

Instructions for Use



piezomed^{PLUS}

SA-435 M

piezomed^{CLASSIC}

SA-430 M

CE
0297

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Symbols

in the Instructions for Use



WARNING!
[risk of injury]



ATTENTION!
[to prevent damage occurring]



General explanations, without risk to
persons or objects



Thermo washer disinfectable



Sterilizable up to
the stated temperature

Symbols

on the medical device



Follow Instructions for Use



Date of manufacture



Do not dispose of with domestic waste



DataMatrix Code for product information including UDI (Unique Device Identification)



Foot control



Manufacturer



CE marking with identification number of the Notified Body



Medical Device



Catalogue number



Serial number



DC – direct current



Electric voltage (volt)



Frequency (hertz)



MEDICAL – GENERAL MEDICAL EQUIPMENT AS TO ELECTRICAL SHOCK, FIRE AND MECHANICAL HAZARDS ONLY IN ACCORDANCE WITH ANSI/AAMI ES60601-1:2005/(R)2012 + A1:2012 + C1:2009/(R)2012 + A2:2010/(R)2012, ANSI/AAMI ES60601-1:2005/A2:2021, CAN/CSA-C22.2 No. 60601-1:14, CAN/CSA-C22.2 No. 60601-1:14/A2:22, IEC 80601-2-60:2019. 25UX – Control No.

Symbols

on the packaging



CE marking with identification number of the Notified Body



DataMatrix Code for product information including UDI (Unique Device Identification)



Catalogue number



Serial number



Date of manufacture



Manufacturer



Caution! Federal law restricts this device to sale by or on the order of a physician, dentist, veterinarian or with the descriptive designation of any other practitioner licensed by the law of the State in which the practitioner practices to use or order the use of the device.



This way up



Trademark of RESY OfW GmbH for identification of recyclable transport and outer packaging of paper and cardboard.



Fragile, handle with care



Data structure in accordance with Health Industry Bar Code



Keep dry



Temperature limitation



Humidity limitation



“Der Grüne Punkt” (The Green Dot) trademark of Duales System Deutschland GmbH



MEDICAL – GENERAL MEDICAL EQUIPMENT AS TO ELECTRICAL SHOCK, FIRE AND MECHANICAL HAZARDS ONLY IN ACCORDANCE WITH ANSI/AAMI ES60601-1:2005/[R]2012 + A1:2012 + C1:2009/[R]2012 + A2:2010/[R]2012, ANSI/AAMI ES60601-1:2005/A2:2021, CAN/CSA-C22.2 No. 60601-1:14, CAN/CSA-C22.2 No. 60601-1:14/A2:22, IEC 80601-2-60:2019. 25UX – Control No.

1. Introduction



For your safety and the safety of your patients

These Instructions for Use explain how to use your medical device. However, we must also warn against possible hazardous situations. Your safety, the safety of your team and, of course, the safety of your patients, are of paramount importance to us.



Observe the safety notes.

Intended use

Drive unit with a piezoceramic oscillating system for treatment of organic hard and soft tissue in dental surgery, implantology, maxillofacial surgery and periodontics.



Misuse may damage the medical device and hence cause risks and hazards for patient, user and third parties.



Qualifications of the user

Only suitably qualified medical, technical and specialist trained staff may use the medical device. We have based our development and design of the medical device on the physician target group.

Introduction

Responsibility of the manufacturer

The manufacturer can only accept responsibility for the safety, reliability and performance of the medical device when it is used in compliance with the following directions:

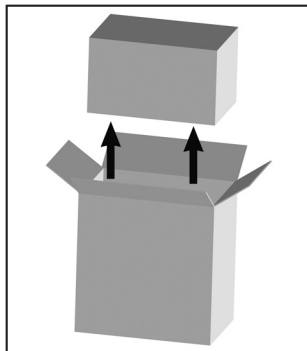
- > The medical device must be used in accordance with these Instructions for Use.
- > The medical device has no components that can be repaired by the user.
- > Modifications or repairs must only be undertaken by an authorised W&H service partner (see page 58).
- > The electrical installation at the premises must comply with the regulations laid out in IEC 60364-7-710 ("Installation of electrical equipment in rooms used for medical purposes") or with the regulations applicable in your country.
- > Unauthorized opening of the medical device invalidates all claims under warranty and any other claims.

Improper use, unauthorized assembly, modification of or repairs to the control unit or the handpiece with cable and non-compliance with our instructions or the use of accessories and spare parts unauthorized by W&H will void the warranty and release us from all other claims.

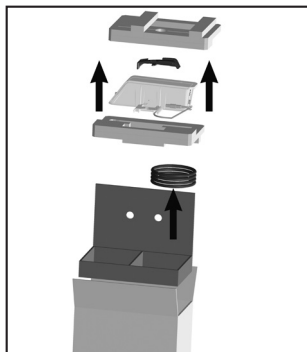


Any serious incident that has occurred in relation to the medical device should be reported to the manufacturer and the competent authority!

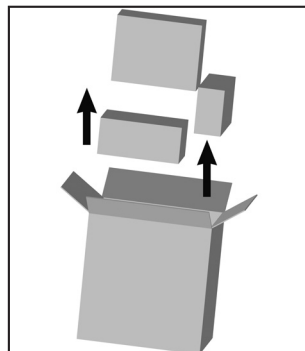
2. Unpacking



❶ Remove the carton.



❷ Lift out the insert with the stand, Instructions for Use, universal support, control unit and mains cable.



❸ Remove the packaging and remove the power supply, irrigation tubing set and accessories.

W&H packaging is environmentally friendly and can be disposed of by industrial recycling companies. However, we recommend that you keep the original packaging.

