

Tornador® STEAM

Original Bedienungsanleitung / Original Instruction Manual



(Alle Abbildungen in diesem Handbuch sind Beispiele, dienen der vereinfachten Erklärung und können vom gelieferten Gerät abweichen / All illustrations in this manual are examples, are for ease of explanation and may differ from the delivered device)

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1. INTRODUCTION

This manual is an integral part of the Tornador®-STEAM and contains all necessary information for its operation and maintenance.

Therefore the user has to read and understand these instructions **before** using the appliance and also keep this manual.

For information, spare parts or accessories, please contact your retailer.

This manual or a copy has to be always at the disposal of the operator for consultation.

Following these instructions, avoids taking useless risks for security and reduces damages, cost for repairs and time the appliance does not work.

2. Intended use

The Tornador®-STEAM is a continuous refilling steam generator for industrial use.

2.1 Technical data

- Boiler: Stainless steel
- Boiler capacity: 1,2 Liter
- Cold water tank: 2,0 Liter
- Electric power supply: 220/240 V
- Boiler power: 3200 W
- Water pump: 50 W
- Working pressure: 600 kPa (6 bar)
- Weight: 8,5 Kg
- Serial number: 83930000 - 83935000

Data, specifications and equipment which are described in this document, are not binding and may be altered in the meantime.

2.2 Safety devices

- Thermostat with automatic resetting
- Thermostat with manual resetting
- Safety valve
- Electronic power balance
- Low voltage handle

2.3. Safety Instructions, Risks and Warnings



The manufacturer declines all responsibility for damages deriving from using the appliance if: the instructions of this manual are not respected, modifications are brought in without previous authorization from the manufacturer, repairs are made by unauthorized persons, parts of the appliance are replaced with not genuine parts, or the machine is used differently from how it is intended.

- **The high-pressure steam jet can be dangerous, if it is used in an improper way. Never direct the steam jet towards people or electric devices.**
- **Never direct the steam jet towards yourself or other people for cleaning clothes or shoes.**

- Never direct the steam jet towards hazardous materials
- Don't use the Tornador® STEAM to clean electric devices such as Laptops, TVs, microwaves ovens and other electrical components.
- People using the STEAM, have to use it according to the instruction manual and should be aware of the outer surroundings.
- Do not use the appliance near other people, if these do not wear protective clothing.
- Pay attention, not to touch the nozzles, as those become very hot while using steam.
- If the electrical cable is damaged, it has to be replaced immediately by the manufacturer or by an authorized person. If you will not follow this directive, it can be very dangerous for the user and his or her surroundings. Contact your dealer immediately.
- If you work with an extension cable, make sure that plug and socket are waterproof and tight. If it's not, it will be dangerous for life of the user and his environment: stop working and contact directly your authorized service.
- In case of leaks of foam or liquids, switch off the unit immediately and contact the authorized Tornador® service partner
- Children or not trained persons must not use this appliance.
- It is very important to respect domestic and company health safety regulations in addition to this instruction manual.
- Be sure that the noted voltage on the machine label is the same as the electrical outlets power. Also, it is important, that the source of electricity is secured accurately and grounded.
- Before using the machine please check that all connecting cables and electrical outlets are working. If you notice any damages, contact an authorized customer service and get the parts changed to prevent any danger.
- Never touch the electrical plug or the electrical outlet with wet hands.
- Regularly check electrical connections for any possible damage. Signs of damage could be squeezed or crushed cables, torn cables, or signs of age. In case of any kind of damage, do not continue using the machine and get the damages from an authorized service fixed.
- The Tornador® STEAM can not be cleaned with a high pressure washer or running water as this can lead to electrical damages of the machine.
- Every time before using the machine you have to check, if all components are ok. Especially the electrical cable, the plug and the steam hose. In case of any damages do not use the machine until you have spoken to and authorized service partner.
- Use only pure tap-water and no distilled water, as distilled water is conductive and the internal sensors can not transmit measured signals correctly. Also, never use solvents, acids or other detergents inside of the machine.
- Never use the machine in a potentially explosive area.
- If steam is used in any hazardous surrounding, it is indispensable to always respect the local security regulations.
- To guarantee the safety of this appliance, only genuine spare parts have to be used.



Do not pull the steam hose, it could get damaged.

3. CONTROL PANEL

1. Main switch ON/OFF
2. Display
3. Steam regulator
4. Plug Socket
5. Water tank cap



4. Operation

4.1 Preparation

- Open the cap (5) by pulling it up and fill the cold-water tank with **tap water**
- Plug the steam-hose in to the plug socket
- Connect the electrical plug to a grounded electrical outlet and push the main switch (1) to ON.



