

Instructions for use



PEOPLE HAVE PRIORITY



AM-25 LT
AM-25 A, AM-25 A BC/RM
AM-25 E, AM-25 E BC/RM
AM-25, AM-25 BC/RM

W&H Symbols



WARNING!
(Risk of injury)



ATTENTION!
(to prevent
damage occurring)



General
explanations,
without risk to
persons or objects



Sterilizable
up to the stated
temperature



Data Matrix Code for product
identification, e.g. in hygienic
maintenance process

Only for USA

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

Contents

W&H Symbols	2
1. Introduction	4 – 5
2. Before use – Safety notes	6 – 7
3. Product description	8
4. Operation	9 – 11
Assembly/removal, check for leakages, test run	
5. Hygienic maintenance	12 – 19
General, Pre-disinfection, Manual Cleaning, Manual Disinfection, Oil service, Sterilization	
6. Exchanging the bulb (AM-25 LT)	20 – 21
7. Exchanging O-rings (AM-25 LT/A, AM-25 A BC/RM)	22
8. W&H Accessories	23 – 24
Technical data	25
Authorized Service organizations	26
Letter of indemnity	27

1. Introduction

Customer satisfaction is the main priority under the W&H quality policy. This W&H product has been developed, manufactured and subjected to final inspection according to legal regulations, quality norms and industry standards.

For your safety and the safety of your patients

Prior to initial use please read the instructions for use. These explain how to use your W&H product and guarantee a smooth and efficient operation.

Intended use

The air motor is intended for the following applications: Drive for dental transmission instruments for dental restoration and prophylaxis. Supply of dental transmission instruments with cooling air, chip air, spray water and light.



Production according to EU Directive

This air motor is a medical product according to the EU directive 93/42/EEC.

Skilled application

This medical product is intended only for informed use in the medical dental field according to its purpose of use in compliance with the valid health and safety at work regulations, the valid accident prevention regulations as well as in compliance with these instructions for use. The air motor should be maintained according to the manufacturer's recommendations and in-line with infection control procedures for the safety and well-being of patients. Improper use, e.g. missing hygienic maintenance, or non-compliance with our instructions or the use of accessories and spare parts which are not released by W&H, invalidates all claims under warranty and any other claims.

Service

In case of service or repair contact your local retail dental supplier, or one of our authorized service organizations (see Page 26). Service and maintenance work must only be carried out by accredited W&H service organizations.

2. Before use – Safety notes



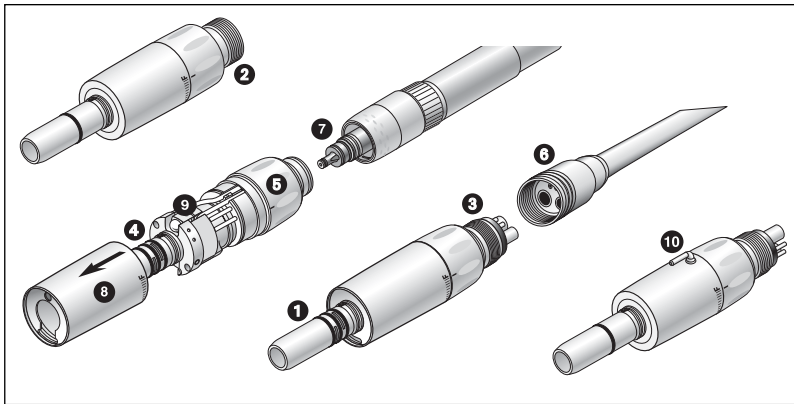
- > The operation of the air motor with light is permitted only on dental units which correspond to the standards IEC 60601-1 (EN 60601-1) and IEC 60601-1-2 (EN 60601-1-2).
The power supply unit for the dental unit must comply with the following requirements:
 - >The compliance with the leakage currents of the application section must be guaranteed by the system assembler.
 - >The secondary voltage must be non-earthed.
 - >The secondary circuits must be protected against short-circuiting and overloading.
- > Danger zones M and G
In accordance with IEC 60601-1 / UL 60601-1, the air motor is not suitable for use in potentially explosive atmospheres or with potentially explosive mixtures of anaesthetic substances containing oxygen or nitrous oxide.
- > Always ensure the correct operating conditions and cooling function.
- > Always ensure that sufficient and adequate cooling is delivered and ensure adequate suction. In case of coolant supply failure, the air motor must be stopped immediately.
- > Use only non-contaminated, filtered, oil-free and dry compressed air to operate the air motor.
- > Check the air motor for damage and loose parts prior to use.

Hygienic maintenance prior to initial use

The air motor is in a clean condition and sealed in PE-film when delivered. Lubricate and sterilize the air motor prior to initial use.