3. Scope of delivery

Control unit		30406000	30407000
REF 07721800	Universal support	X	
REF 08067690	Stand	X	
Mains cable country-specific		X	

Optional included in set

REF 30392000	Handpiece SA-40 L with 1.8 m cable (only for SA-435 M)
REF 30392001	Handpiece SA-40 L with 3.5 m cable (only for SA-435 M)
REF 30408000	Handpiece SA-40 with 1.8 m cable
REF 00636901	Nozzle cleaner
REF 30264000	Foot control S-NW
REF 07759700	Dongle S-NW CAN-Bus
REF 30495000	Foot control S-NW3
REF 08165950	Dongle S-NW3 CAN-Bus
REF 30285000	Foot control S-N2
REF 06276700	Instrument changer
REF 07883900	Power supply
REF 08072750	Irrigation tubing set 2.2 m incl. Y-manifold (6 pcs. disposable)
REF 08041710	Irrigation tubing set 3.8 m incl. Y-manifold (6 pcs. disposable)

4. Safety notes



- > Before using the medical device for the first time, store it at room temperature for 24 hours.
- > Check the medical device for damage and loose parts each time before using.
- > Do not operate the medical device if it is damaged.
- > Check the parameter settings every time you restart.
- > In case of coolant supply failure, the medical device must be stopped immediately.
- > Perform a test run each time before using.
- > Avoid overheating at the treatment site.
- > The responsibility for the use and timely shutdown of the system lies with the user.
- > Ensure that it is possible to complete the operation safely should the units or instruments fail.
- > Never touch the patient and the electrical contacts on the medical device simultaneously.
- > Make sure that no computer viruses are transferred to the control unit by an external data medium (USB stick).



The medical device is not approved for operation in potentially explosive atmospheres.
The medical device is not approved for operation in oxygen rich Environment.

Safety notes



Power failure

In the event of a power failure, if the control unit is switched off, or when switching between programs, the last values set are saved and re-activated on power-up.

System failure

A total system failure does not constitute a critical fault.



Mains cable/Power supply

- > Only use the power mains cable/supply supplied.
- > Plug the mains cable only into a power socket with protective contact.

Disconnect the medical device in dangerous situations from the power supply!

- > Pull the power plug/power supply out of the socket.

Safety notes



Risks due to electromagnetic fields

The functionality of active implantable medical devices (AIMD) (e.g. cardiac pacemaker, ICD) can be affected by electric, magnetic and electromagnetic fields.

- > Find out if the patient has active implantable medical devices (AIMD) before using the medical device and inform about the risks.

Foot control



Follow the directions and safety notes in the Instructions for Use of the foot control.

Foot control S-NW/S-NW3



Keep the ORANGE button pressed to switch between the control units.

Safety notes

Coolant supply



The medical device is designed for use with physiological saline solution.



- > Always ensure the correct operating conditions and cooling function.
- > Use only suitable coolants and follow the manufacturer's medical data and instructions.
- > Use the W&H irrigation tubing set or accessories approved by W&H.

Irrigation tubing set



- > Sterile disposable irrigation tubing sets are supplied with the equipment.
- > Note the expiration date and only use disposable irrigation tubing with undamaged packaging.
- > Replace the disposable irrigation tubing immediately after every treatment.
- > Follow your local and country-specific laws, directives, standards and guidelines for disposal.

Change application



When changing the application a acoustic signal sounds (risk of injury).

Safety notes

Hygiene and maintenance prior to initial use



- > Clean the control unit.
- > Clean and disinfect the universal support and the stand.
- > Sterilize the universal support.

Test run



Do not hold the handpiece with cable at eye level!

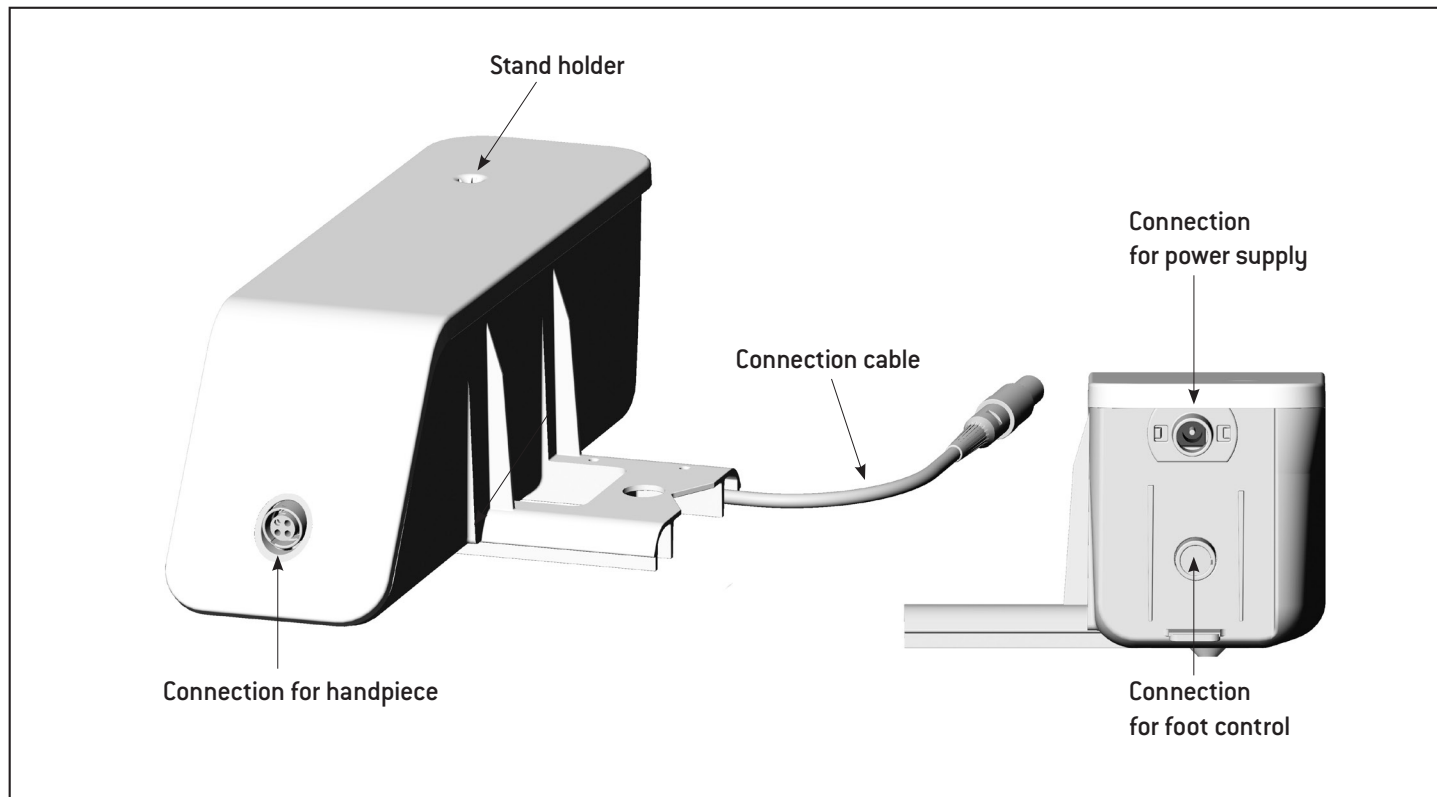
- > Attach the handpiece with cable to the control unit.
- > Insert the instrument.
- > Put the control unit into operation.

