

● WASI-STEAM 2



● SERVICE MANUAL

Dear customer,

Thank you for choosing a product from the Wassermann range. Wassermann dental equipment incorporates the highest standards of quality and the latest technology. In order to enjoy maximum performance and years of trouble-free operation, please read this service manual carefully before you connect this device and start work, and operate the device according to the recommended guidelines. The operation safety and the functionality of this device can only be guaranteed if you follow both the general safety guidelines and the applying laws to prevent accidents as well as the precautions given in this service manual. We are not liable for any damages which occur due to inappropriate usage or faulty operation of this device.



Make sure that anyone using this device has read and understood this service manual.

Keep this service manual in a safe place where it can be referred to as required at any time.

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1 Features

- powerful steam-cleaner for all cleaning applications
- water connection, electronic delimer, service interval display and huge stainless steel boiler
- user-friendly operation using swivel head to regulate wet steam saturation and steam quantity
- selector for wet or dry steam
- steam pressure 5 bar at rest / 6 bar in operation
- protects seals by reducing pressure to 5 bar after 10-minute break
- clear pressure and temperature display (combined)
- simple operation, high safety standards
- durable, versatile and ecofriendly
- stainless steel housing
- Wall mount available as accessory

2 Safety guidelines

2.1 Safety symbols used in this manual



Warning!

This is a warning of risk situations and dangers. Failure to observe this warning could be life-threatening. These warnings must be observed.



Information!

This symbol draws your attention to specific features that must be observed.

2.2 Safety guidelines

Configuring and operating this equipment requires **precise knowledge** and **observance** of the instructions in this **service manual**. The equipment is designed only for its intended application.



WARNING: The jet nozzle is a possible source of injury, as it gets extremely hot (RISK OF SCALDING).

Before you use the unit for cleaning, sterilizing or degreasing, put on heat-resistant gloves and wear some form of eye protection.

Hold the steam gun only by the housing.

Do not point the steam spray at living things.

The steam from the nozzle can reach temperatures up to 164°C, so only spray towards the collector or washbasin.

If the unit is not to be used for an extended period, the tap should be turned off and the steam-jet switched off.

Make sure that the unit is connected to the correct mains voltage.

The tap must have a non-return valve and a breather (washing-machine tap).

If there is a water leak, the moisture detector will switch the unit off automatically.

When it is not in use, the unit switches to a temperature of 158°C and a pressure of 5 bar. The temperature increases automatically to 164°C and the pressure to 6 bar as soon as the steam gun is pressed.

The pressure safety switch turns the unit off automatically when it reaches 7 bar.

The TÜV-tested safety valve on the pressure vessel opens automatically if the operating pressure exceeds 9 bar.

As a safety precaution, the steam regulating valve on the jet does not close completely, even in the "0" position.

Servicing and repairs should be carried out only by authorised specialists.

3 Application

This steamer is used for cleaning, sterilizing and degreasing dental appliances.

Only use the device for this type of application.

4 Before starting

4.1 Transport

Before transporting the unit, ensure that it has been unplugged from the power socket. Make sure that it is packed correctly in order to avoid accidental damage.



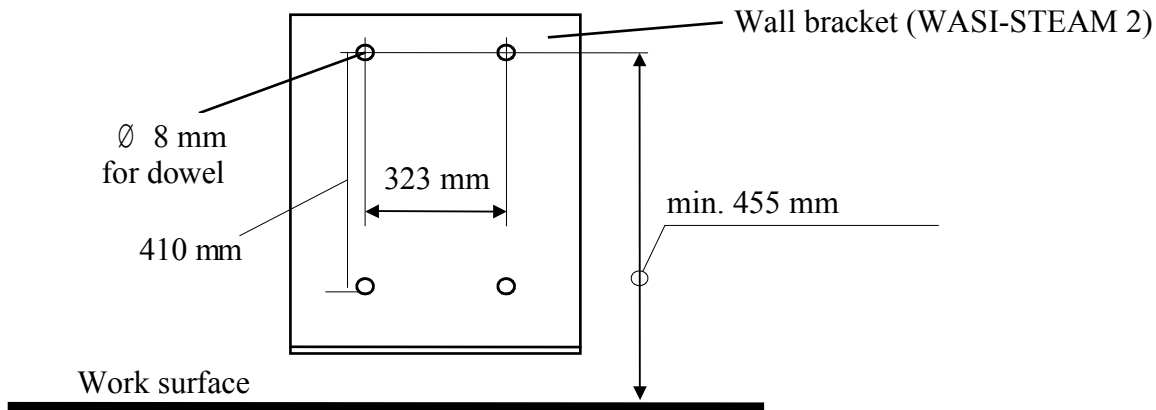
Be sure to check for any transport damage when unpacking the goods. Note down any damage if found.