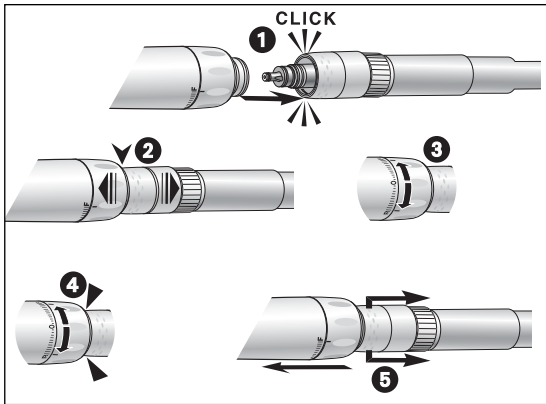
- > Oil service Page 16
- > Sterilization Page 18

3. Product description



- AM-25 LT**
AM-25 A, AM-25 A BC/RM,
AM-25 E, AM-25 E BC/RM,
AM-25, AM-25 BC/RM
- ❶ ISO 3964 connection
 - ❷ Borden 2/3-hole
 - ❸ Standard 4-hole
 - ❹ O-ring
 - ❺ Speed control ring
 - ❻ Union nut
 - ❼ Roto Quick coupling
(with light connection)
 - ❽ Motor sheath
 - ❾ Bulb
 - ❿ External coolant tube

4. Operation



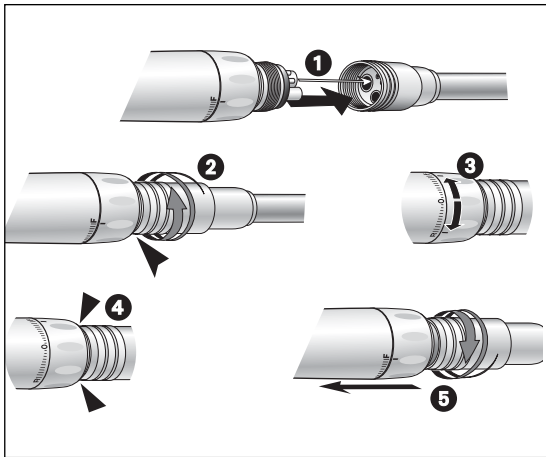
Air motor with Roto Quick connection assembly/removal



Do not assemble/remove during the operation!



- 1** Push the air motor onto the Roto Quick coupling.
- 2** Check that the connection to the Roto Quick coupling is secure by pulling on it.
- 3** Set the speed control ring to F or R.
- 4** Check for leakages.
- 5** Pull the retention sleeve of the Roto Quick coupling back and remove the air motor by pulling in an axial direction.



Air motor with fixed connection assembly/removal



Do not assemble/remove
during operation!





- ❶ Push the air motor with BC/RM connection into the turbine hose apertures.
- ❷ Screw the union nut on firmly clockwise.
- ❸ Set the speed control ring to F or R.
- ❹ Check the air motor with RM connection for leakages (not possible with BC connection, because the return air is expelled through the outer sheath).
- ❺ Unscrew the union nut anti-clockwise from the supply hose.

Test run

- > Start the air motor.
- > Turn the speed control ring to »F« forward or »R« reverse.
- > Vary the speed from minimum to maximum across a period of 10 seconds.
- > Wipe off the air motor with a soft cloth.
- > If you observe problems (e.g. vibrations, unusual noise, overheating, coolant supply failure or leakage), **stop the motor immediately** and contact an authorized service organization (see page 26).

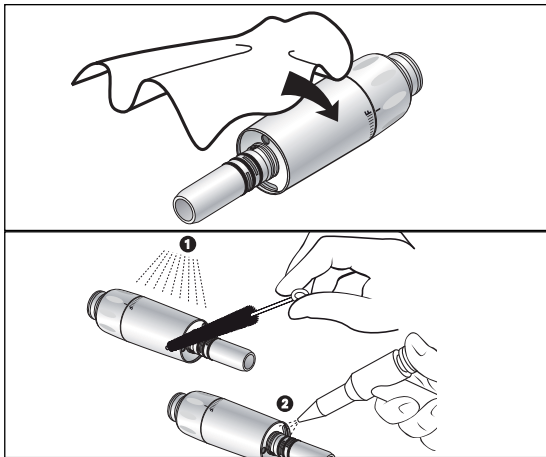
5. Hygienic maintenance

-  > Follow your country-specific directives, standards and guidelines for cleaning, disinfection and sterilization.