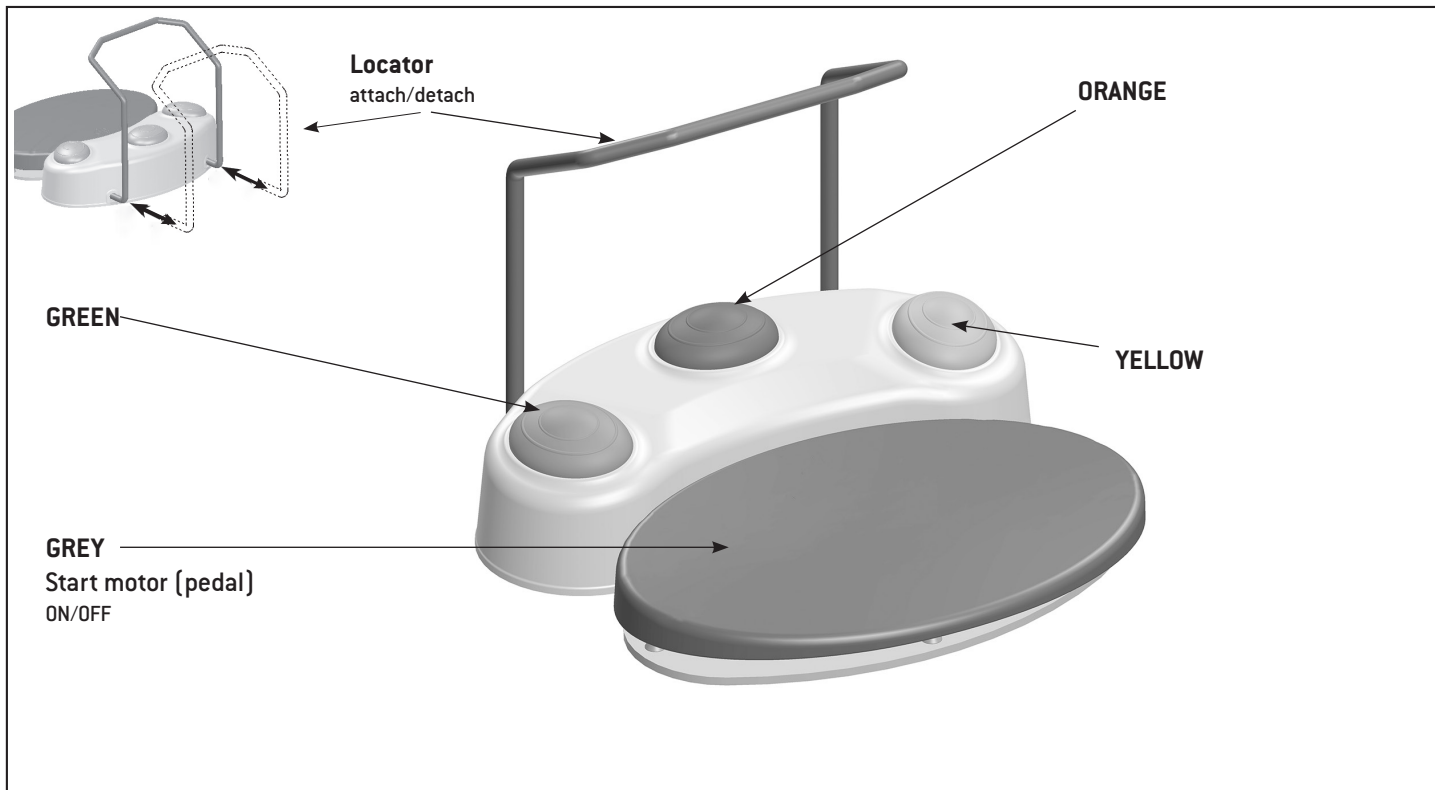


In the event of operating malfunctions (e.g., vibrations, unusual noise, overheating, coolant failure or leakage) stop the medical device immediately and contact an authorized W&H service partner.

5. Description

SA-430 M / SA-435 M





ORANGE

S-N2/S-NW/S-NW3: Change program

Press the ORANGE button to change programs in ascending order.



When changing from the last program to the first program a longer acoustic signal sounds (risk of injury).



S-NW/S-NW3: Switching between multiple control units

Press the ORANGE button for 3 seconds.



S-NW/S-NW3: Change application

Press the ORANGE button for 3 seconds until an acoustic signal sounds.

S-N2: Change application

Press the ORANGE button for 3 seconds until an acoustic signal sounds.

GREEN

Press the green button to change the coolant volume in steps of 20%

Press and hold the GREEN button to activate the coolant filling function.

YELLOW

Boost function

Keep the yellow button depressed to activate the boost function.

The boost function increases power during operation to 100%, irrespective of the set value on the display.

