

● Steam-jet
WASI-STEAM Classic



● 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.

Company address:

Wassermann Dental-Maschinen GmbH

Rudorffweg 15-17

D-21031 Hamburg, Germany

Tel. : +49 (0)40 / 730 926 – 0 Fax.: +49 (0)40 / 730 37 24

E-mail: info@wassermann-dental.com

URL: <http://www.wassermann-dental.com>

Index

1 Features	4
2 Safety guidelines.....	4
2.1 Safety symbols used in this manual	4
2.2 Safety guidelines.....	4
3 Application	5
4 Before starting.....	5
4.1 Transport.....	5
4.2 Installation.....	5
4.3 Storage.....	5
4.4 Mounting instruction fastening set for wall mounting WASI-STEAM Classic.....	6
5 Start-up / Installation	11
6 Operation.....	14
7 Troubleshooting.....	15
8 Care and maintenance.....	16
8.1 Cleaning.....	16
8.2 Maintenance.....	16
8.3 Warranty	17
8.4 Spare parts.....	17
8.5 Scope of delivery / Accessories	17
8.6 Repairs.....	17
9 Technical data.....	18
10 EC Conformity Certificate.....	19
11 Terminal connection diagram.....	20
12 Spare part diagram.....	21

1 Features

- Manual filling so the location can be flexibly selected
- Comfortable application through single-handed operation of the jet gun
- Variable working pressure, variable up to 4 bar
- Short heat-up phase through 1,200 Watt-special steel heating
- Wall mounting possible

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



- Never touch the steam gun directly at the nozzle – **risk of scalding!**
- When refilling with water it is imperative to note point **6 (operation)** of this service manual – **risk of scalding!**
- Never point the steam gun at people (living beings) – **risk of injury!**
- The device has several safety features:
Pushbutton switch 4 bar, thermo-safety switch with manual reset 165° degrees Celsius, adjustable thermostat max. 180° degrees Celsius, safety valve 7 bar.
- The device can be filled manually, e.g. by means of a beaker, funnel, or the like. The device must not be filled with pressure and or be attached to a tap.

3 Application

Because of its variable work pressure of up to 4 bar it offers the user a gentle but quick and thorough cleaning of all small parts in the dental laboratory.

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 on a steady and even surface or may be mounted to a stable wall by means of the mounting kit (see 4.4 Assembly instructions fastening set for wall mounting WASI-STEAM Classic).



Install the device in a place where it will not block the working area and the functionality (take the dimensions into account). Please see that the louvres are not set because air circulation (heat flow) is absolutely necessary.

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.

4.4 Mounting instruction fastening set for wall mounting WASI-STEAM Classic

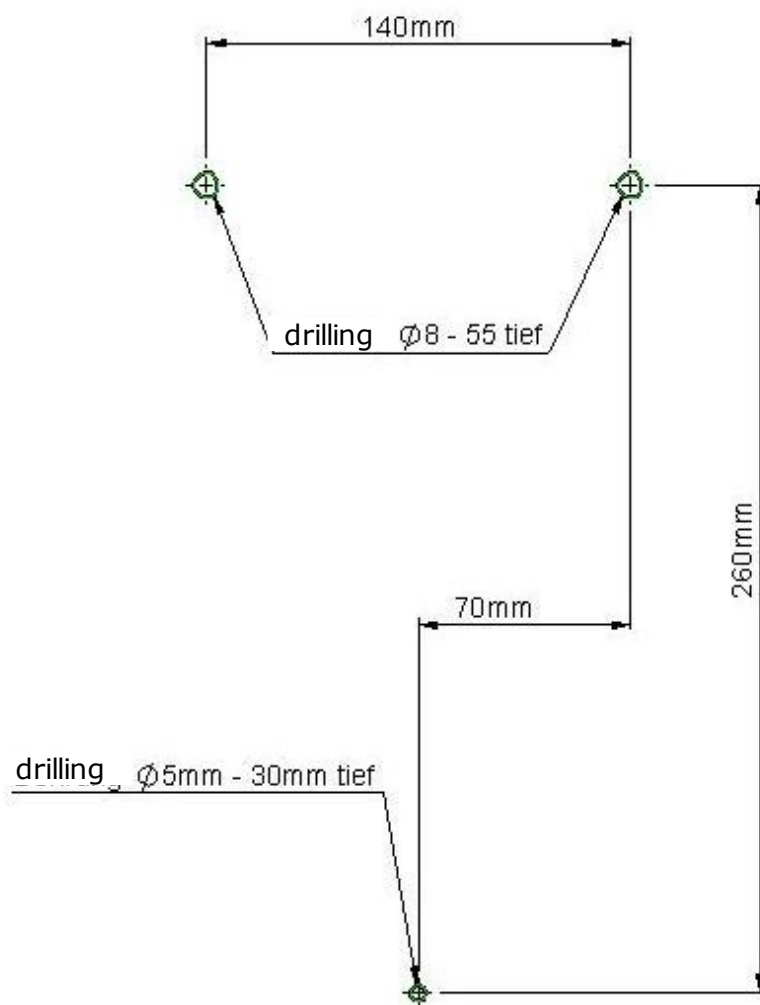
Please check the included accessories:

Incl. in delivery item.-no. 174358 fastening set WASI-STEAM Classic	
Quantity	Name
1	Securing bracket
1	Phillips head screw M 4x8
1	Washer D 4,3
1	Serrated washer D 4,3
1	Slotted screw 4 x 16
2	Slotted screw 6 x 50
2	Screw anchor S8
1	Screw anchor S5

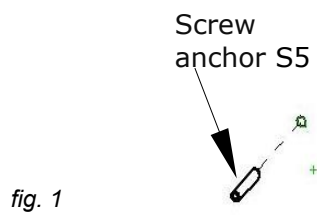
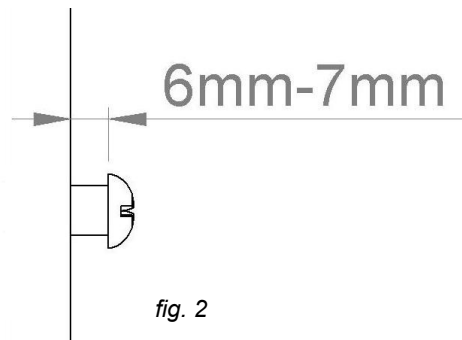
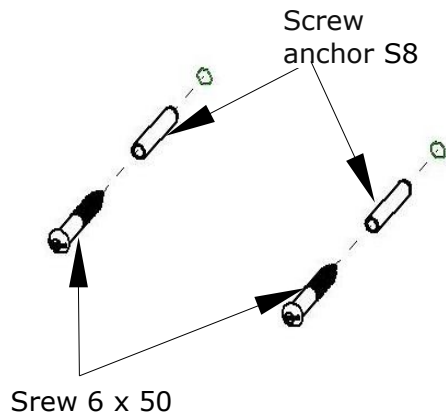
Mounting instruction:

Please drill the holes as indicated in the following drilling template. Please make sure before that the wall is really suitable for mounting a device (aerated concrete walls and drywall are problematic).

Drilling template



Secure the enclosed screw anchors as shown in Figure 1. Screw the 6x50 screws into the two upper holes; keep a distance of 6-7 mm to the wall! (Figure 2)



Screw the securing bracket to the Wasi-Steam Classic as shown in Figure 3.
Do not yet fully tighten the Phillips head screw, however – you still need to be able to move the securing bracket.