-  > Wear protective clothing.
- > Remove the transmission instrument from the air motor and set the speed control ring to F or R.
- > Remove the air motor from the supply hose or from the Roto Quick coupling.

- > Clean and disinfect the air motor **immediately after every treatment.**

- > Sterilize the air motor following manual cleaning, disinfection and lubrication.



Pre-disinfection

> If heavily soiled: Clean first with disinfectant cloths.



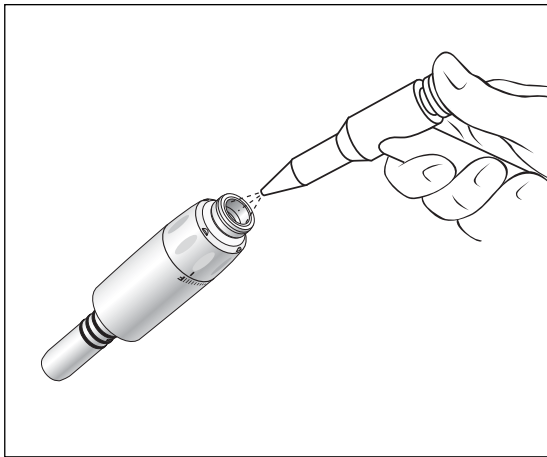
Only use disinfectants that have no protein-fixing effects.

Manual cleaning internal and external

- ➊ Rinse under demineralized water (< 38 °C) with the aid of a brush (brush is not recommended in U.K.)
- ➋ Then remove any liquid residues (absorbent cloth, blow dry with compressed air).



Do not place the air motor in liquid disinfectant or in an ultrasonic bath.

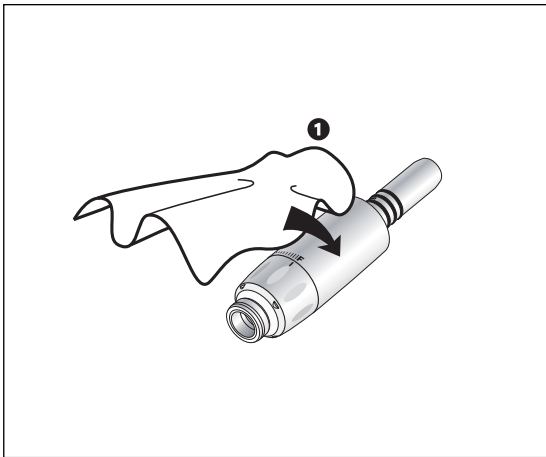


Cleaning the coolant tube

Blow through the coolant tube a with an air syringe.



In the event of clogged spray nozzles or coolant tubes contact an authorized service organization.

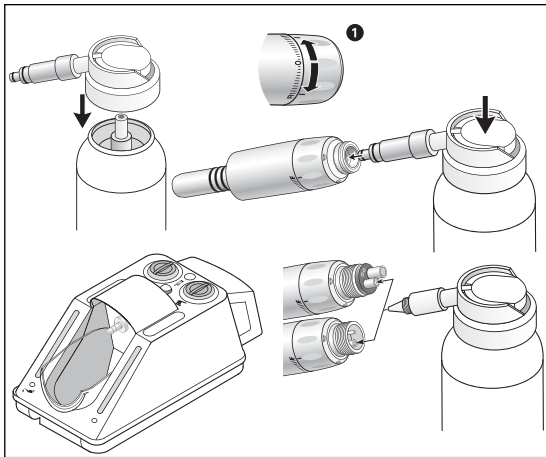


Manual disinfection

- > Disinfection with disinfectants,
 - ❶ wiping disinfection is recommended.
- > Use only disinfectants which do not contain chlorine and which are certified by officially recognized institutes. For USA: Use EPA registered disinfectants.
- > Note the manufacturer's specifications for the use of the disinfectants.



After manual cleaning, disinfection and lubrication you must carry out a final thermal disinfection (unwrapped) or sterilization (wrapped) in the class B or S steam sterilizer (according to EN 13060).



Daily oil service only with W&H Service Oil F1, MD-400

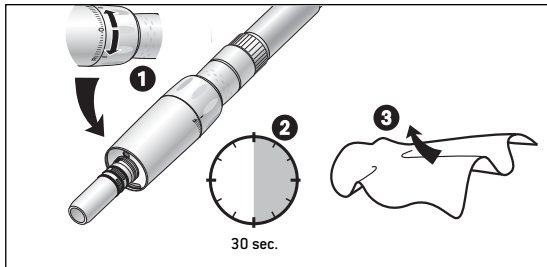
- ❶ Set the speed control ring to F or R.
- > Follow the instructions for use of the oil spray can.