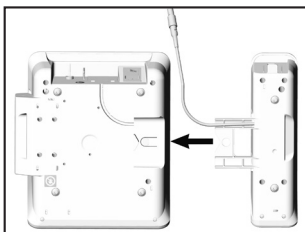
6. Start-up



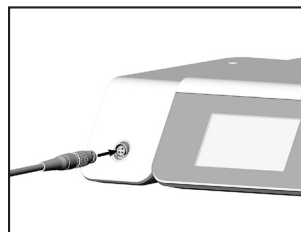
Place the medical device on a flat level surface.



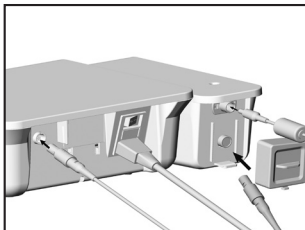
Ensure that the medical device can be disconnected from the power supply at any time.



- ❶ Attach the control unit until it engages.



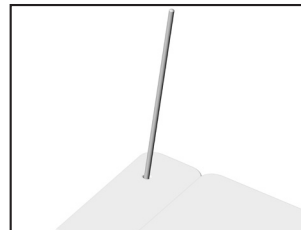
- ❸ Connect handpiece cable.
Pay attention to the positioning!



- ❷ Connect the connection cable to the SI-10xx foot control connection. Connect the power supply, foot control or dongle to the SA-4xx M.

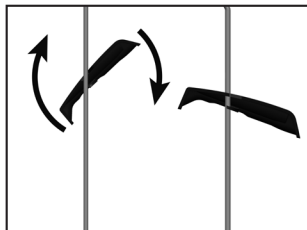


Pay attention to the positioning!

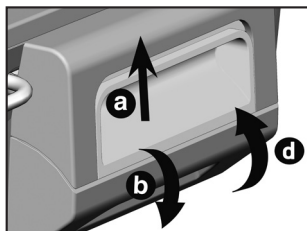


- ❹ Insert the stand.
Pay attention to the positioning!

Start-up



- 5 Attach the universal support and lock it.

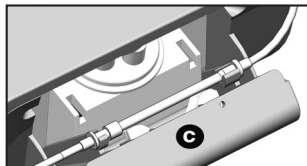


- 6 Insert the irrigation tubing.

> Open the pump cover (a,b).

> Insert the irrigation tubing (c).

> Close the pump cover (d).

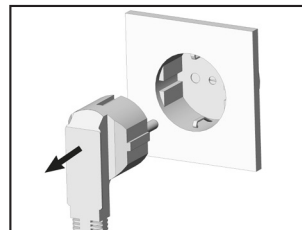


Start-up

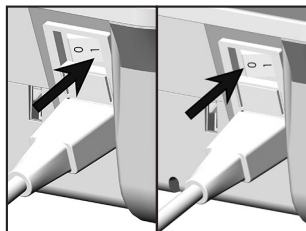
Control unit switching on and off



- 1 Plug the mains cable/power supply into an earthed power socket.



- 1 Pull the power plug out of the socket.



- 2 Switch on/off the control unit at the power switch.

SA-430 M / SA-435 M



Ensure that the SA-430 M / SA-435 M is connected to the power supply before switching on the control unit at the power switch.



Make sure that the coolant filling function has been carried out prior to every application.



The coolant filling function symbol will only appear on the display if a handpiece is connected.



Coolant filling function

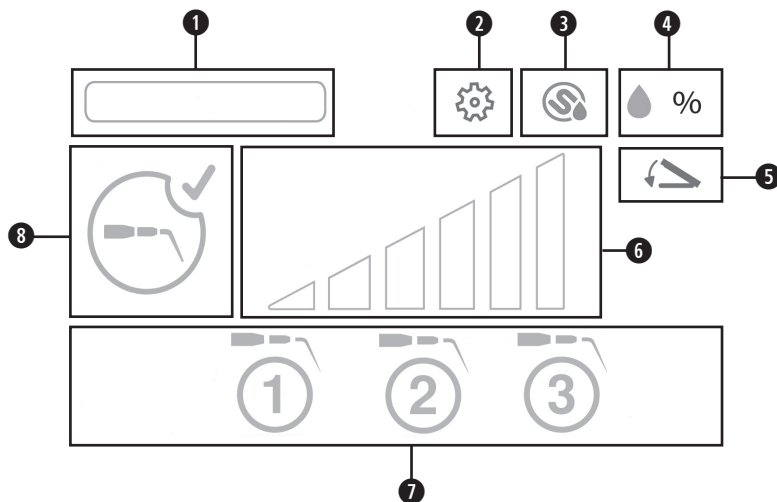


Start the coolant filling function by confirming the entry.



The coolant filling function lasts for 15 seconds.

Press any button on the display or the foot control to stop the coolant filling function.



1	Instruments library
2	Setup
3	Coolant filling function
4	Coolant volume
5	Foot control
6	Power
7	Instrument group
8	Information

Bone quality

In instrument group 3, the power settings are displayed according to bone quality (D1, D2, D3).

D3 > 40%

D2 > 70%

D1 > 85%

No bone quality is displayed for under 40%.

Operation

“Auto Detection”



- > Instrument detection assists the user and helps to avoid incorrect settings.
- > Only deactivate the „Auto Detection“ if instrument detection fails during treatment.



- > The instrument's maximum power setting is shown on the instrument card.

My instruments



“My instruments” is only available with “Auto Detection” and displays all available instruments.