4.2 Installation

Open the box, remove the packing materials, and carefully lift out the device and accessories. Check the included accessories.

The device must stand horizontally on a steady and even surface or may be mounted horizontally to a stable wall using the optional wall bracket. If mounting the unit on the wall, make sure that the wall is **strong enough** to take the weight.

Use the following hole template if mounting the unit on a wall:



Install the device in a place where it will not block the working area and the functionality (take the dimensions into account). Make sure that there are about 10 cm of free space on each side to guarantee air circulation (heat dissipation).

Do not install the unit outdoors or in places without proper ventilation.



Before start-up, be sure the device reaches room temperature.

4.3 Storage

If the unit is to be stored for an extended period, protect it from moisture and dust.

5 Start-up / Installation



Before starting the unit, connect up the following:

Use the water supply hose supplied to connect the steam-jet (left side) to a tap (the tap must have a non-return valve and a breather – washing-machine tap).

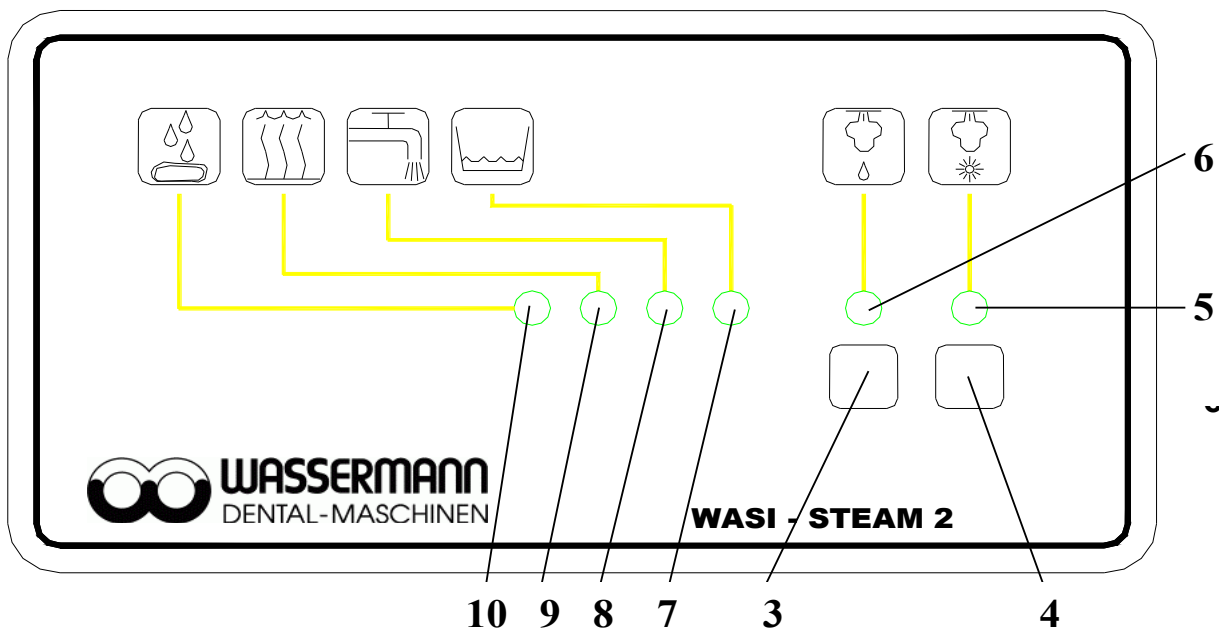
Connect the drain hose supplied to the left side of the unit (if possible, run the hose into a heat-resistant container or washbasin as the draining water can be very hot).

