



CL337 - STEAM DRAGON™ ATMOSPHERIC STEAM CLEANING MACHINE OPERATING INSTRUCTIONS



World's leading manufacturer of precision tools, equipment and supplies for the jewelry industry.

Dear Steam Dragon™ Owner,

We would like to take this opportunity to thank you for your Steam Dragon™ purchase. Whether you have bought Grobet USA™ products before, or are trying us out for the first time, we would like to ensure your satisfaction as we hope this will be the beginning of a long relationship with us.

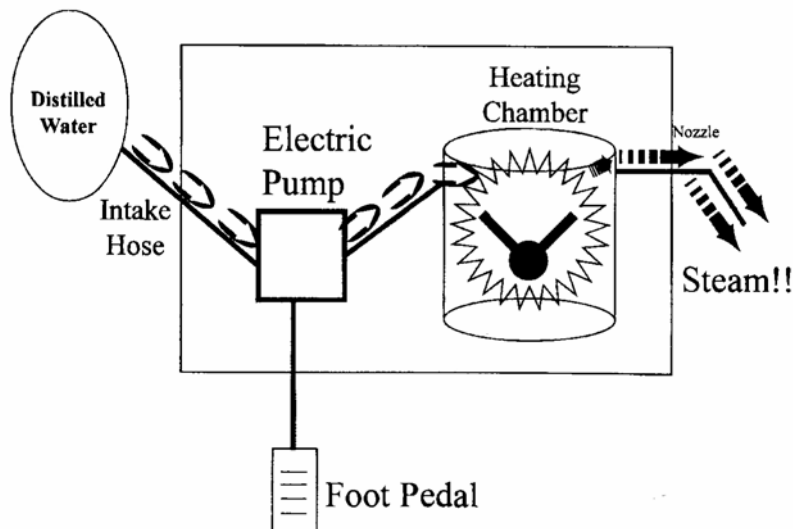
Each Steam Dragon™ we currently produce incorporates a safety pressure release and a temperature limit control. Grobet USA™ Steam Dragon products are safe in any environment and made in the USA.

The Steam Dragon is an advanced line of state-of-the-art atmospheric cleaning machines. These compact, yet sturdy, machines deliver 125 PSI of dry steam instantly. The Steam Dragon™ produces continuous steam with comparable performance to much larger machines without necessity of boiler permits and/or blow down plumbing, etc. They are safe to operate in malls, stores and offices.

After turning the machine on, allowing time for heat-up, and inserting the intake hose into a container of distilled water, press the foot pedal for three seconds for every 8-15 second burst of steam. All Steam Dragon™ cleaners utilize the same technology: a flash boiler type of steam generation. Once the foot pedal is pressed, the electric pump inside the machine is activated, sucking distilled water into the machine via an intake hose.

The distilled water then travels to the heating chamber. The heating chamber is a 2-1/2" sphere in the center of an aluminum band. This aluminum band keeps the heat at a constant 535°F so that when the water (a table spoon for each press of the foot pedal) hits the chamber, it flashes instantly into steam. The steam then travels out the nozzle at a rate of 125 PSI. The steam is dry and sterile. Steam is produced only when the pump is running and will continue to be produced as long as there is water in the chamber. All Steam Dragon™ cleaners are open to the atmosphere. This means that they store heat, not pressure. This makes our steam cleaners safe to operate anywhere and by anyone.

Sincerely, Grobet USA™



General Description

The Steam Dragon™ has been engineered to provide thousands of steam cycles with minimum problems and maintenance. As long as distilled water is used, very few operational problems will occur. The use of distilled water is not just a suggestion, it is a requirement.

Your Steam Dragon™ is a safe machine to own when operated as outlined in this manual. The Steam Dragon™ does not present a serious safety problem. However, high temperatures are required to generate dry steam. Therefore, appropriate caution should be used at all times. The Steam Dragon™ incorporates many safety features including pressure and temperature limit controls. It is much safer to operate because it is a flash steam generator instead of a boiler. The steam generator is always open to the atmosphere so no high pressure is held inside.

The steam generator is heated to 535°F with a band type heater and controlled by a thermostat. When water is pumped into the hot chamber, it flashes into steam and exits through the nozzle. The Steam Dragon™ stores heat, not pressure.

The following is a complete description of each of our Steam Dragon™ products. Each Steam Dragon™ is unique, so please take the time to familiarize yourself with your model. All models weigh under 30 lbs. (except the Silver which weighs 20 lbs.), and each model produces 90-125 PSI of steam.