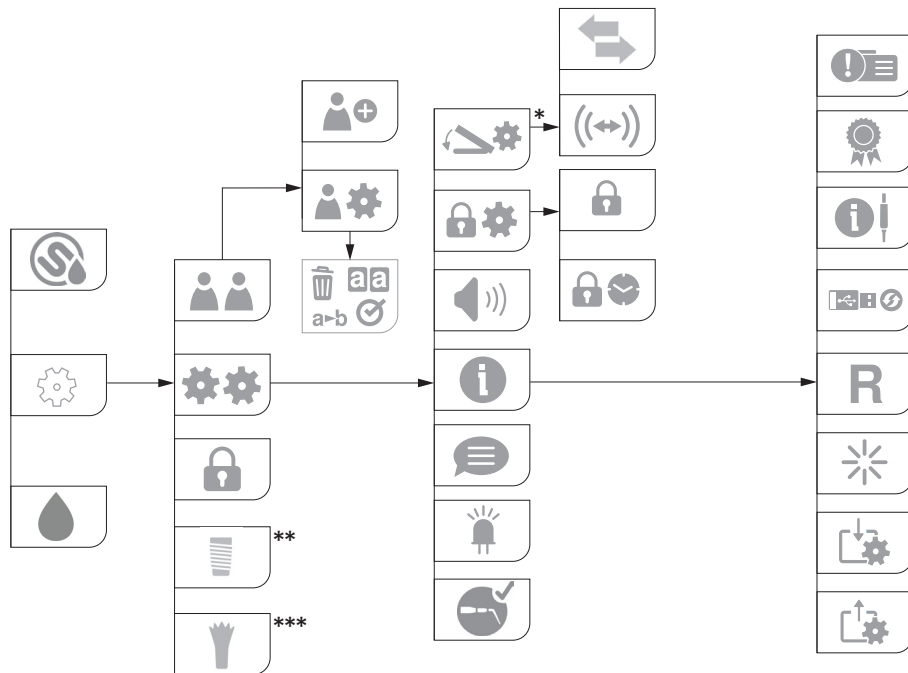
Choose the instruments which are available in your instrument set and save your preferred settings.



Press the ORANGE button on the foot control to activate the respective instrument with the stored basic settings.

“Auto Detection OFF”



- > “Auto Detection” is deactivated.
- > “Auto Detection” is not available for handpieces without light.



* Only visible when using the foot control S-NW/S-NW3.

** Visible in Piezo mode / *** visible in Implant mode

8. Icons

 **User**
 An activated user cannot be deleted

 **Add user**

 **Manage user**
User settings: Copy, Rename, Activate, Delete

 **Confirm/save**


 **Switch to next screen**

 **Set foot control**

 **Pairing S-NW/S-NW3**


 **Foot control ON/OFF**

 **System**


 **Implant mode**
> Switch from Piezo mode to Implant mode

 **Piezo mode**
> Switch from Implant mode to Piezo mode

 **Coolant filling function**

 Grey = Coolant volume set, inactive
Green = Coolant volume set, active

 **Screen lock**
> Activating / deactivating

 **Set screen lock**
> Activating / deactivating
> Interval

 **Interval time**
> Select time

Icons



LED

> Activating / deactivating



Fade-out time

Select time



SOUND

> Activating/deactivating



Language

> Select



"Auto detection"

> Activating/deactivating



"Auto detection OFF"



Device info



Service



Licenses

GPL: GNU General Public License

LGPL: GNU Lesser General Public License



Module info



Reset



Software Update



Reset



Import user settings



Export user settings



Change application

> Activating/deactivating



Switch only between
Implant/Piezo mode



Change application OFF

Icons



Setting selected



red = replace batteries



black = Information

green = Information with selection option



Foot control S-NW/S-NW3



red = error message, work cannot be continued

orange = error message, work can be continued



Foot control S-N2










Reduce/increase parameters

> pressing minus/plus





> moving the slider

> pressing onto the line of the slider at any position

9. Error messages

Icon	Description of error	Solution
	WARNING NO HANDPIECE DETECTED	<ul style="list-style-type: none"> > Unplug the handpiece and plug it back in again > Deactivate AUTO DETECTION  If the error message appears again, contact an authorized W&H service partner immediately.
	WARNING NO INSTRUMENT DETECTED	<ul style="list-style-type: none"> > Insert the instrument  If the error message appears again, contact an authorized W&H service partner immediately.
	WARNING AUTO DETECTION OFF	<ul style="list-style-type: none"> > Manually enter the instrument group > Use the group number from the instrument card or from the Piezomed brochure on wh.com.
	WARNING FOOT CONTROL	<ul style="list-style-type: none"> > Check plug-in connection of foot control > Check the plug-in connection of the dongle
	WARNING SWITCH COOLANT SUPPLY	<ul style="list-style-type: none"> > On the irrigation tubing set, set the regulator of the Y-manifold to the correct position. > Press any button on the display or the foot control to confirm the change application.

Error messages

Icon	Description of error	Solution
	WARNING INSTRUMENT DETECTION ERROR	<ul style="list-style-type: none"> > Check LED socket (correctly attached, defective) > Deactivate AUTO DETECTION
	WARNING SURGERY SCALER	<ul style="list-style-type: none"> > Check the plug contacts of the handpiece > Allow handpiece to cool for at least 10 minutes
	SYSTEM ERROR	<p>Switch the control unit off and back on again</p> <p> If the error message appears again, contact an authorized service partner immediately.</p>

- > If the error messages described cannot be resolved, a check by an authorized W&H service partner is required.
- > In case of a total system failure, switch the dental unit off and on again.



Follow your local and national laws, directives, standards and guidelines for cleaning, disinfection and sterilization.



> Wear protective clothing, safety glasses, face mask and gloves.



> Use only oil-free, filtered compressed air with a maximum operating pressure of 3 bar for manual drying.



Cleaning agents and disinfectants

- > Read the notes, follow the instructions and heed the warnings provided by the manufacturers of cleaning agents and/or disinfectants.
- > Use only detergents which are intended for cleaning and/or disinfecting medical devices made of metal and plastic.
- > It is imperative to comply with the concentrations and exposure times specified by the manufacturer of the disinfectant.
- > Use disinfectants which have been tested and found effective by, for example: the Verbund für Angewandte Hygiene e.V. (VAH = Association for Applied Hygiene), the Österreichischen Gesellschaft für Hygiene, Mikrobiologie und Präventivmedizin (ÖGHMP = Austrian Society for Hygiene, Microbiology and Preventive Medicine), the Food and Drug Administration (FDA) or the U.S. Environmental Protection Agency (EPA).
- > The user is responsible for validating its process if the specified cleaning agents and disinfectants are not available.