Finally, insert the power plug into the socket, making sure that the mains and the unit operate on the same voltage.

6 Operation



- 1 Controller steam quantity
- 2 Controller wet steam



- 3 Button wet steam
- 4 Button dry steam
- 5 Lamp (LED) dry steam
- 6 Lamp (LED) wet steam
- 7 Lamp (LED) low water
- 8 Lamp (LED) water intake
- 9 Lamp (LED) heating
- 10 Lamp (LED) water leak



Turn on the tap.

Press the green ON/OFF switch – the unit will fill with water automatically and heat up.

Once the pressure has reached 2 bar, vent the steam vessel once by pointing the steam gun in the direction of the collector or washbasin and pressing the steam gun button until the pressure gauge reads 0 (**this only applies to new equipment or after the pressure vessel has been emptied**).

The operating pressure of 6 bar is reached after about 12 minutes, and the unit is then ready for use.

Use the appropriate switch to select dry steam (4) or wet steam (3).

If you are using wet steam, set the amount of hot water using controller wet steam (2) on the front of the unit (0 = no water, 5 = max. water).

Use controller steam quantity (1) to set the desired amount of steam (for safety reasons, the valve is not completely shut in position “0”).

Hold the steam gun in your hand, then release and control the steam using the button.

If the unit is not used for more than 10 minutes, it switches to stand-by mode (5 bar). When the steam gun is operated, the unit returns to operating temperature/pressure (164°C, 6 bar) within 45 seconds.

7 Troubleshooting

Fault	Cause	Remedy
No display reading and/or only ON/OFF switch illuminated	Blown fuse	Replace fuse and trace cause or contact Service Workshop
	Temperature/pressure too high	Check pressure gauge – if pressure in red range (above 6.3 bar), check for fault and repair if necessary (Service Workshop)
Hot water rather than steam comes from nozzle	Water container too full	Set unit to dry steam and spray until only steam comes out
Pressure gauge below 0 bar	Normal function	None
Collector spills over	Full	Empty collector
Wet steam setting produces only dry steam	Control turned to "0"	Select wet steam (settings 1-5)
Low-water LED on continuously	No water flow	Check tap and connections
Low-water LED flashes in conjunction with wet-steam and dry-steam LEDs	Indicates need to flush container	Flush container as instructed
Water-supply LED on continuously	No water supply	Check tap and connections
Heating LED on continuously with no increase in pressure	Faulty heater	Repair in Service Workshop
Water-leak LED comes on	Unit leaking	Repair in Service Workshop

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If the above recommendations do not solve the problem, contact your dental depot or our service department.

8 Care and maintenance

8.1 Cleaning



Disconnect the power plug before starting any maintenance work. The identification plate must always be kept in easily legible condition and must not be removed. Flush the steam vessel only after the pressure has dropped to zero. Otherwise, there is a very high risk of scalding.



Remove external dirt from time to time with some form of cold cleaner. **Use only cold cleaners to avoid damaging the paintwork or removing the lettering.**

The equipment should be cleaned at regular intervals to ensure trouble-free operation. It requires only normal cleaning (sponge, damp cloth, mild detergent). Do not use chemical additives.

Your Wassermann steam-jet incorporates a special technique for avoiding lime build-up: harmless lime residue should be rinsed away **once per week**.



When draining the water, observe the following points:

- Before draining** the water, ensure that the unit has cooled down (pressure gauge) and that the drain hose will empty into a heat-resistant container or washbasin. For your own safety, you should fix the hose firmly in place as the draining water/steam mixture, (if the unit has not cooled down completely), is very hot (up to 164°C).
- Using a square-head socket wrench, carefully turn the drain valve slowly to the stop (90° counter-clockwise), while simultaneously pressing the steam gun until no more water comes out.
- Press the flushing button on the left-hand side of the unit (for a brief guide to the flushing procedure, see the sticker on the front of the unit). Flush the de-sludger in the steam vessel until the water runs clear.
- To prevent damage to the unit, we recommend you flush it once a week and at the latest when the dry steam (5), wet steam (6) and low-water (7) LEDs flash.
- The unit is fitted with a running-time meter. After about 100 hours of operation, the low-water (7), dry steam (5) and wet steam (6) LEDs will flash to indicate that the unit must be flushed.
- Pressing the dry steam button (4) when the unit is turned off and simultaneously turning it on at the mains will return the running-time meter to zero (**RESET**).
- You now use the square-head socket wrench to turn the valve 90° clockwise and stop the water draining out.
- Now place the spray protector with filter insert (if you have one) in front of the unit.