The appliance is provided with a power cord according to its electrical input characteristics. It's important to verify that the electrical mains are according to the norms. It is strongly recommended, that the power supply of this appliance is equipped with an earth leakage circuit breaker (ELCB) of 30 mA maximum. Ask an authorized electrician, if you are unsure.

4.2 Starting

- When the pump has filled up the boiler, the boiler starts heating up (about 5 minutes).
- When the display shows temperature 160 C. the STEAMER is ready for use. The best results will be reached at approx. 170 C.
- Push the trigger on the handle and direct the steam jet towards the area which has to be cleaned.



Before starting steam cleaning, blow off the initial condensation of the conducts into a bucket or any other suitable place.

4.3 Hot water function

To activate/deactivate the function press the button on the handle of the hose (see picture below). When you want to switch back to the steam function just press the switch again.



4.4 Refilling water

When the cold water tank is empty, steam and pressure will decrease and the STEAMER will give an acoustic signal and the display shows H₂O.

The Tornador® STEAM is equipped with a two tank technology and can constantly be refilled.

Proceed as follows:

- Open the cap 5 and fill water in the tank.
- Close the cap 5.
 - After a few seconds the display will show 170 C., and you can continue cleaning.

5. MAINTENANCE



Always interrupt the power supply of the Tornador® STEAM and wait until the device has cooled down before carrying out any maintenance or replacement work!

For the safety of the operator and to secure always perfect performances, the following controls and servicing is recommended:

5.1 Periodically

Check regularly that the power cord does not present any signs of wear or ageing. If it is damaged, it is absolutely necessary to replaced it immediately by a proper power cord before using the STEAMER again.

5.2 Regularly maintenance of the Tornador® STEAM PLUS

To ensure a long term and proper function of the Tornador® STEAM Plus adapter, the rotation set has to be treated **after every use**. This means that oil/lubricant has to be sprayed on the rotation set. By this procedure the smooth running of the rotate set can be continuously guaranteed. For lubricating the rotation set please unscrew the black nozzle from the Tornador® STEAM Plus adapter.

Once the nozzle is off, spray the oil on the back of the rotation set and manually turn the rotation set a few times so the oil gets into the ball bearings.

Afterwards screw the nozzle back on the Rotate-Set. Repeat this procedure after every usage.

The Tornador® STEAM Plus will reliably continue running smooth.

5.3 Cleaning the boiler

1. To prevent calcifying of the boiler, every 200 hours an acoustic signal (beeping noise) will warn you to do a maintenance of the system.
2. Start the decalcification with disconnecting the electrical plug.
3. Wait until the whole machine completely cooled down.
4. Open the cold water tank cap (5) and drain out the remaining water into a collecting container.
5. Open the drain screw on the bottom of the machine with a 22mm wrench and empty completely all remaining water in the boiler.
6. When the boiler is empty, screw carefully the drain screw into the machine without exceeding.
7. Fill the cold water tank with a 50:50 mix of vinegar and water. If you are using some kind of universal softening agent, pls. follow the instruction of the manufacturer.
8. Connect the electrical plug and switch on the main switch (1). Wait until the pump finishes to refill the boiler and switches off (it's possible that the display shows H₂O lack of water and that you hear the acoustic signal). Switch off the main switch (1), disconnect the electrical plug and leave the machine for 8 hours.
9. Open the drain screw again and empty the water with the loose limestone into a collecting container. When the STEAMER is empty, screw the drain screw carefully without exceeding into the machine.
10. Refill the cold water tank with cold tap water, switch the STEAMER on and follow the instructions explained under 4.2 (Starting).
11. Since there may still be softening agents or vinegar residues in the boiler, it may initially smell a bit like vinegar. Depending on requirements and odor nuisance, evaporate the first liter into a collecting container and only then start your normal operation.

5.4 Troubleshooting

ANOMALY	SOLUTION
Water is leaking from the accessories	Due to wear or damage of seals – Replace the seals on the coupling. Pay attention not to cut or to mark them and to place them carefully.
Plug of the steam hose is difficult to insert into the plug socket of the machine.	Do not force to insert it, but put a bit of silicon on the steam coupling in the machine to make it passable
Boiler needs more time to heat up.	Clean the boiler as explained.
Pressure drop while using steam.	Symptom of limestone. Clean the boiler as explained.
Rotation set does not turn any more.	Unscrew the black nozzle and oil the back of the rotation set.