The product lifetime and the medical device's ability to operate correctly are mainly determined by mechanical stress during use and chemical influences due to processing.

- > Send worn or damaged medical devices and/or medical devices with material changes to an authorized W&H service partner.



Processing cycles

- > We recommend a regular service for the W&H universal support after 500 processing cycles.



- > Clean the medical device immediately after every treatment.
- > Wipe the universal support and the stand with disinfectant.



Note that the disinfectant used during pre-treatment is only for personal protection and cannot replace the disinfection step after cleaning.

Universal support/Stand



- > Do not place the universal support and the stand in liquid disinfectant or in an ultrasonic bath.

Universal support/Stand

- > Clean the universal support and the stand under running tap water [$< 35^{\circ}\text{C}$ / $< 95^{\circ}\text{F}$].
- > Rinse and brush off all internal and external surfaces.
- > Remove any liquid residues using compressed air.

Control unit



- > Do not immerse the medical device in water or clean it under running water.



Evidence of the medical device's basic suitability for effective manual cleaning was provided by an independent test laboratory using tap water $< 35^{\circ}\text{C}$ and towels/cloth »WIPEX[®] WET DESI premium« (NORDVLIES GmbH, Bargteheide).

Control unit/Universal support/Stand



W&H recommends wiping down with disinfectant.



Evidence of the basic suitability of the control unit, universal support and the stand for effective manual disinfection was provided by an independent test laboratory using the disinfectants “mikrozid® AF wipes” (Schülke & Mayr GmbH, Norderstedt) and “CaviWipes™” (Metrex).

Universal support/Stand



W&H recommends automated cleaning and disinfection using a washer-disinfector (WD). Read the notes, follow the instructions and heed the warnings provided by the manufacturers of washer disinfectors, cleaning agents and/or disinfectants.



> The control unit and foot control are not approved for automated cleaning and disinfection.



Evidence of the basic suitability of the universal support and the stand for effective automated disinfection was provided by an independent test laboratory using the “Miele PG 8582 CD” washer-disinfector (Miele & Cie. KG, Gütersloh) and the “Dr. Weigert neodisher® MediClean forte” cleaning agent (Dr. Weigert GmbH & Co. KG, Hamburg) according to ISO 15883.

- > Cleaning at 55 °C (131°F) – 5 minutes
- > Disinfection at 93 °C (200°F) – 5 minutes

Universal support/Stand



- > Ensure that the universal support and the stand are completely dry after cleaning and disinfection.
- > Remove liquid residues using compressed air.

Universal support/Stand



- > Check the universal support and the stand after cleaning and disinfection for damage, visible residual soiling and surface changes.
- > Reprocess any universal support and stand that are still soiled.
- > Sterilize the universal support following cleaning and disinfection.

Universal support



Pack the universal support in sterilization packages that meet the following requirements:

- > The sterilization procedure must meet the applicable standards in respect of quality and use and must be suitable for the sterilization method.
- > The sterilization package must be large enough for the sterilization goods.
- > The loading sterilization package must not be under tension.

Universal support




W&H recommends sterilization according to EN 13060, EN 285 or ANSI/AAMI ST55.



- > Read the notes, follow the instructions and heed the warnings provided by the manufacturers of steam sterilizers.
- > The program selected must be suitable for the universal support.

Recommended sterilization procedures

- > “Dynamic-air-removal prevacuum cycle” [type B] / “Steam-flush pressure-pulse cycle” [type S]*/**
134°C (273°F) for at least 3 minutes, 132°C (270°F) for at least 4 minutes
- > “Gravity-displacement cycle” [type N]**
121°C (250°F) for at least 30 minutes
- > Maximum sterilization temperature 135°C (275°F)

 Evidence of the universal support's basic suitability for effective sterilization was provided by an independent test laboratory using the LISA 517 B17L* steam sterilizer (W&H Sterilization S.r.l., Brusaporto (BG)), the Systec VE-150* steam sterilizer (Systec) and the CertoClav MultiControl MC2-S09S273** steam sterilizer (CertoClav GmbH, Traun).

“Dynamic-air-removal prevacuum cycle” (type B): 134°C (273°F) – 3 minutes*, 132°C (270 °F) – 4 minutes*/**
“Steam-flush pressure-pulse cycle” (type S): 134°C (273°F) – 3 minutes*, 132°C (270 °F) – 4 minutes*/**
“Gravity-displacement cycle” (type N): 121°C (250°F) – 30 minutes**

Drying times:

“Dynamic-air-removal prevacuum cycle” (type B): 132°C (270°F) – 30 minutes**
“Steam-flush pressure-pulse cycle” (type S): 132°C (270°F) – 30 minutes**
“Gravity-displacement cycle” (type N): 121°C (250°F) – 30 minutes**

* EN 13060, EN 285, ISO 17665

** ANSI/AAMI ST55, ANSI/AAMI ST79

Universal support



- > Store sterile goods dust-free and dry.
- > The shelf life of the sterile goods depends on the storage conditions and type of packaging.

11. Service



Periodic inspection

Regular periodic inspection of the function and safety of the medical device is necessary and should be carried out at least once every three years, unless shorter intervals are prescribed by law.

The periodic inspection covers the complete medical device and must only be performed by an authorized service partner.

Service

Repairs and returns

In the event of operating malfunctions immediately contact an authorized W&H service partner.
Repairs and maintenance work must only be undertaken by an authorized W&H service partner.



> Ensure that the medical device has been completely processed before returning it.



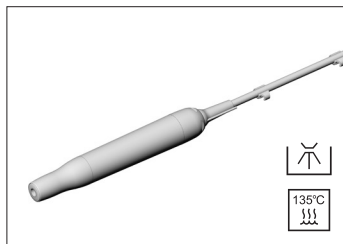
> Always return equipment in the original packaging.