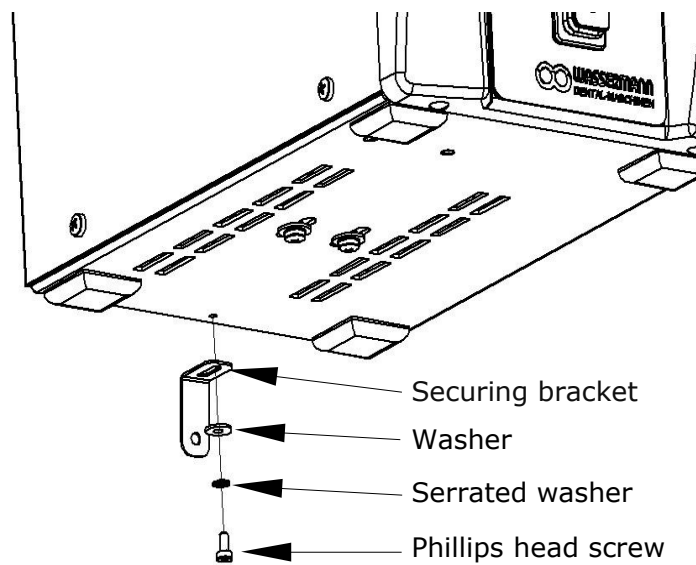
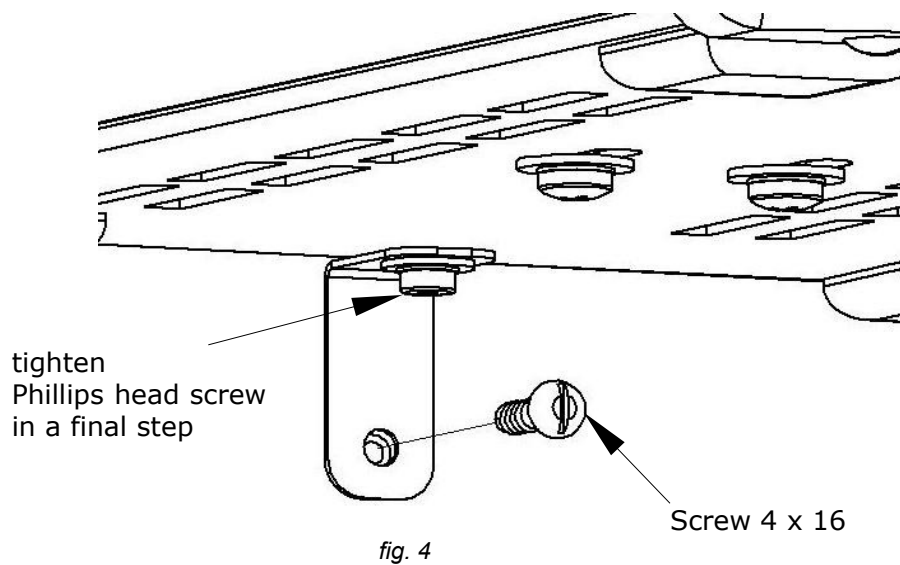


fig. 3

Carefully hook in the device. Check, whether the device hangs loosely (i.e. moving back and forth on the screws). If this is the case tighten the 6x50 screws until the device hangs securely.

Finally tighten the securing bracket. First at the wall, then tighten the screw on the device itself. (Figure 4)



5 Start-up / Installation



Before you use the steam cleaner, please put on heat-resistant gloves and wear safety goggles.

