Soner 203H
Soner 206H
Soner 210H
Soner 220H

Ultrasonic Cleaner

# Overview

The ultrasonic cleaning function consists of chemical reaction of detergent and physical strength from so called cavitation. The primary elements of cleaning solution is surfactants or wetting agents that help to break chemical bonds between contaminants and the contaminated objects, besides, there are numerous tiny bubbles in liquid forming a tremendous physical energy from cavitation by which to remove chemical residue, dirt from the objects.

The general frequency of ultrasonic cleaner is within 20-100 KHZ , the higher the frequency be, the stronger the penetration becomes and suitable to clean the objects with complicated shapes or hard-to-reach cervices (50-100 KHZ). The lower the frequency be, the stronger the cavitation becomes and ideal for cleaning the objects with stubborn contaminants but coming with bigger noise and higher corrosion on the surface of the objects being cleaned (20-49 KHZ).

Degassing is to remove the gases from the cleaning solution before cleaning and used to keep the cleaning solution a vacuum and avoid loss of the energy produced by cavitation. Otherwise, the impact power could be absorbed just like a blow at sponge.

Always make sure to place the object being cleaned and basket in the chamber gently to avoid bubbles forming at the corners or gaps. In case of that, please shake the basket slightly to release bubbles or increase the degassing time.

Ultrasonic cleaner must be used with the cleaning solution to perform the best cleaning effect. The selection of cleaning solution should be based on different kinds of the objects being cleaned and its contaminants. (refer to as instructed on Rocker's cleaning solution).

Note: Inflammable or low flash point detergents should be never used. As the energy generated by the cavitation phenomenon will be converted to heat and kinetic energy that would increase the solution temperature and make low flash-point solution flammable. Besides, acids, bleaches and its derivatives should be avoided because which can damage the chamber of the unit unless used with indirect cleaning.

# Important notice

Thanks for your purchase on Soner Series Ultrasonic Cleaner. Please make sure to read and comply with these instructions carefully. Any unauthorized modification on the machine is not allowed and won't fall in our guarantee scope.

▲ Switching on the machine with no or insufficient water is prohibited.

▲ When in use, please watch the water level and make sure to add water once the water is constantly evaporated and then causes insufficient water.

▲ Ensure proper use of cleaning solution; inflammable, acid and bleach substances are prohibited.

▲ The object to be cleaned is not allowed to be placed at the bottom of chamber directly and should be placed on the removable bracket or basket.

▲ When not used for a long time, make sure to drain the cleaning solution off and keep the chamber dry.
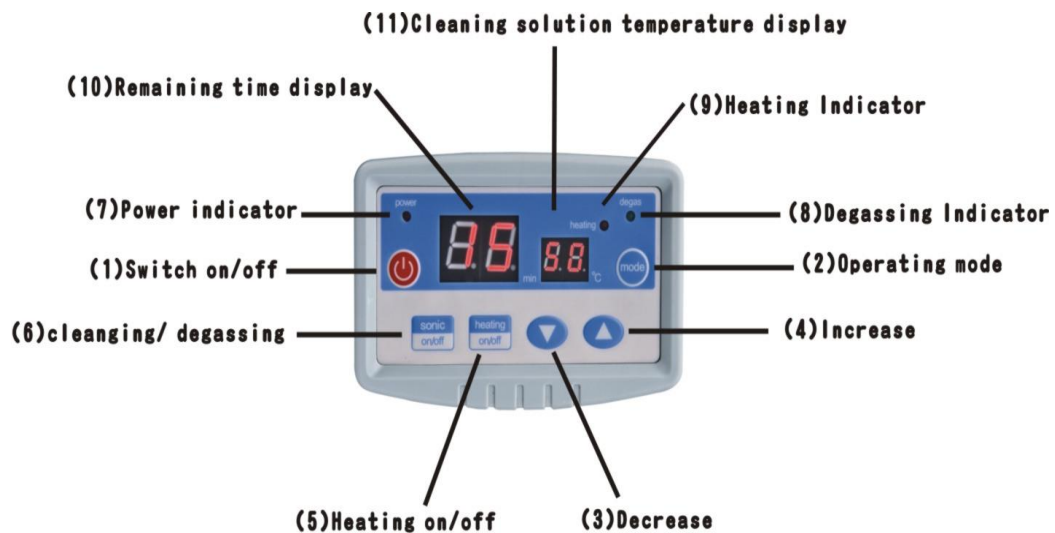
# Unpacking

Carefully check if the shipping carton is in good condition before unpacking. Please check all supplied items according to standard package list. If you have any questions, please keep serial no. & shipping carton and contact your local dealer for help.

The complete package contains:

1. Ultrasonic Cleaner x 1
2. Power Cord x 1
3. Bracket x 1
4. Instruction Manual & Warranty Card x 1
5. Stainless Steel Cover x 1

# Function Keys



(11)Cleaning solution temperature display
(10)Remaining time display
(9)Heating Indicator
(7)Power indicator
(8)Degassing Indicator
(1)Switch on/off
(2)Operating mode
(6)cleanging/ degassing
(4)Increase
(5)Heating on/off
(3)Decrease

| Item | Function | Item | Function |
|------|----------|------|----------|
| 1 | : switch on/off | 7 | Power indicator |
| 2 | mode: operating mode | 8 | Degas indicator |
| 3 | ▼: decrease value | 9 | Heating indicator |
| 4 | ▲: increase value | 10 | Cleaning and degassing timer |
| 5 | heating on/off | 11 | Temperature display |
| 6 | sonic on/off: cleaning or degassing | | |

## A. Installation

1. Please place the unit on a ventilated and clean table surface.

2. Check voltage specified on the nameplate at the back of the unit.

3. Ensure if it matches the line voltage on your location.

4. Plug in the power.

5. Pour the formulated cleaning solution into the chamber up to the operating level after the object being cleaned is placed in.