6. ACCESSORIES

The right steam hose and suitable accessories are important for the safety of the STEAMER. Therefore, it is recommended and important to use only genuine steam hoses and accessories.



1. Flexible steam hose with handle and plug
2. Steam lance
3. Steam PLUS adapter
4. Triangular brush with pincers
5. Adapter for triangular brush

7. EG declaration of conformity

Bendel Werkzeuge GmbH & Co. KG

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hereby declares,

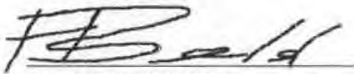
that the steam generator Tornador® STEAM is compliant with the provisions of the Directives 2014/30/EU, Electromagnetic Compatibility (EMCD), Directive 2014/35/EU Low Voltage Directive (LVD) and the Directive 2011/65/EU of the European Parliament and Council for Restriction of the use of certain hazardous substances in electrical and electronic equipment - in short RoHS Directive.

Applied harmonized standards:

EN 60335-1 / EN 60335-2-79 / EN 55014-1/2 / EN 61000 (part 3) / EN 62233 - EN 50581

Name and address of the authorized personal:

Frank Bendel
Wilhelm-Schulze-Str.8-10
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Bad Bevensen, 26.09.2018



Frank Bendel, CEO



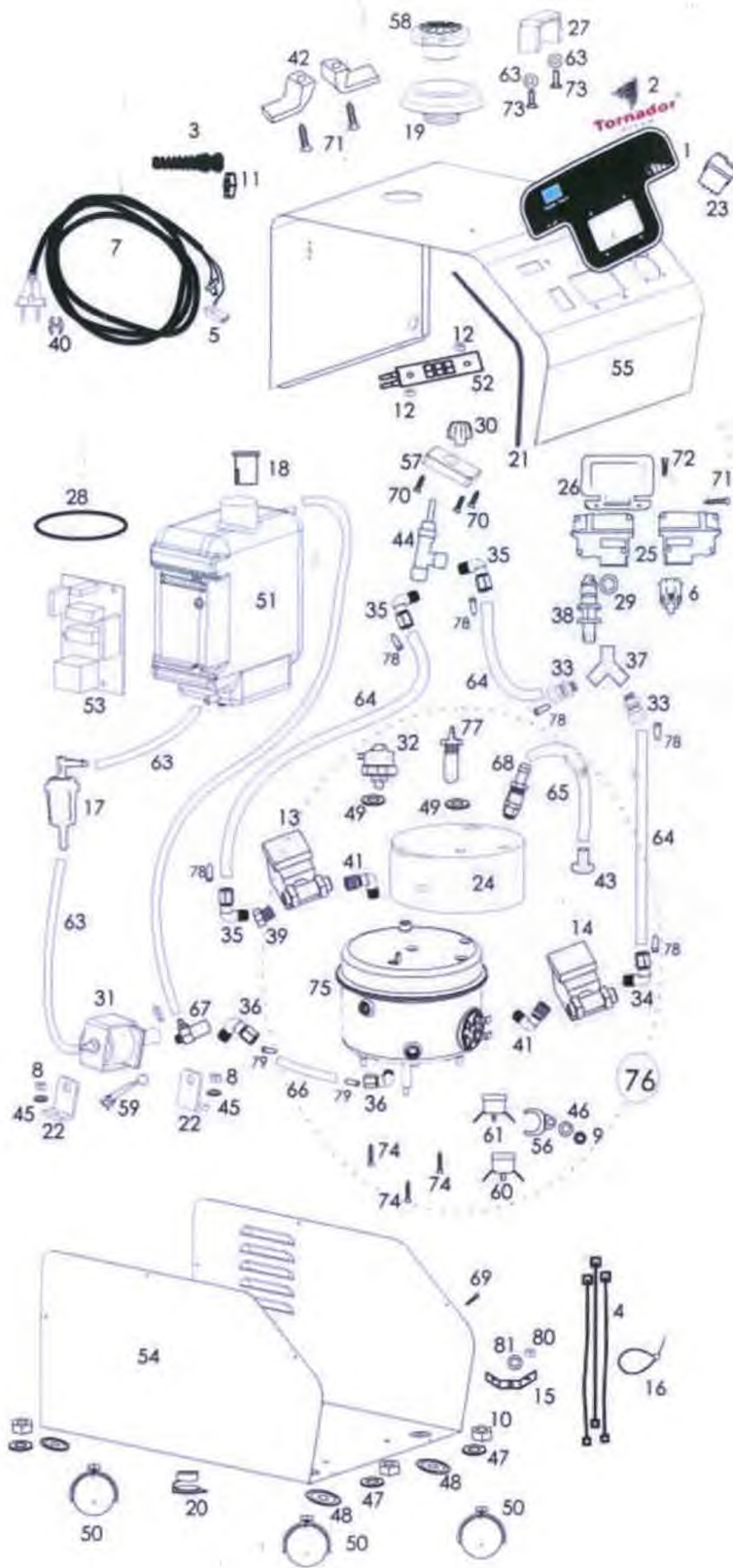
Explanation of the symbols:

Read the user manual, wear eye-protection, wear ear protection and goggles, hair may need to be protected by a hairnet, wear protective gloves, a suitable dust mask and reading the user manual are required to ensure operational safety.

Environmental Indication:



Power tools are hazardous waste and do not belong in the household waste. The Tornador® STEAM is a device, designed for commercial use, that can not be dispensed in public waste collection facilities. To dispose of the device, contact your authorized dealer, who will forward it to the manufacturer for recycling.



Pos	Part.No.	Description
1	UADZ2503	Frontal label
2	UADZ5797	"Tornado Steam" label
3	UBLP0008	Cable connector
4	UCB22600	Gaiser 2000 wiring
5	UCNP0009	Faston cover
6	UCNP0003	Female connector 5 poles
7	UCV25K90	Power Cable with Plug
8	UDA00000	Nut
9	UDA00004	Stainless steel nut
10	UDA40004	Nut zinc coated
11	UDAP0000	Nut
12	UDAP0003	Nut
13	UEV20006	Electrovalve 7000/6AE
14	UEV20012	Electrovalve 7000/AE
15	UFA20002	Male faston
16	UFAP0008	Clamp plas.
17	UFP0001	Pump Filter
18	UFP0002	Filter tank
19	UGN00010	Washer
20	UGN00012	Cap seal
21	UGO60004	Rubber protection
22	UGOG5000	Anti-vibration support
23	UIN20008	Main switch
24	ULRZ0014	Insulation
25	UMB00002	Socket coversupper pluslower
26	UMB00003	Anti-splash cover pluspring
27	UMNP0004	Plastic handle
28	UOR14475	O-ring
29	UOR32037	O-ring 9.25X1.75
30	UPMN0000	Steam regulator knob
31	UPO20004	Pump professional machines
32	UPR20006	Premostat
33	URA10005	Pipe
34	URA10006	Pipe
35	URA10009	Pipe
36	URA10023	L pipe 1/8
37	URA10041	Y 1 f. 1/8 pipe
38	URA10043	Nozzle male 1/8g
39	URA10046	Reduction
40	UANP0000	Fixing ring of power cable
41	URA10065	Pipe
42	URAN0011	Cable reel
43	URAP0015	Safety drainage pipe nylon
44	URB20001	Steam valve regulator
45	URO00003	Washer
46	URO40002	Washer
47	URO40006	Washer
48	URO40008	Washer
49	URO60000	Washer aluminum
50	URUN0008	Wheel
51	USEP0001	Refill water tank
52	USH23512	QV6 display
53	USH23514	QV6 pcb
54	USI02002	Gaiser 2000 lower body
55	US502000	Gaiser 2000 upper body
56	UST00000	Bracket 1hole for thermostat
57	USUP5001	Regulator knob support
58	UTAN0001	Cap
59	UTE20003	Thermoprotector
60	UTE20007	Thermostat One-shot
61	UTE20008	Thermostat
62	URO40003	Galvanized washer 6.4x18
63	UTUP0012	Silicone tube
64	UTUP0015	Tube
65	UTUP0020	Silicone tube
66	UTUP0023	Teflon tube
67	UVAM0000	Injection Valve
68	UVAM0001	Boiler Safety Valve 8 bar
69	UV00002	Screw
70	UVH0004	Screw 2.9x5.5
71	UVH0008	Screw for plastic
72	UVH0007	Screw
73	UVH0010	Screw 6x10
74	UVH0013	Screw
75	VCA25300	Boiler Safety Valve 8 bar
76	YCA25700	Complete boiler
77	YS003500	Level sensor
78	URA20004	Reinforcement bush d.5
79	URA20008	Reinforcement bush d.4
80	UDA40003	Nut zinc coated
81	URO40005	Washer