Daily oil service only with W&H Assistina

- > See instructions for use of Assistina.

Recommended lubrication cycles

- > essential after every internal cleaning
- > before each sterilization
- or
- > after 30 minutes of use or at least once daily



Test run following oil service

- 1** Set the speed control ring to F or R and position the air motor with the ISO connection downwards.
- 2** Run the air motor for 30 seconds to remove excess oil.
> Repeat the oil service if dirt emerges.
- 3** Wipe with gauze or soft cloth.

Sterilization and storage



W&H recommends sterilization according to EN 13060, class B

- > Follow the operating instructions of the manufacturer.
- > Clean, disinfect and lubricate before sterilizing.
- > Wrap the air motor and the accessory in sterile goods packing according to EN 868-5.
- > Make sure, that you only remove dry sterile goods.
- > Store sterile goods dust-free and dry.

Approved sterilization procedures



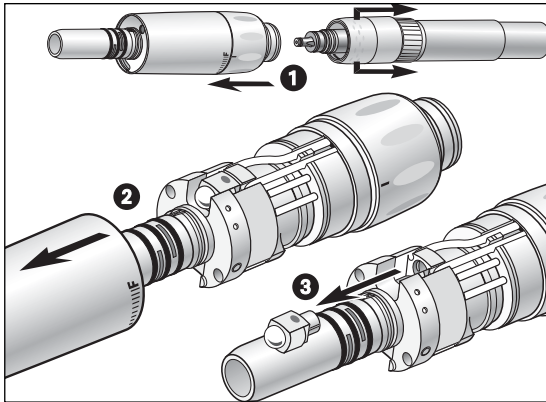
Follow your country-specific directives, standards and guidelines.

- > Steam sterilization class B (pre and post vacuum) with sterilizers in accordance with EN 13060.
Sterilization holding time a minimum of 3 minutes at 134 °C (273.2 °F)
Required pressure -0.85 bar (-12.3 psi) up to 2.16 bar (31.3 psi)

or

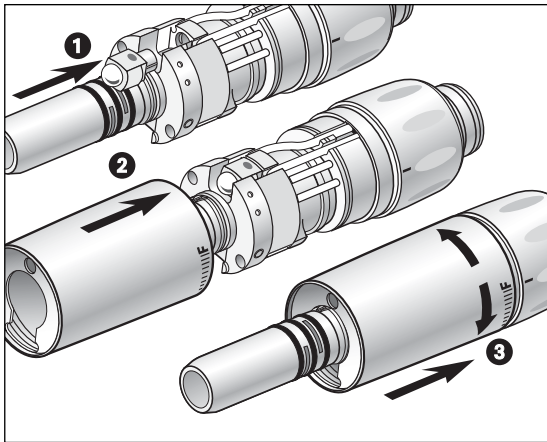
- > Steam sterilization class S with sterilizers in accordance with EN 13060.
The sterilizer manufacturer must give their express approval for the sterilization of air motors.
Sterilization holding time a minimum of 3 minutes at 134 °C (273.2 °F)

6. Exchanging the bulb (AM-25 LT)



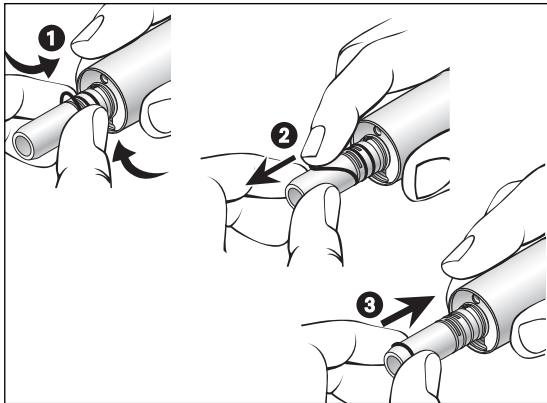
Wear protective gloves!
(bulb damage)

- 1** Remove the air motor from the Roto Quick coupling.
- 2** Remove motor sheath.
- 3** Take out the bulb.



- ➊ Push in the bulb with the dot facing upwards.
- ➋ Place the motor sheath with the light emission opening corresponding to the bulb position.
- ➌ Push the motor sleeve firmly into place and turn until it engages.

7. Exchanging the O-rings (AM-25 LT/A, AM-25 A BC/RM)



Exchange damaged or leaking O-rings immediately. Do not use sharp instruments!

- ❶ Squeeze the O-ring together between thumb and forefinger to form a loop.
- ❷ Pull off the O-rings.
- ❸ Slide on the new O-rings.

8. W&H Accessories

Use only original W&H accessories and spare parts!