8.2 Maintenance

The operation of the safety valve on the pressure vessel should be checked at regular intervals by a service engineer.

8.3 Warranty



The warranty period for our equipment is 12 months. If faults occur within the warranty period, contact your dental depot or get in touch directly with our service department.

Your equipment should only be operated in perfect condition. If faults occur which could harm operators or third parties, the unit should not be used until it has been fixed.

This warranty does not cover damage caused by improper use, external mechanical causes, transport damage or interference with the unit by unauthorized persons.

8.4 Spare parts

If necessary please contact our service hotline phone:
 0049 (0)40 / 730 92 6-0

8.5 Scope of delivery / Accessories

Included parts:	Item no.
Discharge hose	320031
Supply hose	320060
Square socket spanner	174133
Sealing cap for press button	511168

Accessories:	Item no.
Splash protection	174230
Fastening set	174090
Wall mount	174280
Console for splash protection	174288

8.6 Repairs



Servicing or repairs to the unit must only be carried out by qualified technicians. Only original spare parts are to be used. Responsibility for the product is voided if unauthorised persons alter it or if inappropriate components are installed.

9 Technical data

Steam-jet Wasi-Steam 2 – Item no. 174992

Dimensions:	W: 450 mm, H: 490 mm, D: 265 mm
Weight:	30 kg
Voltage*:	220-240 V / 50/60 Hz
Output:	1880 W
Power consumption:	8.3 A (Si 10 A)
Safety class:	IP 33
Duty:	Interrupt operation 5 / 5 min.
Working pressure:	Max. 6 bar (stand by 5 bar)
Steam temperature:	Max. 164 °C at 6 bar
Boiler capacity:	2.2 l

*Other voltages upon enquiry.

The noise level of the unit amounts to ≤ 70 dB(A).

i The technical data are subject to change without prior notice.

10 EC Conformity Certificate

in accordance with 2006/95/EG (low-voltage guidelines) , 2004/108/EG (EMV guidelines) , 2006/42/EG (Machinery guidelines) and 97/23/EG (Pressure Equipment Directive)

Manufacturer:	W A S S E R M A N N Dental-Maschinen GmbH Rudorffweg 15 - 17 D-21031 Hamburg	Product description:	Steam-jet for dental applications
Model:	Wasi-Steam 2	Item no.	174992
Applicable standards:	DIN EN 61010-1 DIN EN 61000-6-3 DIN EN 61000-6-1 DIN 45635-1 DIN EN 60335-1		

Hiermit wird bestätigt, dass die oben bezeichnete Maschine den genannten EG-Richtlinien entspricht. Diese Erklärung wird ungültig, falls die Maschine ohne unsere Zustimmung verändert wird.

This is to confirm that the above mentioned machine complies with the described EC rules. This declaration becomes invalid if the machine is modified without our approval.

Cette machine est conforme aux normes en vigueur de la Communauté Européene. Cet avis est nul et non avenant si cette machine est modifiée sans notre accord.

Esta máquina, anteriormente mencionada, cumple con los limites requeridos por el reglamento EC. Ahora bien, esta declaración quedará invalidada en caso de realizar modificaciones al aparato sin nuestra aprobación.

Hiermee wordt bevestigd dat bovengenoemde machine voldoet aan de voorgeschreven EU normen. Deze verklaring verliest geldigheid als er zonder onze uitdrukkelijke toestemming wijzigen aan de machine worden aangebracht.

