asserted if they are notified without delay to Zubler in writing. A copy of the invoice or delivery note is to be attached to the notification.

In addition to the guarantee, the purchaser's legal warranty claims apply, wherein the warranty period is 12 months.

6. Service

Malfunction	Cause	Remedial action
Handpiece does not start.	<p>Check whether the controller is switched on and the motor speed display is lit.</p> <p>Check whether the chuck of the handpiece is closed (check that the tool is firmly seated)</p> <p>Check whether the handpiece is plugged into the controller.</p> <p>Check whether the foot pedal is plugged into the controller.</p>	<p>Unplug the mains cable 20 and plug it in again; switch on the mains switch 110, see 1.2. Open and close the chuck mechanism.</p> <p>Plug in and secure the handpiece cable (see 0.3).</p> <p>Plug in and secure the foot pedal (see 0.3)</p>
The speed display on the controller does not show any display	<p>Check whether the controller is switched on (On/Off switch 110)</p> <p>Check whether the controller is connected to the mains supply.</p> <p>Check whether the fuse in the controller (mains cable connector) has blown.</p>	<p>Unplug the power cable and plug it in again. Switch on the On/Off switch 110.</p> <p>Replace the fuse (see 2.4)</p>
The speed of the handpiece does not increase	The maximum speed of the handpiece must be set with the speed knob.	Adjust the setting with the speed knob 13.
<p>processing of your enquiry.</p>		

Service address

Zubler Gerätebau GmbH
Buchbrunnenweg 26
89081 Ulm-Jungingen
Germany
Telefon: +49(0)731-14520
Fax: +49(0)731-145213
mail: support@zubler.de
www.zubler.de



4220 Steve Reynolds Blvd.
Suite 24
Norcross, GA 30093
770-921-2131
www.zublerusa.com
sales@zublerusa.com



M-V40PRO- 28/2014en
Subject to technical changes!

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www.zubler.de



Zubler Gerätebau GmbH
Buchbrunnenweg 26
D-89081 Ulm-Jungingen