

PROFIDENT/PROFIDENT LUMOS DENTAL UNITS

USER MANUAL



Item no. 174000/174001

TELEPHONE 020 8891 2007

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1. PURCHASED PARTS

Profident

Profident	174000
Mobile dental unit Profident	1
Dental handpiece (high speed)	1
Low speed motor and handpiece	1
Tray	1

Profident LUMOS

Profident LUMOS	174001
Mobile dental unit Profident LUMOS	1
LED dental handpiece (high speed)	1
Low speed handpiece	1
LED scaler	1
Tray	1

2. FIRST STEPS

Air Pressure

The Profident is an air driven dental unit. The inlet pressure should be set to approx. 75 psi. Please refer to the manual of the compressor to adjust the pressure. If you use a hydraulic compressor, please make sure to connect a suitable oil filter. Keeping the amount of oil in the compressed air as low as possible will prolong the lifespan of your dental unit.

Positioning of the Handpieces

Order of the handpieces (from left to right):

1. Dental scaler (Profident LUMOS only)
2. 3-way air/water syringe
3. Low speed handpiece
4. High speed handpiece

Pressurised Water Bottle

H ₂ O	Pressurised Water Connector for External Units
FLOW	Water flow Control Switch
Flip-switch	Pressure on Water Bottle ON (city)/OFF (bottle)
Volume	750 ml

Fill/Refill Pressurised Water Bottle

Please flip the flip-switch down to the position bottle (OFF) and make sure that all pressure has been released from the water bottle. Remember to turn off the compressor when releasing the system pressure. Only when all pressure is released unscrew the bottle, fill it preferably with distilled water and fix the bottle tightly back on the unit. Finally put the flip-switch back on city (ON).



Warning!

- Use only distilled water.
- Empty the water bottle (every 6 months) and clean it at regular intervals.

Foot Control

The flip-switch has two positions.



1. Right/Towards the blue dot: Water supply switched on: High-speed handpiece and dental scaler (Profident LUMOS only) will be operated with water cooling.
2. Left/Opposite direction: Water supply is switched off (except 3-way air/water syringe): High-speed and low speed handpiece will be operated without water cooling.



Important!

Never operate the dental scaler with the water supply switched off (Profident LUMOS).

3. CONNECT THE UNIT

Connect the Compressor

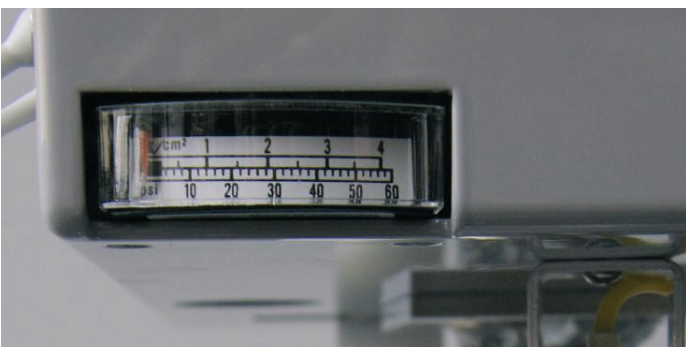
The unit (Profident) has to be connected to a compressor (see also „Air Pressure“, page 4).



Please ensure power supply for the LED scaler of Profident LUMOS (see also „Controls on the Back of the Unit Profident LUMOS“, page 6) and connect the compressor to electricity.

Check Working Pressure

The ideal working pressure is 38–42 psi (pressure is preset).



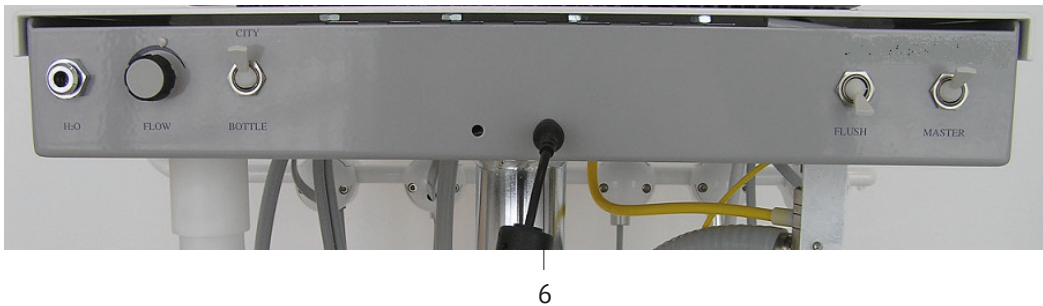
4. START THE UNIT

Controls on the Back of the Unit Profident



1. Pressurised water connector for external units
2. Water flow control switch for external units)
3. Pressure on water bottle ON (city)/OFF (bottle)
4. Water flush for handpieces
5. Master switch (off = down/on = up)