   - Please refer to the instruction on Soner GP about the proportion of formulating clearing solution

   - Keep the cleaning solution level at the operating level of the chamber after the object being cleaned is placed in.

   - **Note: Watch the cleaning solution level and ensure that it is always above Min. Operating Level. Otherwise, it may damage the unit and its heater which will be out of warranty scope.**

## B. Before Operation

1. Please replace the cleaning solution if it is dirty.

2. Place the object to be cleaned in bracket or basket and then put them inside the chamber carefully. Avoid bubbles arising from the object's corner or hard-to-reach crevices, if so, please shake the basket slightly to expel bubbles.

   - **Warning: Do not place the object directly at the bottom of the chamber, otherwise it will damage the transducer and reduce the cleaning effectiveness.**

3. Check whether the water level is sufficient and make sure to add water and clearing solution if short.

4. Please degas the object or cleaning solution when coming with bubble.

## C. Operating Procedure

1. Check if (7) Power Indicator flashes indicating that the power supply is normal and the unit is standby.

2. Press (1) Switch On/Off then (7) Power indicator will extinguish and the panel will display the last operation mode (Cleaning or Degassing), setting value and (11) actual temperature. If all current settings are unchanged then press (6) to start cleaning or degassing and press (5) to start heating.

   * The first time use or re-plug the power, it will display the default setting (Mode: Cleaning, Time: 15 Min.)

- **Change the last settings:**

1. **Cleaning Mode (Degas indicator unlighted)**

   1.1 **Change the cleaning time:** press (2) then (10) starts flashing => press (3) or (4) to increase or decrease the setting value => press (6) => start cleaning.

   1.2 **Change into Degas Mode:** press (2) for 3 times => (8) starts flashing => press (3) or (4) once => (10) starts flashing (indicating Degas time setup) => press (3) or (4) to reset the degassing time => press (6) => the mode has been changed into Degas Mode.

2. **Degas Mode (Degas indicator lighted)**

   2.1 **Change the degassing time:** press (2) once => (10) starts flashing => press (3) or (4) to reset the degassing time => press (6) => start degassing.

   2.2 **Change into Clean Mode:** press (2) for 3 times, => (8) starts flashing => press (3) or (4) once => (10) starts flashing (indicating the cleaning time setup) => press (3) or (4) to reset the cleaning time => press (6) => the mode has been changed into Clean Mode.

3. **Change the temperature setting**

   3.1 Press (2) till (11) starts flashing => press (3) or (4) to reset the temperature setting (20-60℃) => press (5) to starts heating. (11) will display the actual solution temperature; (9) will flash when heating and keep lighted after reaching the setting temperature.

   3.2 Change the temperature setting during the heating process: press (2) till (11) starts flashing => press (3) or (4) to reset the temperature setting => no need to press (5) and ultrasonic cleaner will continue heating.

   - The unit will start ultrasonic action after a fixed time interval repeatedly to even the solution temperature if the heating function is required only.
   - When cleaning or degassing time is finished, the unit will stop heating at the same time. Just press (5) to continue heating.
   - **When the operation is finished, the unit will alarm by 6-sec whistling and keep standby after turning off the power.**

# Troubleshooting

| Conditions | Possible Causes | Solutions |
|---|---|---|
| Failure to start-up | • Unconnected power plug<br><br>• Invalid power outlet<br><br>• Fuse burned out | • Plug in power exactly<br><br>• Replace the power outlet<br><br>• Contact service technician |
| Ineffective Cleaning | • Too much bubble coming from cleaning solution without being degassed<br>• The cleaning solution level is too high after the object to be cleaned is placed in<br>• The cleaning solution is ineffective | • Degas for 5 min<br><br>• Lower the cleaning solution level to the operation level<br><br>• Change the cleaning solution |
| Invalid function key | • Failure to shift setting | • Switch off and restart |

# Ordering Information

| | |
|---|---|
| 188203-11(22) | Soner 203 Ultrasonic cleaner, AC110V/60Hz (AC220V/50Hz) |
| 188204-11(22) | Soner 203H Ultrasonic cleaner (w/ heating function), AC110V/60Hz (AC220V/50Hz) |
| 188206-11(22) | Soner 206 Ultrasonic cleaner, AC110V/60Hz (AC220V/50Hz) |
| 188207-11(22) | Soner 206H Ultrasonic cleaner (w/ heating function), AC110V/60Hz (AC220V/50Hz) |
| 188210-11(22) | Soner 210 Ultrasonic cleaner, AC110V/60Hz (AC220V/50Hz) |
| 188211-11(22) | Soner 210H Ultrasonic cleaner (w/ heating function), AC110V/60Hz (AC220V/50Hz) |
| 188220-11(22) | Soner 220 Ultrasonic cleaner, AC110V/60Hz (AC220V/50Hz) |
| 188221-11(22) | Soner 220H Ultrasonic cleaner (w/ heating function), AC110V/60Hz (AC220V/50Hz) |
| 188203-30 | Basket for Soner 203/203H |
| 188206-30 | Basket for Soner 206/206H |
| 188210-30 | Basket for Soner 210/210H |
| 188220-30 | Basket for Soner 220/220H |
| 188203-31 | Bracket for Soner 203/203H |
| 188206-31 | Bracket for Soner 206/206H |
| 188210-31 | Bracket for Soner 210/210H |
| 188220-31 | Bracket for Soner 220/220H |
| 188200-31 | Beaker positioning cover (S) for Soner 203/203H/206/206H |
| 188200-32 | Beaker positioning cover (M) for Soner 210/210H |
| 188200-33 | Beaker positioning cover (L) for Soner 220/220H |