12. Accessories, consumables, spare parts and other recommended medical devices by W&H



Use only original W&H accessories and spare parts or accessories approved by W&H!

Suppliers: W&H partners (Link: <https://www.wh.com>)



30392000

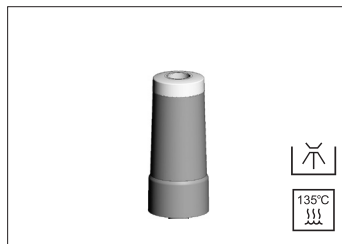
Handpiece SA-40 L with 1,8 m cable
incl. 5 clips

30392001

Handpiece SA-40 L with 3,5 m cable
incl. 10 clips

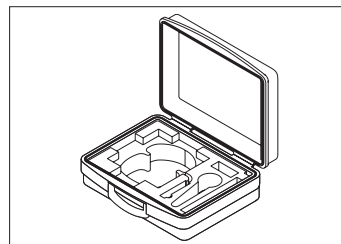
30408000

Handpiece SA-40 with 1,8 m cable
incl. 5 clips



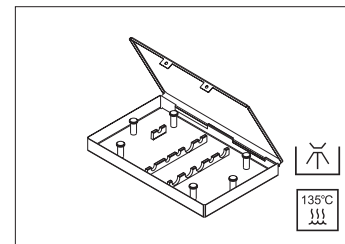
06205600

LED socket



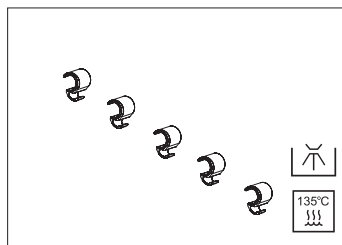
07962790

Transportation case



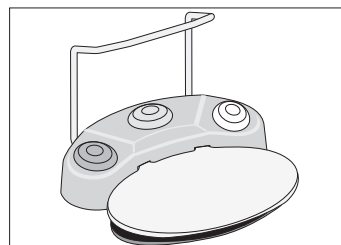
07172900

Cassette



08046870

Clips (5 pcs)



30285000

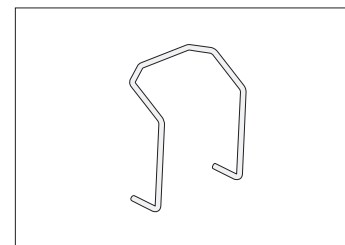
Foot control S-N2

30264000

Foot control S-NW

30495000

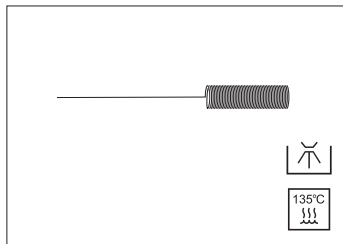
Foot control S-NW3



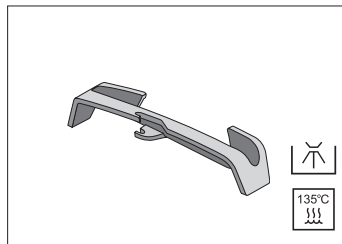
04653500

Handle for foot control

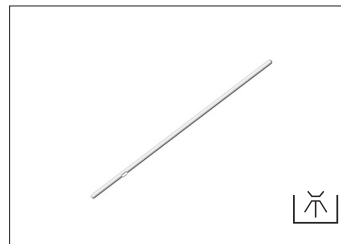
Accessories, consumables, spare parts and other recommended medical devices by W&H



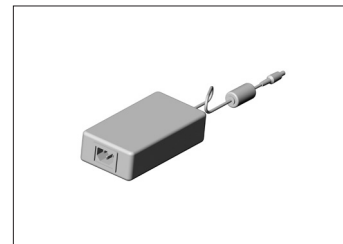
00636901
Nozzle cleaner



07721800
Universal support



08067690
Stand



07883900
Power supply



08072750
Irrigation tubing set 2.2 m incl.
Y-manifold [6 pcs, disposable item]

08041710
Irrigation tubing set 3.8 m incl.
Y-manifold [6 pcs, disposable item]

Scan the QR code to find accessories, consumables and spare parts for this medical device.



13. Technical data

Control unit	SA-430 M	SA-435 M
Supply voltage:	100 – 240 V	
Operating voltage:	30 – 32 V DC	
Frequency:	50 – 60 Hz	
Maximum power output (ultrasonic):	18 W	24 W
Operating frequency:	22 – 35 kHz	
Coolant flow rate at 100 %:	at least 90 ml/min	
Operating mode:	S3 (80s on/330s off) maximum 4 repeats	
Dimensions in mm (height x width x depth):	90 x 140 x 285	
Weight:	635 g	685 g
Length handpiece cable:	1.8 m	1.8 m / 3.5 m
Foot control:	S-N2 / S-NW / S-NW3	

Technical data

Ambient conditions

Temperature during storage and transport:	-40°C to +70°C (-40°F to +158°F)
Humidity during storage and transport:	8 % to 80 % (relative), non-condensing
Temperature during operation:	+10°C to +35°C (+50°F to +95°F)
Humidity during operation:	15% to 80% (relative), non-condensing

Classification according to Paragraph 6 of the General Specifications for the Safety of Medical Electrical Equipment according to IEC 60601-1/ANSI/AAMI ES 60601-1

Class I medical electrical equipment (to avoid the risk of electric shock, the power supply must only be connected to a supply mains with protective earth!)



The medical device is classed as equipment without protection against the ingress of water (IPX0).

Pollution level:	2
Overvoltage category:	II
Altitude:	up to 3,000 m above sea level

14. Data on electromagnetic compatibility according to IEC/EN 60601-1-2



Operating environment and EMC warning notes

This medical device is neither life-sustaining nor coupled to the patient. It is suitable for operation both in domestic healthcare and in facilities used for medical purposes except rooms/areas, in which EMC interference of high-intensity may occur.