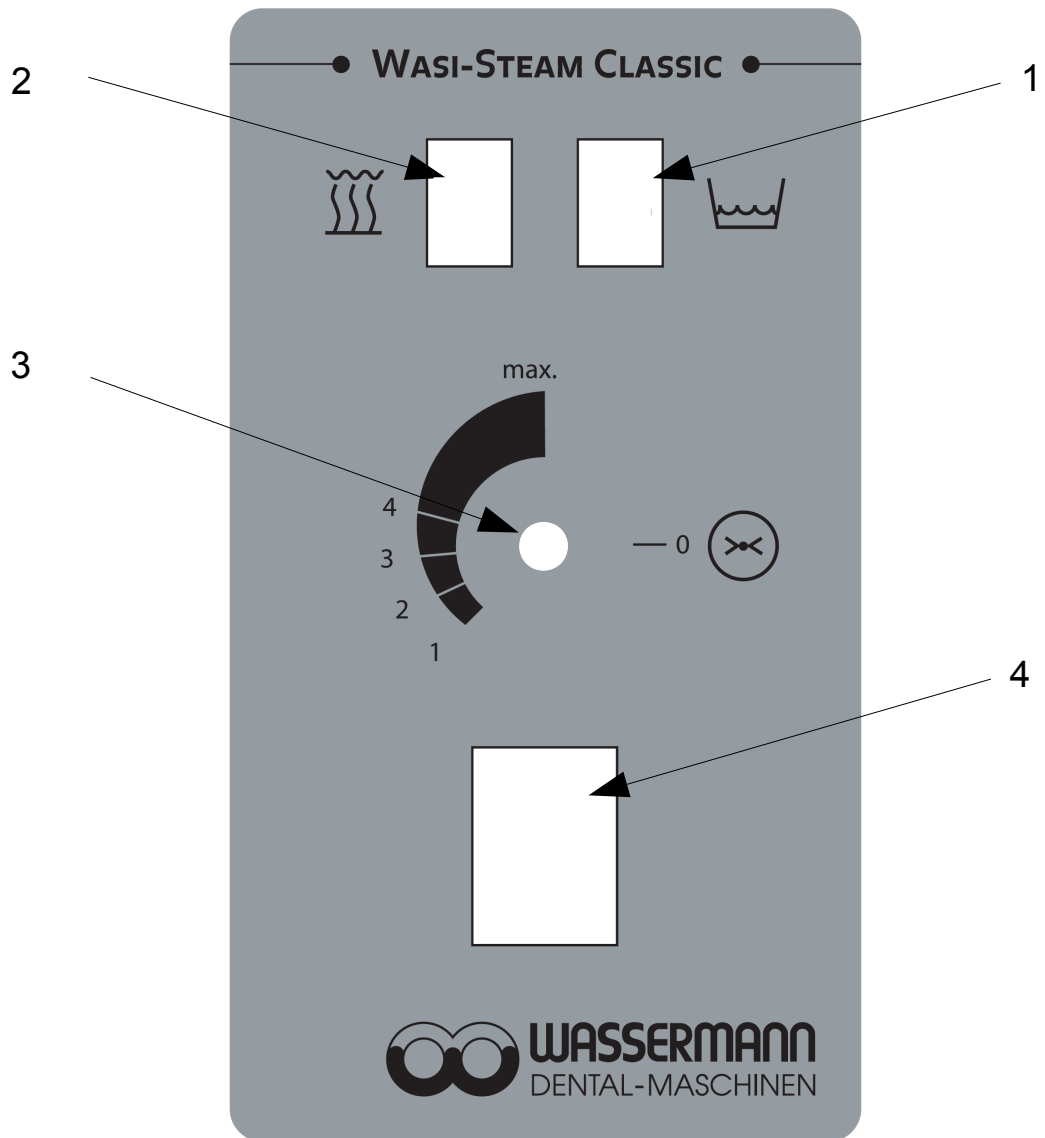


Switch the unit off if it will not be used for an extended period.



Note: Optimal and fast pressurization is carried out only if the adjusting knob is in the "max." position, since the heater with this is activated via a push button switch, i.e. immediately at the start of every blasting action. In case of the pressure choice options (1-4), the heater is activated via a thermostat, i.e. even in case of a massive decrease in pressure it may take several minutes until the heater is activated due to residual heat of the container for example. Therefore this setting is preferable only in case of occasional work.

i Note the details on the equipment stickers!!



- 1 = light red (low water)
- 2 = light green (heating operation)
- 3 = controller steam quantity (1 – 4 bar)
- 4 = main switch (unit on / out)

- open the screw top of the container carefully while pressing down the screw top
- fill with at most 2 litres of water
- tighten container screw top sturdily again (hand-screwed)
- connect power plug
- switch on main switch (4)
- choose pressure range from 1 – 4 according to the scale or choose max. with adjusting knob (3)
- **heat-up phase** approx. 30 minutes (full container).

Briefly deaerate the device after approx. 15 minutes by operating the steam gun.

If the heating light (2) turns off, the device is ready for use. Now steam blasting via the gun is possible by operating the pushbutton until the temperature delimiter activates (button under black cap on the right side of the device) and the red light (1) lights up. Then proceed by referring to point **6 operation** (instruction "**refill water**").

6 Operation

i

To avoid an unintentional interruption of use (cooling down period approx. 45 min.), the device should be refilled every morning in a cold state (take fill level into account, or else the container will be overfilled).

i

Note: Do not refill more than 2 litres of water, if the red light (water shortage) lights up (otherwise the container will be overfilled).