Bezugsquelle: W&H partners

301	W&H Assistina
02690400	Assistina Adapter for air motor AM-25 LT
10940021	W&H Service Oil F1, MD-400 (6 pcs)
02036100	Spray cap for AM-25 A BC/RM, AM-25 E BC/RM, AM-25 BC/RM
02229200	Spray cap with spray adaptor for W&H air motors AM-25, AM-25 LT/A/E
02083500	Intermediate adaptor for AM-25 A BC, AM-25 E BC, AM-25 BC
01862300	O-ring (motor attachment AM-25 LT/A, AM-25 A BC/RM)
04300400	Spare bulb (AM-25 LT)

Roto Quick couplings for air motors AM-25, AM-25 A/E:

- RQ-03 W&H Roto Quick coupling with Borden 2(3)-hole-fixed connection, back-suction stop
- RQ-04 W&H Roto Quick coupling with Standard 4-hole connection, back-suction stop
- RQ-14 W&H Roto Quick coupling with Standard 4-hole connection, spray regulation, back-suction stop

Roto Quick couplings for air motor AM-25 LT:

- RQ-24 W&H Roto Quick coupling with Standard 4- hole connection, back-suction stop
- RQ-34 W&H Roto Quick coupling with Standard 4- hole connection, spray regulation, back-suction stop

Technical data

		AM-25 LT	AM-25 A/E AM-25	AM-25 A/E BC AM-25 BC	AM-25 A/E RM AM-25 RM
Coupling	Hose-side acc. to standard	ROTO QUICK /	ROTO QUICK /	ISO 9168	ISO 9168
	Motor/transmission instrument connection acc. to standard	ISO 3964	ISO 3964	ISO 3964	ISO 3964
Speed range (rpm) at	2.2 bar	5000 – 20000	5000 – 20000	5000 – 20000	5000 – 20000
an operating pressure of:	3 bar	5000 – 25000	5000 – 25000	5000 – 25000	5000 – 25000
Max. torque	(Ncm)	4	4	4	4
Max. power	(W)	20	20	20	20
Air consumption (Nl/min) at	2.2 bar	42	42	42	42
an operating pressure of:	3 bar	50	50	60	50
Spray water flow	acc. to EN ISO 13294 (ml/min)	> 100	> 100	> 100	> 100
Operating pressure	(bar)	2.2 – 3	2.2 – 3	2.2 – 3	2.2 – 3
Water pressure	(bar)	1.5 – 2.5	1.5 – 2.5 *	1.5 – 2.5 *	1.5 – 2.5 *
Spray air pressure must be higher than water pressure	(bar)	2 – 3	2 – 3 *	2 – 3 *	2 – 3 *
Lamp voltage	(V)	3.2 ± 0.1 (DC) 3.3 ± 0.1 (AC)			
Light current consumption	(A)	0.7			

- * only at air motors with internal and external cooling
 The chip air / water pressure must be set at the same time
 Power and speed data of air driven motors are largely dependent on the quality of the turbine hoses used and may therefore differ from the specified values.

Authorized Service organizations

GB

EIR

W&H (UK) LIMITED, 6 Stroud Wood Business Centre, Park Street, St Albans, Herts AL2 2NJ,
t + 44 1727 874990, f + 44 1727 874628/872254, E-Mail: office.uk@wh.com

USA

W&H Impex Inc., 6490 Hawthorne Drive, Windsor, Ontario, N8T 1J9,
t + 1 800 2656277, f +1 519 9746121, E-Mail: service.ca@wh.com

CAN

W&H Impex Inc., 14300 Henn Rd., Dearborn, MI 48126, USA,
t + 1 800 2656277, f +1 519 9746121, E-Mail: service.us@wh.com

AUS

NZ

A-DEC AUSTRALIA CO. INC., Unit 8, 5-9 Ricketty Street, Mascot NSW 2020,
t +61 2 83324000, f +61 2 83324099, E-Mail: a-dec@a-dec.com.au

In other countries please contact

W&H Dentalmechanik GmbH, Ignaz-Glaser-Straße 60, A-5111 Bürmoos,
t + 43 6274 6236-239, f + 43 6274 6236-890, E-Mail: service.dept.@wh.com

Letter of indemnity

This W&H product has been manufactured with great care by highly qualified specialists. A wide variety of tests and controls guarantee 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 manufacturer, W&H is liable for material or manufacturing defects within a warranty period of 24 months from the date of purchase.

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! High-pressure bulbs are excluded from the warranty.

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

24 Months Warranty

Manufacturer

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

ISO 13485,
93/42/EEC – Annex II



Form-Nr. 50620 AEN
Rev. 001 / 17.04.2009
Subject to alterations