Place, date: Hamburg, 06.03.13

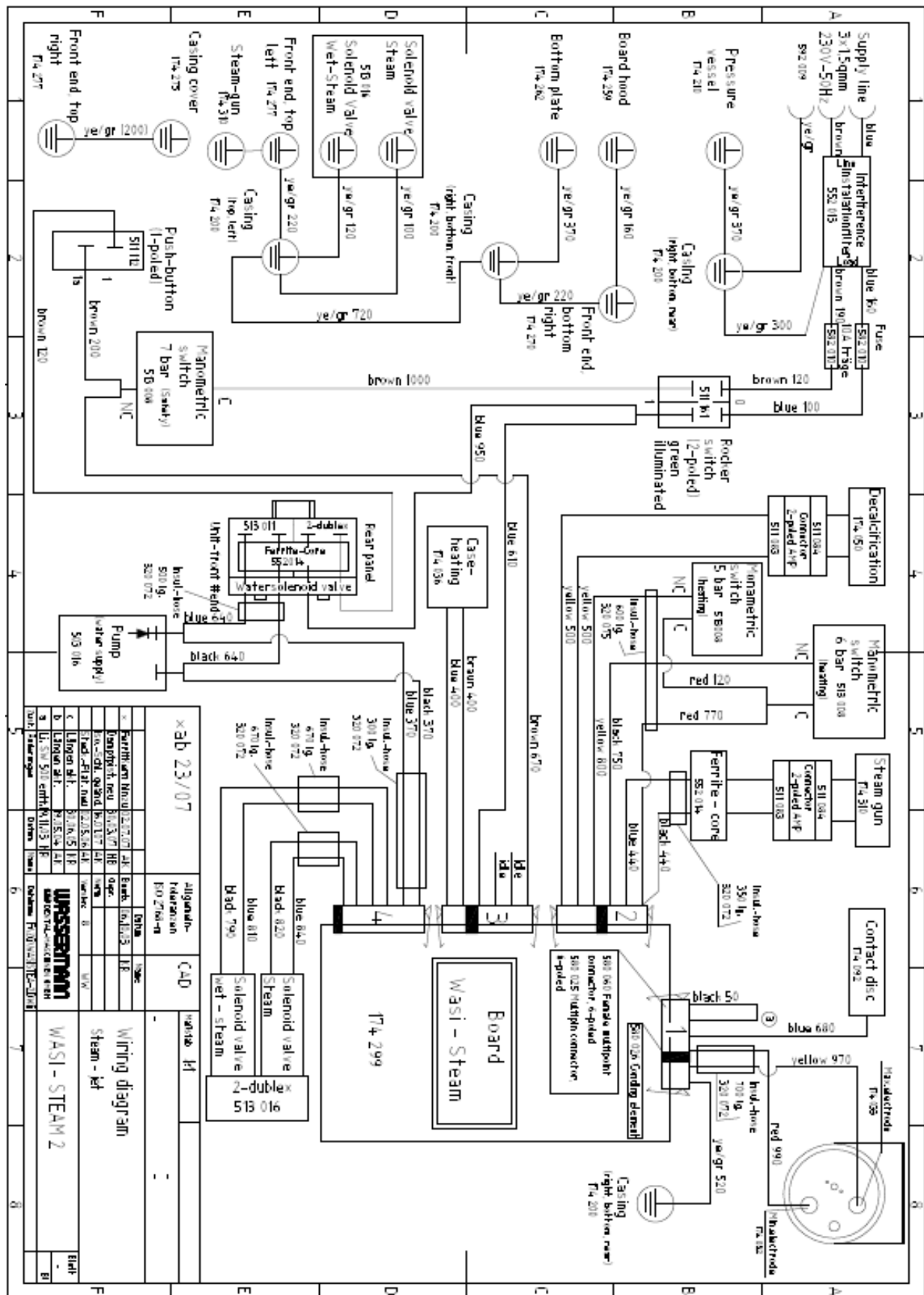
Company stamp:



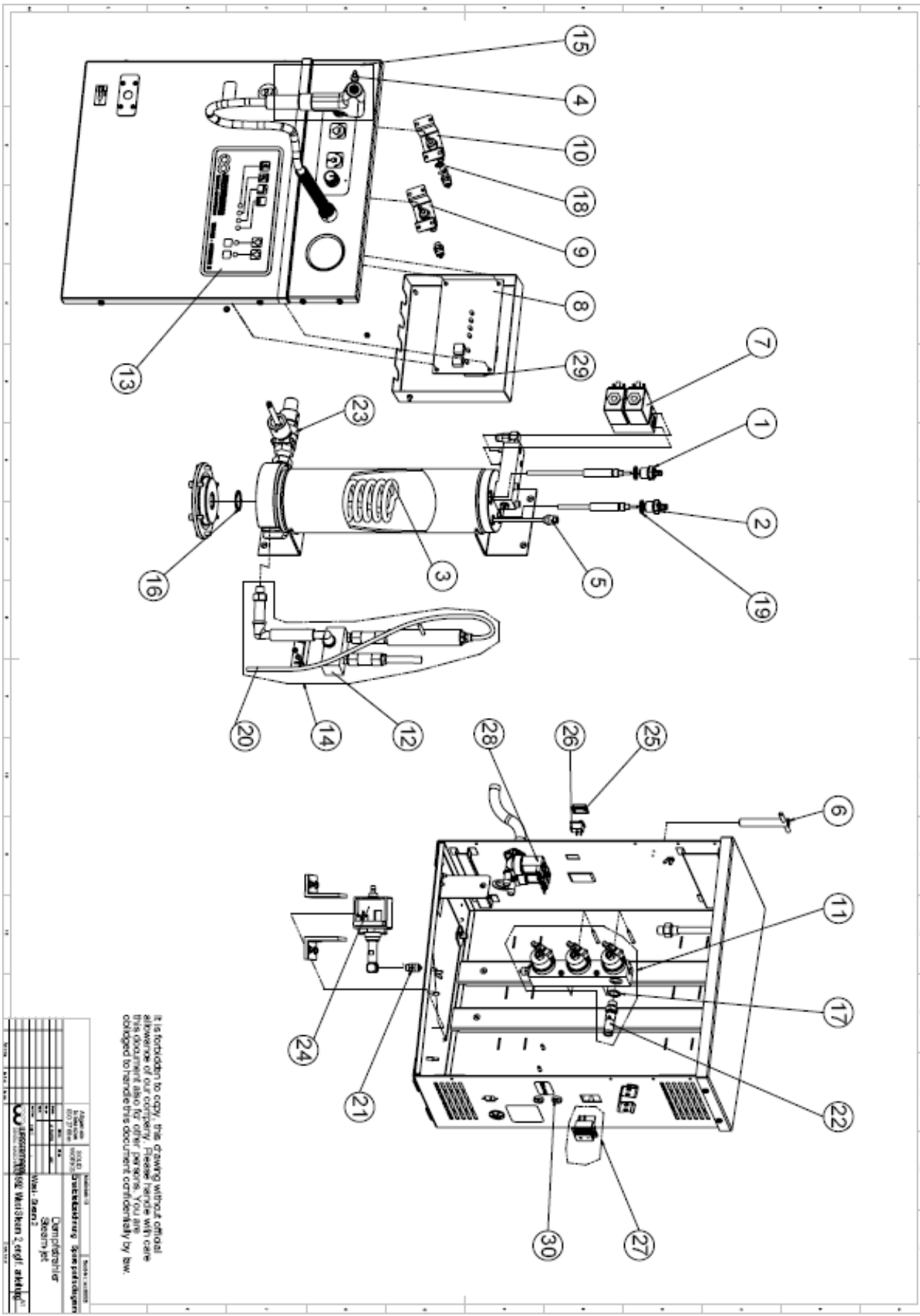
WASSERMANN
DENTAL-MASCHINEN GMBH
Rudorffweg 15 - 17 · 21031 Hamburg

Signature : _____
Wilfried Wassermann
(Managing director)

11 Wiring diagram



12 Spare part diagram



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 this document also for other persons. You are
 obliged to handle this document confidentially by sw.