- after the red light (1) lights up, wait approx. 45 min. (**cooling down period**) until you refill again, or else there is a **risk of scalding** as long as the temperature remains above 100°C.
- container must be **pressureless**; produce a pressure balance via the jet nozzle by operating the steam gun
- only now open the screw top of the container carefully while pressing down the screw top
- refill water (**2 litres at most**)
- fully tighten the screw top of the container again (hand-screwed)
- switch on the temperature delimiter (button under black cap on the right side of device) again as follows; first unscrew the black cap, then push in the pushbutton, the red light (1) goes out and the device heats up to the adjusted pressure. Finally, screw the black cap back on.
- heat-up phase (see p. 13)
- operational; i.e. steam blasting via the gun by operating the pushbutton is possible until the temperature delimiter activates again and the red light (1) comes on.

7 Troubleshooting

Fault	Cause	Remedy
No function, only the main switch lights up	Devise fuse faulty	Replace fuse and investigate cause; call service if necessary.
Steam escapes from device	Safety valve has opened because pressure switch is faulty	Turn off the device immediately (unplug power plug) and call service.
Hot water leaks from the nozzle instead of steam	Container is overfilled with water	Operate gun until only steam escapes.
Lower amount of steam than usual at max. heating	Nozzle of the steam gun is clogged or the water level in the container has reached the minimum level	Unscrew nozzle from gun and examine for passage (<u>caution risk of scalding!!</u>) or refill water (do not overfill!!).
Insufficient pressure build-up	Tank seal is still loose or O-ring is faulty	Check or replace tank seal.
No pressure in boiler	Container empty but red light or thermo switch faulty or container not empty but heater or heating regulator faulty	Check water level, refill if necessary and check the thermo switch button. If still no function, call service.
No steam when operating the pushbutton	Solenoid valve faulty or clogged	When operating the gun's pushbutton, a "clicking sound" is heard from the solenoid valve. If this is the case the problem could be resolved by cleaning the valve. Otherwise call service.



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.

It requires only normal cleaning (sponge, damp cloth, mild detergent) - no chemical additives.



Use only cold cleaners to avoid damaging the paintwork or removing the lettering.

8.2 Maintenance

The WASI-STEAM Classic should, depending on frequency of use, but at least twice a year, be decalcified in accordance with the following instructions. As a basic principle, the device must always be kept clean.

Decalcification

- turn off the main switch and unplug the power plug
- empty / pour out container in cold state
- mix approx. 50 cc lime scale remover with 2 litres of water and fill into the device (depending on lime content, the ratio can be increased)
- heating regulator must be set to less than 1 bar
- securely screw on the tank seal
- switch on the device and let it heat up briefly until the green light goes out
- turn off the device and allow the let lime scale remover to act for approx. 8 hours (e.g. overnight, but take into account the max. soaking time of 12 hours)
- pour out the solution and rinse with clear water (approx. 1 litre) at least 2 times by swivelling the device.
- Refill with water (max. 2 litres or else the container will overflow) and the device is then operational again.

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.
Fastening set for wall mounting	174358
Sealing cap for press button	511168

Accessories:	Item no.
Jet D2,5 mm	174352
Splash protection	174360
Kalk-Ex, lime remover, 1000 ccm	655002

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 Classic – item no. 174993

Dimensions:	W: 235 mm, H: 340 mm, D: 340 mm
Weight:	11 kg
Voltage*:	220-240 V / 50/60 Hz
Output:	1220 W
Power consumption:	5,3 A (6,3 A medium-blowing-fuse)
Working pressure:	max. 4 bar
Steam temperature:	approx. 151 °C
Boiler capacity:	3.3 l
Safety class:	IP 22

*Other voltages upon enquiry.

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



The technical data are subject to change without prior notice.

10 EC Conformity Certificate

in accordance with 2006/95/EG (low-voltage guidelines) and 2004/108/EG (EMV guidelines) and 2006/42/EG (machinery guidelines) and 97/23/EG (pressure-units guidelines)

Manufacturer: W A S S E R M A N N Product description: Steam-jet for dental applications
Dental-Maschinen GmbH
Rudorffweg 15 - 17
D-21031 Hamburg

Model: WASI-STEAM Classic Item no. 174993

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 Européenne. Cet avis est nul et non avenant si cette machine est modifiée sans notre accord.