24.970 Silver Dragon Foot Pedal

11.5 AMP / 110-120V/ 1300 Watts 20-gauge stainless steel cabinet 2"x 15"x 11" High

24.960 Deluxe Silver Dragon Foot Pedal

12 AMP / 310-120V / 1400 Watts 20-gauge stainless steel cabinet 12"x 15"x 11" High

24.961 Deluxe Silver Dragon Foot Pedal with Wand

12 AMP / 110-120V/ 1400 Watts 20-gauge stainless steel cabinet 12" x 15" x 11" High

24.970X Silver Dragon Foot Pedal

5 AMP / 110-120V/ 3300 Watts 20-gauge stainless steel cabinet 12"x 15"x 11" High

24.960X Deluxe Silver Dragon Foot Pedal

5AMP / 220-240V / 1400 Watts 20-gauge stainless steel cabinet 12" x 15" x 11" High

24.961X Deluxe Silver Dragon Foot Pedal with Wand 5 AMP / 220-240V/ 1400 Wafts 20-gauge stainless steel cabinet 12" x 15" x 11" High

Set-Up & Operation

1. Alter opening the shipping container, inspect the carton for any visible signs of shipping damage. Show any damages to the delivery person and note them on the shipper's receipt.
2. The top cover of the Steam Dragon™ is equipped with over hangs at both the front and rear. These overhangs were designed into the unit for lifting purposes. Lift the Steam Dragon™ by its cover or use the handle (Silver Dragon only) and install it in a secure place.
3. CAUTION: Make sure there is adequate spacing between all of the external surfaces of the Steam Dragon™ and any structured walls and/or surfaces. Proper ventilation must also be provided to insure correct operation. The external surfaces of the Steam Dragon™ should not be in direct contact with any other surfaces. Do not operate the Steam Dragon™ with any packing materials on the unit!
4. Do not lift your Steam Dragon™ by the exhaust nozzle! Doing so may damage the front panel as well as the nozzle. You may, however, bend the nozzle to attain a more suitable direction of steam.
5. To provide continued protection against the risk of electrical shock, connect the power cord to a properly grounded 15-AMP 110-120V outlet. Although a 15 AMP outlet is sufficient, if there is little else on the line, a 20 AMP line is better. A 10 AMP, 220-240 volt outlet is required for model 24.960X and 24.961X. It draws approximately 5 AMPS.
Model 24.970 (The Silver Dragon), draws 11 AMPS and 1365 watts.
Models 24.960 and 24.961 draw 12.5 AMPS and 1455 watts

- Models [24.970](#) and 24.970X: Flip the power switch (the red rocker switch) to the on position and it will glow red. Also note the red "heating when lit" indicator light will be on as the machine is heating. It will take between 10 and 15 minutes for the generator to come to full heat (535°F) and the indicator light will go off. The "heating when lit" light will turn on and off continually as the thermostat calls for heat. You can make steam at any time the light is off after the initial heat-up.

Models 24.960 , 24.960X and 24.961: Turn on the breaker switch marked "power" and both the green light (power light) and the red light ("heating when lit") will illuminate. The manual pump switch should be in the off position. It will take 10- 15 minutes for the generator to come to full heat (535°F) and the red light will go out. The red light will turn on and off continually as the thermostat calls for heat. You can make steam at any time after the initial heat-up.

- While the machine is heating, uncoil the clear plastic water intake hose. Insert the hose end (the end with the short metal tube inserted) into the container of distilled water. Make sure that the hose inlet stays submerged in the water. Also be sure to keep the container of distilled water and your Steam Dragon™ at the same level before and after operation (doing so helps prime the internal pump). NOTE: Do not pull plastic hose out of bottle and run the pump dry. This may clog the pump with air bubbles. Running the pump without water is trouble to come.

Your Steam Dragon™ is now ready for operation

- Place the foot pedal in a convenient place on the floor. Using the foot pedal, run the pump until you see water coming up the intake hose and into the cabinet. Once you see this, stop pumping water.

To make steam press the foot pedal or activate the pump switch. For 10-15 seconds of steam, run the pump no more than three seconds; or tap the foot pedal in one second intervals. If you have the Burst Button model, you can press the button to obtain 15 seconds of steam.

Your Steam Dragon™ will yield an eight second burst of steam for every second that the pump is running. Your Steam Dragon™ will not stop producing steam until all the distilled water you have pumped into the steam generator has completely evaporated.

- Although tap water can work in your Steam Dragon™, it will leave mineral deposits from the boiled water. In time, these deposits will clog your Steam Dragon™, rendering it inoperable.

Therefore, Grobet USA™ requires Steam Dragon™ owners to use distilled water in order to keep their warranty valid. Distilled water is readily available at drug and grocery stores. The price of a gallon of distilled water ranges from \$0.65 to \$1.00. Drinking water companies will deliver five gallon jugs for under \$14.00. Depending on usage, you will more than likely use only one or two gallons each week.