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Pos.	Name	Ref.
1	Sensor, long -assembled-	174032
2	Sensor, short -assembled-	174033
3	Circular tube-heater	174036
4	Jet	174100
5	Riser – wet steam	174114
6	Square tool, arranged	174133
7	Steam-Solenoid valve, assembled	174165
8	Board, cpl.	174180
9	Throttle valve (wet steam)	174240
10	Throttle valve (dry steam)	174244
11	Pressure-control unit	174252
12	Supply - rinsing unit	174255
13	Foil for keyboard, self adhesive	174266
14	Rep-set rinsing unit	174290
15	Steam gun, assembled	174310
16	CU-gasket	205203
17	CU-gasket	205206
18	KFC-Ring	205220
19	KFC-Ring	205222
20	PTFE-hose	320034
21	Hose fitting	325002
22	Safety valve	325143
23	Ball valve – cpl. Pass	325151
24	Pump for pressure increase	503016
25	Cap for rocker-switch, 1-poled	511068
26	Pushbutton, black (1-poled)	511302
27	Rep-set switch green	511302
28	Water-solenoid valve, duplex	513011
29	Female multipoint connector, 6-poled	580024
30	Holder with O-ring for fuse	582012

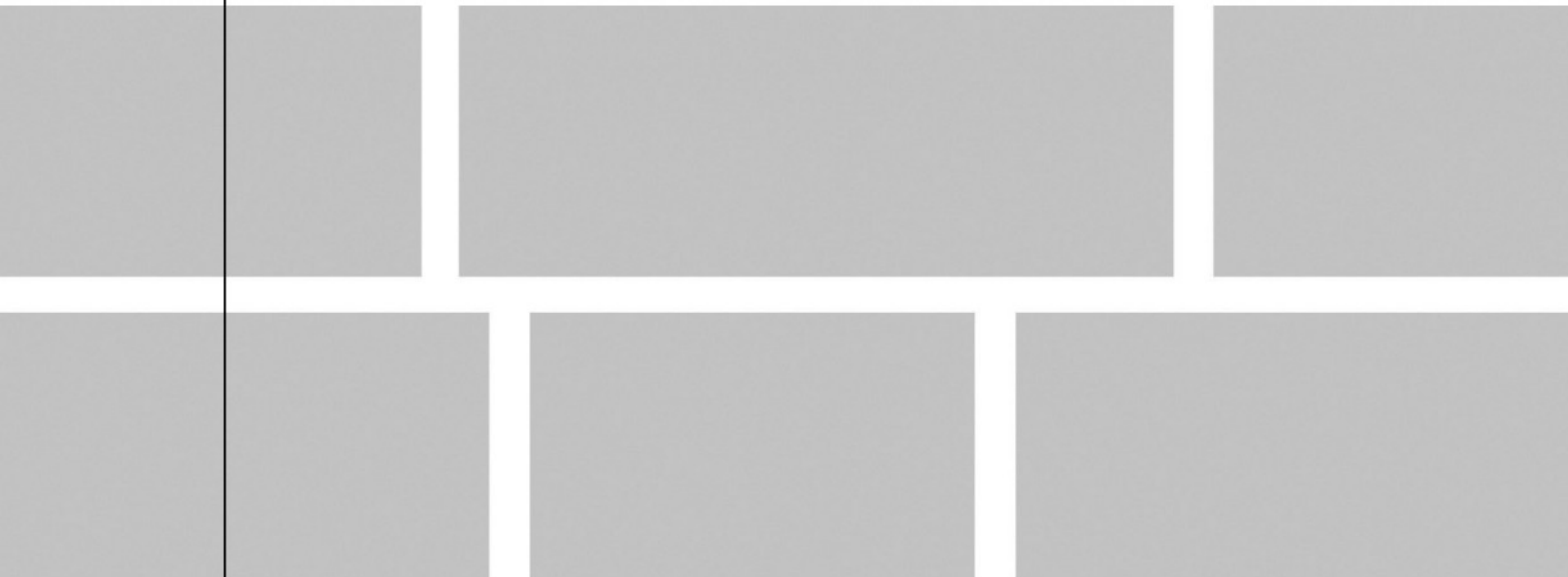
Notes:

Notes:



WASSERMANN
DENTAL-MASCHINEN

● Die Basis für Ihr Labor



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