The customer and/or the user should assure that this medical device is set up and used in an environment of the specified type and/or in accordance with the specifications of the manufacturer. This medical device uses RF energy only for its internal functions. Therefore, its RF emissions are very low and not likely to cause any interference in nearby electronic equipment.

No special precautions are necessary to maintain the basic safety and essential performance of this medical device



Essential performance

This medical device has no critical functions and therefore does not have any essential performance features.

Data on electromagnetic compatibility according to IEC/EN 60601-1-2



RF communication equipment

Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to the medical device. Otherwise, degradation of the performance of this medical device could result.



W&H guarantees the compliance of the device with the EMC requirements only when used with original W&H accessories and spare parts. The use of accessories and spare parts not approved by W&H can lead to an increased emission of electromagnetic interference or to a reduced resistance against electromagnetic interference.



Use of this medical device adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this medical device and the other equipment should be observed to verify that they are operating normally.



The medical device is not intended for use in the vicinity of HF surgical devices.

Results of the electromagnetic tests

Requirement	Class / Test Level*		
Electromagnetic emissions			
Mains terminal disturbance voltage [Conducted Emissions] CISPR 11/EN 55011 [150 kHz – 30 MHz]	Group 1 Class B		
Electromagnetic radiation disturbance [Radiated Emissions] CISPR 11/EN 55011 [30 MHz – 1000 MHz]	Group 1 Class B		
Harmonic distortion IEC/EN 61000-3-2	Class A		
Voltage fluctuations and flicker IEC/EN 61000-3-3	–		
Immunity to electromagnetic interference			
Electrostatic discharge [ESD] IEC/EN 61000-4-2	Contact discharge: ±2 kV, ±4 kV, ±6 kV, ±8 kV Air discharge: ±2 kV, ±4 kV, ±8 kV, ±15 kV		
Radiated RF electromagnetic fields IEC/EN 61000-4-3 [80 MHz – 2,7 GHz]	10 V/m		
Proximity fields from RF wireless communications equipment IEC/EN 61000-4-3	710 / 745 / 780 / 5240 / 5500 / 5785 MHz		9 V/m
	385 MHz		27 V/m
	450 / 810 / 870 / 930 / 1720 / 1845 / 1970 / 2450 MHz		28 V/m
Electrical fast transients / bursts IEC/EN 61000-4-4	Mains supply: ±2 kV Input and output ports: ±1 kV		
Surges IEC/EN 61000-4-5	±1 kV L – N	±2 kV L – PE	±2 kV N – PE
Conducted disturbances induced by RF fields IEC/EN 61000-4-6	3 V 6 V in ISM bands and in amateur radio bands		
Power frequency magnetic fields IEC/EN 61000-4-8	30 A/m		
Voltage dips, short interruptions and voltage variations IEC/EN 61000-4-11	0% for 0.5 cycle at 45° steps from 0°-315° 0% for 1 cycle 70% for 25/30 cycles 0% for 250/300 cycles		
Proximity magnetic fields IEC/EN 61000-4-39	30 kHz		8 A/m
	134,2 kHz		65 A/m
	13,56 MHz		7,5 A/m

* There are no deviations or simplifications to IEC/EN 60601-1-2.

15. Disposal



Ensure that the parts are not contaminated on disposal.



Follow your local and national laws, directives, standards and guidelines for disposal.

- > Medical device
- > Waste electrical equipment
- > Packaging

W&H course certificate

for the user

The user has been trained to use the medical device correctly in accordance with the legal regulations (medical devices marketing regulations, medical devices act). Particular attention has been paid to the chapters on safety notes, start-up, operation, hygiene and maintenance, and service (regular inspections).

Product name	Serial number (SN)
Manufacturer with address	
Distributor with address	

Name of the user	Date of birth and/or personnel number
Hospital/dental practice/department with address	
Signature of the user	
The signature confirms that the user has been trained to use the medical device and has understood the content.	

Name of the instructor	Date of instruction
Address of the instructor	
Signature of the instructor	



W&H course certificate

for the instructor

The user has been trained to use the medical device correctly in accordance with the legal regulations (medical devices marketing regulations, medical devices act). Particular attention has been paid to the chapters on safety notes, start-up, operation, hygiene and maintenance, and service (regular inspections).

Product name	Serial number (SN)
Manufacturer with address	
Distributor with address	



Name of the user	Date of birth and/or personnel number
Hospital/dental practice/department with address	
Signature of the user	
The signature confirms that the user has been trained to use the medical device and has understood the content.	



Name of the instructor	Date of instruction
Address of the instructor	
Signature of the instructor	

Explanation of warranty terms

This W&H medical device has been manufactured with great care by highly qualified specialists. A wide variety of tests and controls guarantees faultless operation. Please note that claims under warranty can only be validated when all the directions in the Instructions for Use have been followed.

As the manufacturer, W&H is liable for material or manufacturing defects within a warranty period of 12 months from the date of purchase. Accessories and consumables (cassette, irrigation tubing set, clips, nozzle, cleaner, O-rings, adaptor set) are not covered by the warranty.

We accept no responsibility for damage caused by incorrect handling or by repairs carried out by third parties not authorized to do so by W&H!

Claims under warranty accompanied by proof of purchase must be sent to the vendor or to an authorized W&H service partner. The provision of service under warranty extends neither the warranty period nor any other guarantee period.

12 months warranty

Authorized W&H service partners

Find your nearest authorized W&H service partner at <http://wh.com>
Simply go to the menu option “Service” for full details.

Or simply scan the QR code.



Software version SA-430 M:

Surgery scaler: 01.xx.xx

Software version SA-435 M:

Surgery scaler: 01.xx.xx

Tip detection: 01.xx.xx



W&H Dentalwerk Bürmoos GmbH

Ignaz-Glaser-Straße 53, 5111 Bürmoos, Austria

t +43 6274 6236-0, f +43 6274 6236-55
office@wh.com wh.com

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