Controls on the Back of the Unit Profident LUMOS



6. 24 V Power Supply for Dental Scaler (only Profident LUMOS)

The unit is turned on with the flip-switches 3 and 5. Both switches have to face upwards.

5. HANDPIECES

High Speed Handpiece Profident



High Speed Handpiece Profident LUMOS



Includes fiber optic illumination.

The high speed handpieces can be operated in 2 different ways:

1. Water-cooled mode
2. Dry mode

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The water-cooled mode is activated with the flip-switch on the foot pedal (see also „Foot Control, page 5). You can adjust the amount of cooling water using the control dial on the bottom right of the unit (please see the picture below).



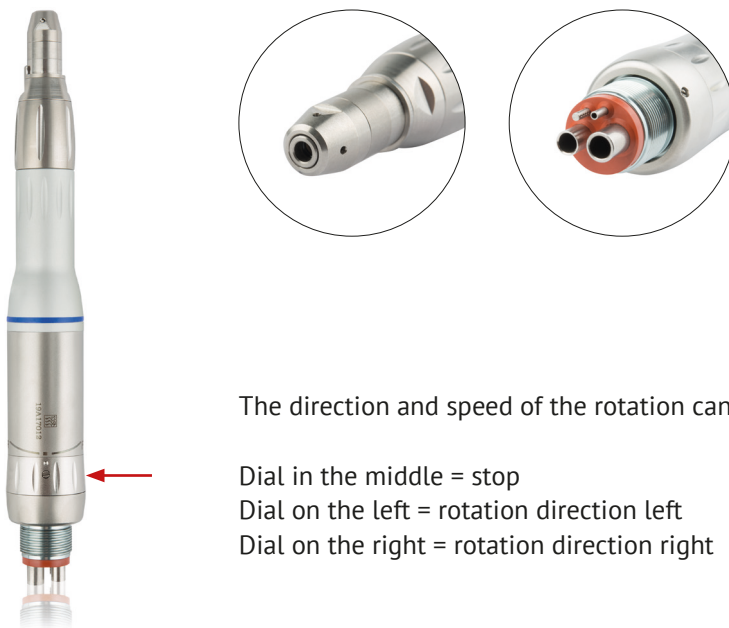
Fitting a bur

Make sure that you only use suitable burs for push button High-speed handpieces. To fit a bur, press the button on the back of the handpiece-head and push the bur deep into the mounting. To change the bur, push the button on the back of the handpiece. This releases the bur and you can pull it out.

Low Speed Handpiece

The low speed handpiece will run without water.

Water cooling is available as retrofit option.



The direction and speed of the rotation can be set on the wheel of the air motor.

Dial in the middle = stop

Dial on the left = rotation direction left

Dial on the right = rotation direction right

Fitting a bur

Make sure that you only use suitable burs for low speed handpieces. To fit a bur, twist the collar of the handpiece (away from the tip) to open the chuck. Then push a suitable bur deep into the chuck and twist the collar again (towards the tip) to lock the handpiece.

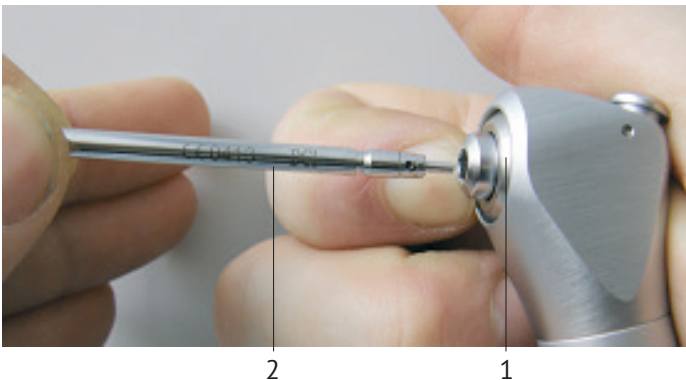
3-way Air/Water Syringe



The 3-way air/water syringe works in three ways:

1. Water/flush mode – Keep the left button depressed to flush with pressurised water
2. Air/drying mode – Press the right button to blow/dry with pressurised air
3. Spray mode – Press both buttons at the same time to activate air and water

Exchange of the Spray Nozzle



To release the spray nozzle (2), please press the outer ring (1) around the nozzle.