Tap water and/or drinking water is not distilled. The use of anything other than distilled water will void your warranty.

Maintenance

The design of this appliance has been engineered so minimum maintenance is required. In fact, so long as distilled water is used, you should encounter flawless operation time and again:

- Keep the work area around your Steam Dragon™ free of contaminants and/or corrosive materials.
- Keep the vents on your Steam Dragon™ free of dust or other polishing obstructions. Do not cover vent openings.
- Be sure that the nozzle is not blocked. This occurs when distilled water is not used or impure water is pumped into the machine. If the steam burst is diminished or acting erratic (split stream and/or spurting), stick a piece of wire (i.e. a paper clip) into the nozzle to help you determine the extent of your blockage. Then remove the nozzle with two 9/16" wrenches and clean.
- Depending on usage, the nozzle cap should be removed periodically and the machine purged. To purge your Steam Dragon™ bring the steam generator to full heat ("the heating when lit" light will turn off). Next, hold the foot pedal down until clear water is streaming out of the nozzle pipe. This volume of water

flushes out the plumbing, check valves, etc. When you stop pumping water, the machine will continue to spit and sputter until the steam generator boils dry; making it ready once again for normal operation. When the pipe is cool to the touch, replace the nozzle. You will need a bucket to hold under the nozzle pipe during this process.

5. If for any reason your Steam Dragon™ is not operating properly, refer to the Troubleshooting Guide in these instructions. You can also call our Customer Service at 800-847-4188 between 8:30am and 5:00pm (EST) Monday through Friday.

Trouble Shooting Guide

1. Power Switch is not illuminated.
 - a. Unit master power switch is not ON.
 - b. Unit is not plugged into a live receptacle.
 - c. Blown fuse: (15 AMP fuse).
 - d. Internal circuitry malfunction.
 - e. Wire disconnected.
 - f. Defective power cord.
 - g. Bad switch bulb.
2. "Heating When Lit" Indicator Light is not Illuminated.
 - a. Unit is at desired temperature.
 - b. Unit master power switch is not on.
 - c. Unit is not plugged into a live receptacle.
 - d. Indicator light malfunction.
 - e. Internal circuitry malfunction.
 - f. Wire disconnected.
3. The Foot Pedal Will Not Operate Motor / Pump Assembly.
 - a. Unit master power switch is not on.
 - b. The unit is not plugged into a live receptacle
 - c. Internal circuitry malfunction.
 - d. The foot pedal is defective.
 - e. Motor / pump failure.
 - f. Disconnected wires
4. Steam Flow is Inadequate:
 - a. Check to see if the steam nozzle is partially plugged. If the nozzle is plugged, run a paper clip into the nozzle hole or remove the nozzle and flush the system (see number four in the Maintenance Section of these instructions).
 - b. Inlet water tube is partially blocked.
 - c. Inlet tube is not submerged in water.
 - d. Check valve malfunction (blocked and/or defective)
 - e. Tube and/or line leakage and/or rupture.
 - f. Low water level in water bottle.
 - g. Steam generator or super heater is coated with lime deposits (purge generator with distilled water).
5. Pump Runs, but Water Doesn't Flow Into the Plastic Tube.
 - a. Low water level in the water bottle.
 - b. Inlet water tube is partially blocked.
 - c. Inlet tube is not under water
 - d. Check valve malfunction (blocked and/or defective).
 - e. Pump or pump seal malfunction.
 - f. Tube and/or line leakage and/or rupture.
 - g. Steam nozzle is partially plugged. (Run the pump and blow into the plastic hose to free the clog.)
6. The Steam Generator Will Not Heat.
 - a. Thermo fuse is blown out.
 - b. The heat band is blown out.
 - c. The heating element has failed.
 - d. Loose wiring

Service

Machines in need of service should be returned to:
Grobet USA™ 1912 Whitney Road Cheyenne, WY 82007

1. Your name, address, and phone number.
2. The problem with your steamer.
3. Your material return authorization (MRA#).

For Technical Assistance, call us at 307-433-1900, 8:00am to 5:00pm (EST) Monday through Friday.

IMPORTANT

Before contacting us, please have the following details to hand: Model #, Serial # and Date of Manufacture. This information is printed on the silver label located on the back of your Steam Dragon™. A return authorization must be obtained prior to sending the unit in for repair. Please call our Customer Service Dept: at 800-847-4188 Monday through Friday, 8.00am to 5:00pm (EST).



FDJ On Time presents the manufacturer's instructions in a useful, organized form. Original instructions are available with the product.