Esta máquina, anteriormente mencionada, cumple con los límites 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 wijzigingen aan de machine worden aangebracht.

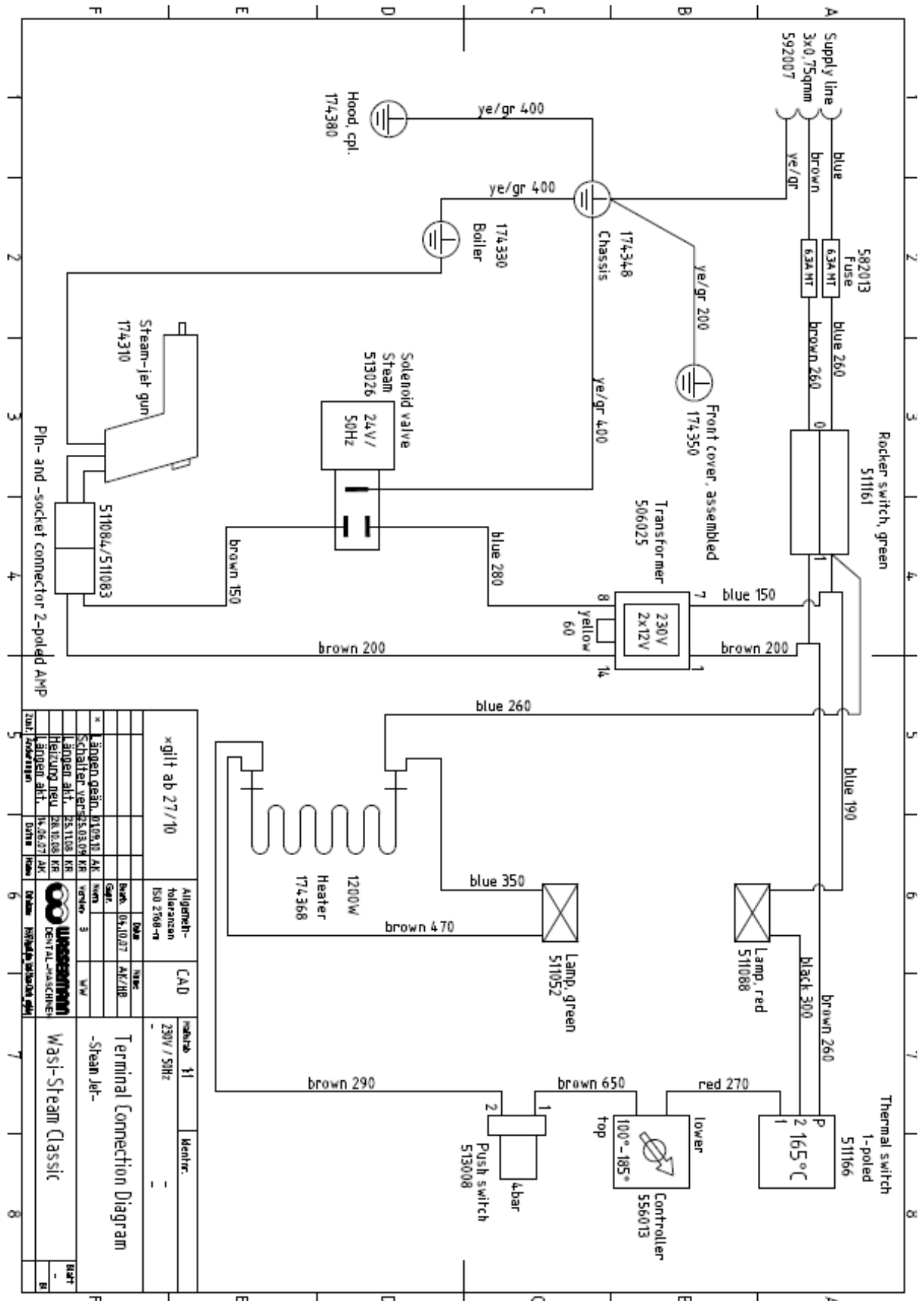
Place, date: Hamburg, 06.03.13

Company stamp:

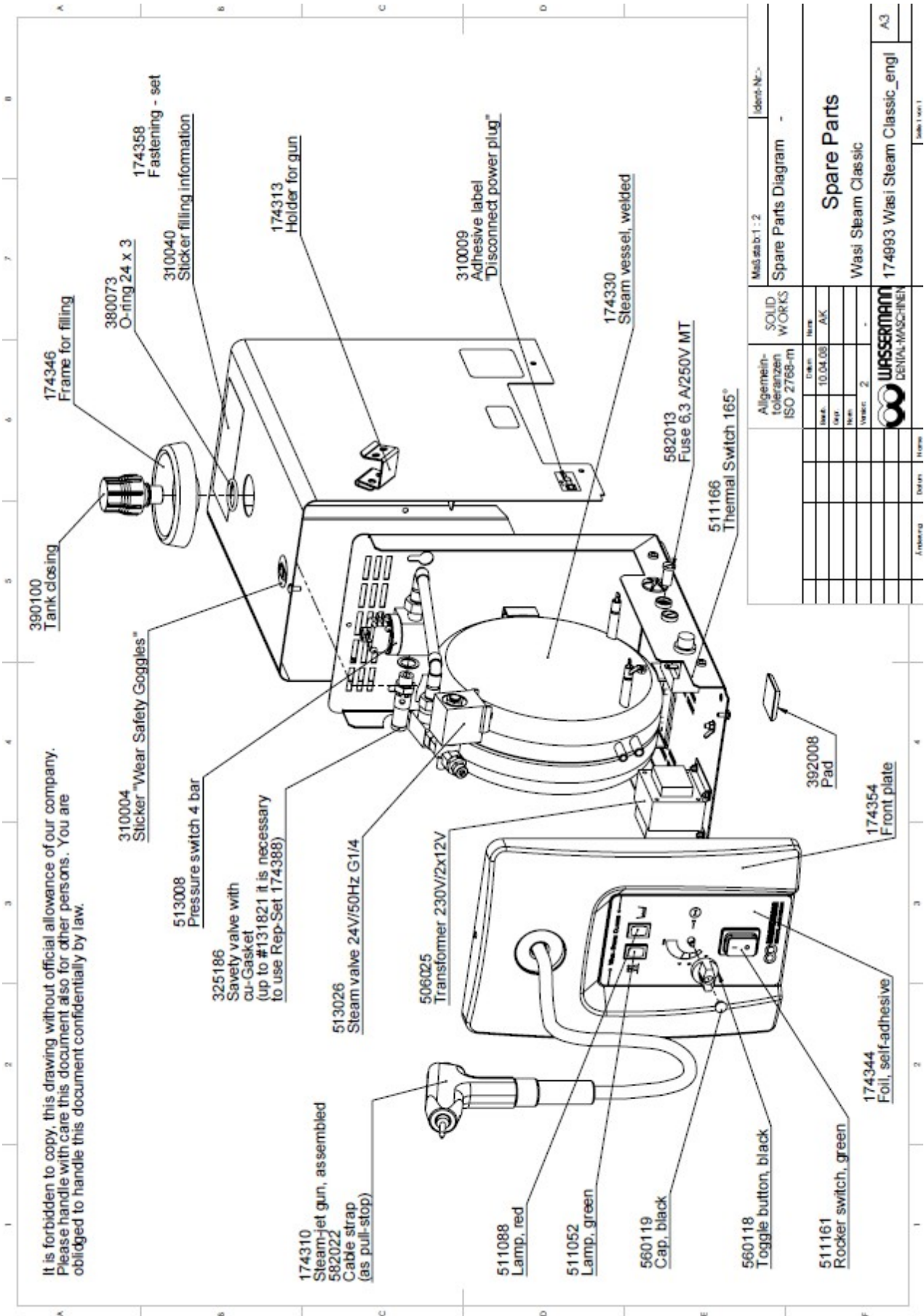


Signature : _____
Wilfried Wassermann
(Managing Director)

11 Terminal connection diagram



12 Spare part diagram



Notes:

Wassermann Dental-Maschinen GmbH
Rudorffweg 15-17 · D-21031 Hamburg
Tel.: +49 (0)40 730 926-0 · Fax: +49 (0)40 730 37 24
info@wassermann-dental.com