Scaler (Profident LUMOS only)



Important!

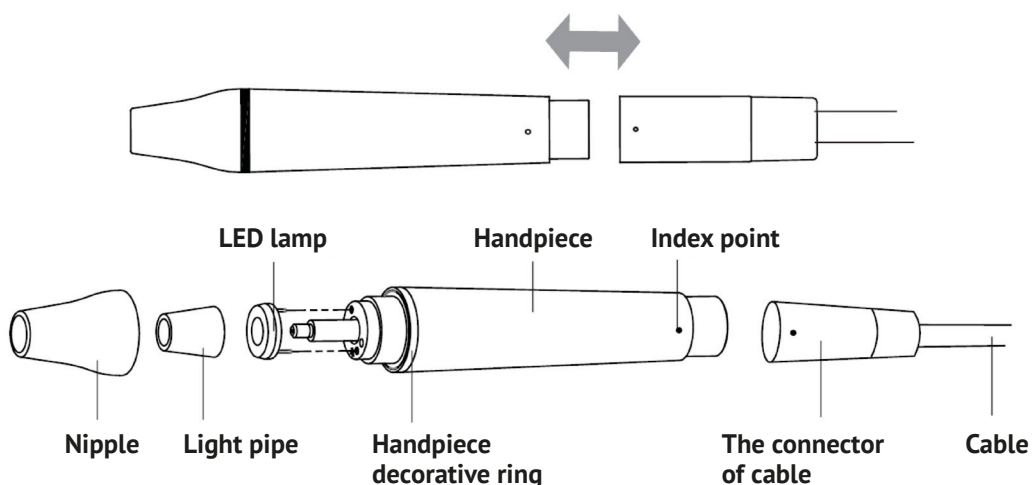
Never operate the dental scaler without water cooling! The scaler tip has to vibrate before it can be used on a tooth.

The water-cooled mode is activated with the dip-switch on the foot pedal. Please make sure that the switch faces towards the blue dot before using the dental scaler (see also „Foot Control, page 5).

You can adjust the amount of cooling water using the control dial on the bottom left of the unit (please see (1) in the picture above). You can adjust the power of the dental scaler with the rotary switch on the left side of the unit (please see (2) in the picture above).

The scaler consists of a detachable handpiece and the scaler tip.

Detachable Handpiece



Nipple:

The nipple can be removed. You can screw out the nipple and clean the pole with alcohol termly. Can be disassembled and cleaned with alcohol regularly, can be autoclaved under the high temperature and pressure.

Decorative ring:

LED lamp/light pipe:

Should be cleaned with purified water and sterilized under the high temperature of 135 °C and high pressure of 0.22 MPa.

Handpiece:

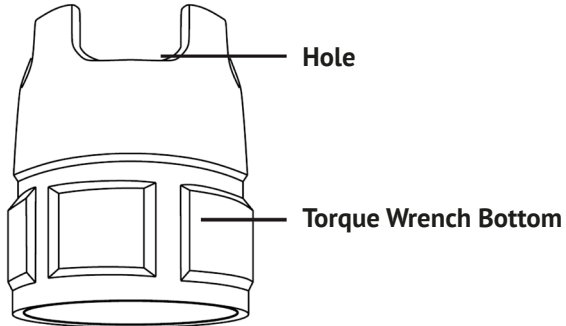
The main part of the ultrasonic dental scaler can be autoclaved under the high temperature and pressure. Symbol: autoclaved (135 °C, 0.22 MPa)

Connector of the cable:

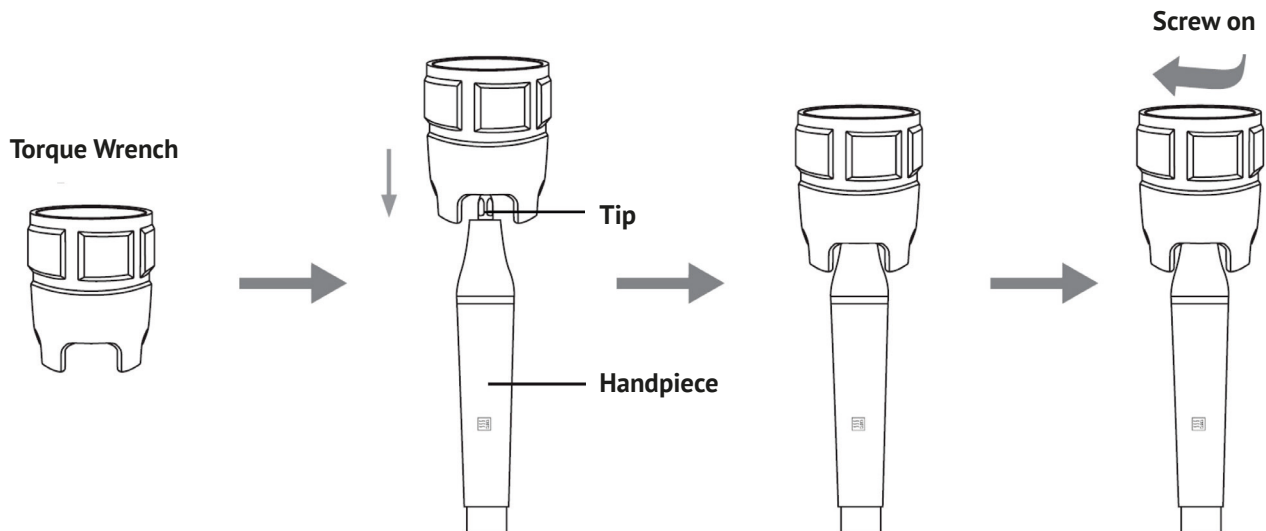
Connects the handpiece with the water source and power supply of the main unit (has to be kept dry).

Torque Wrench

The torque wrench's structure is designed in special way which can control the strength of the scaling tip installation properly and correctly. It also can guarantee the operator screw or unscrew the scaling tip effectively and keep their hands away from being scratched. The torque wrench should be sterilized in steam with 135 °C and 0.22 MPa. Sterilize after each operation. The torque wrench must be cooled naturally after sterilization to avoid scalding when using next time. Keep in a cool, dry and ventilated place and keep it clean.



For operation take the wrench as shown:



Scaler tip installation:

Hold the handpiece, turn the tip toward clockwise direction with the torque wrench. Turn two more circles after the tip stops, then the tip is installed.

Uninstall:

Hold the handpiece, turn torque wrench toward counter-clockwise direction.



Important!

The scaler tip should be sterilized separately with 135 °C after each operation.

6. COMPRESSOR – PUTTING INTO OPERATION



Remove the red cap before use.



Replace the red cap it with the Air Filter.



Tank Pressure Gauge

Outlet Pressure Gauge



To regulate the pressure:

1. Lift the cap to unlock it
2. Turn the cap anti clockwise until fully open
3. Start the compressor (can fizzle now)
4. Turn the cap clockwise until the outlet pressure is between 70 and 80 psi
5. Press the cap down to lock it

7. MAINTENANCE OF THE DENTAL UNIT

Maintenance of Dental Handpieces

1. How to check your High-speed handpiece: Fit a suitable bur to the push button High-speed handpiece (Never run the High-speed handpiece without a bur fitted). Activate the handpiece with the foot control to full speed and check the shut-off delay after taking the foot off the pedal. 1.5 to 2 seconds are normal – a shorter shut-off time indicates contamination or damage of the turbine.
2. How to check your low speed handpiece: Check the correct operation of the low speed handpiece by adjusting the rotary speed on the handpiece from maximum anticlockwise to standstill and then to maximum clockwise rotation. The motor should start without any delay.
3. Make sure to clean the handpieces that after **every** use with suitable oil spray (Art. No. 174010) to remove dirt from the bearings of the handpieces. Please insufflate oil for 2 – 3 seconds via the air pipe connector (the smaller pipe). The pressure will start the motor and will lubricate the complete air turbine.
4. Before you use the handpieces, please let them run for a few seconds for the remaining oil to exit the handpieces.
5. **Important! Continuous cleaning and maintenance of your handpieces have a great effect on the reliability and lifespan of you dental unit. Please also refer to the maintenance instructions of your handpieces.**

Instructions for the Maintenance of Dental Handpieces



Clean the low speed handpiece externally. Disconnect the low speed handpiece attachment of the turbine.



Add about 2 – 3 puffs into the drive with the oil spray (174010) using the spray nozzle (17401155)



Add about 2 – 3 puffs into the drift shaft of the turbine with the oil spray (174010) without using the spray nozzle (17401155)



Insert the plug adapter to the oil spray (174010) and spray into the air ducts also two to three times



Put back together again the attachment and turbine and screw on the hose of the low speed handpiece of the Profident. Press the foot switch 2–3 times, so that the air pressure forces the maintenance oil in the bearings.



After the external cleaning of the high-speed handpiece spray again with the oil spray spray about 2–3 times into the air and water channel, screw back to the high-speed tube and press the foot switch.

Push Button Chuck Maintenance

At least **once a week**, the push-button chuck should be maintained with the oil spray recommended in order to remove deposits and to ensure functionality.

Proceed as follows:

1. Remove the drill.
2. Place the chuck opening firmly on the special nozzle of the spray can.
3. Holding the spray can upright, spray the chuck for 1–2 seconds.
4. Wipe off the escaping care oil with a lint-free cloth.



Maintenance of the Compressor

1. Empty **once per month the air content** (condensate water with oil residues) in the compressor tank by slowly opening the drain plug at the bottom of the pressure vessel.



Previously please separate compressor from power and reduce pressure in the boiler.



Important!

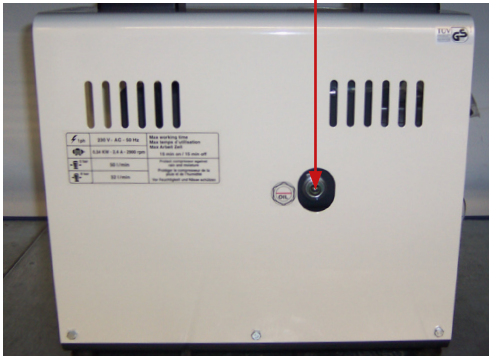
Boiler is under pressure.

To empty the pressure from the compressor, please open the pressure relief valve on the bottom of the pressure chamber of the compressor. Please disconnect the compressor from the mains supply before doing so.

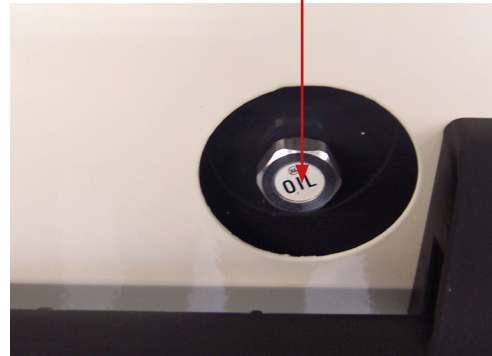
2. For gas-operated compressors:

Check oil level and top up if necessary. Do not overfill! **Never** run the compressor without oil!

Oil level inspection glass



Please fill oil in here



Always wait for the oil to settle for a few minutes before you top it up.

8. AVAILABLE ACCESSORIES

Item No.	Description
174061	Handpiece for dental unit (low speed) (Low speed air motor (20,000 rpm) with straight handpiece)
174055	High speed handpiece Profident
17402322	High speed handpiece Profident LUMOS (with LED)
E174024001	Mains adapter for Profident LUMOS, turbine light and assembly scaler (for current model)
17402307	Mains adapter for Profident LUMOS, turbine light and assembly scaler (for old model with blue handle)
174051	Oil for dental compressor, 1 liter
174880	Anti Dust Spray, 400 ml, includes spray head
174010	Dental Handpiece Lubricant Oil, suitable for high and low speed handpieces, 500 ml
17401150	Dental Handpiece Air Motor/Turbine Adaptor, for Highspeed handpieces, suitable for 174010
17401155	Dental Handpiece low speed E-Type Adaptor, suitable for 174010
174103	Drill Set for HST (44.5 mm)
174205	Dental burr set (HP): Round burr size 18, Flat tapered burr size 14 and 23, Inverted cone burr size 12 and 21
174450	Diamond Disc Cutter Superflex (HP), Length: 4.5 cm

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