Ultrasonic Cleaner
User's Manual

CONTENTS

7 Return of items

Authorization must be obtained from our customer service center. When applying for authorization, please include data regarding the reason the items are to be returned. For your production, items must be carefully packed to prevent damage in shipment and insured against possible damage resulting from careless or insufficient packing.

NOTE: The company reserves the right to make improvements in design, construction and appearance of our products without notice.

8 Packing list

* Main unit of ultrasonic cleaner 1 set
* Cover 1
* Basket 1
* Drain hose 1
* Power cord 1
* User's Manual 1
* Warranty card and product certificate 1

level at the tanks OPERATING LEVEL line.

Load size – it is faster and more efficient to run several small loads rather than a few big loads.

Placing items – Never allow items to sit on the bottom of the tank. Always place them in a basket or beaker to support all items. Allow at least 20mm away from the bottom.

Rinsing items – After cleaning, use a clean water bath to rinse away chemicals adhering to items.

Drying items – Air drying at room temperature works well for some items. Place items requiring faster drying under hot air blowers or in ovens.

Lubricating items – When necessary, re-lubricate items immediately after cleaning.

6 Warranty

Our company warrants this product to be free from significant deviations and workmanship for one year from date of purchase. If repair or adjustment is necessary and has not been the result of abuse or misuse within one-year period, please return-freight prepaid-and correction will be made without charge. Our company will determine if the product problem is due to deviations or customer misuse. Out-of-warranty will be repaired on a charge basis.

Chapter   One Foreword

1.1Introduction

Ultrasonic cleaners have been widely used in cleaning meters and instruments,electroplates.devices ,se micondrat,uctor silicon chips, circuit boards, electroplates, optical giasses, andio magnetic heads, Dacron filter clements, latex modds, meaical appliances, glassware, bijouteric, timepiece parts, precision hardware parts,bearings ,oil nozzles,oil pumps as well as spare parts,assembly parts and geometrically shaped complicatedpartshospital,schllo,scientficresearch, petroleum,chemistry.light industry,metallurgy.traffic,national defense and othet industries,Ultrasonic cleaner is the most ideal high-efficient cleaning equipment especially for dirt at deep holes, bilnd holes and tongues & grooves.

1.2 Safety Rules

1.2.1 Please carefully read this manual before the use of this ultrasonic cleaner .Be sure to operate according to thae requirements of the manual.

1.2.2 Safety preventive measures should be taken for this device·

1.3 Protective measure

1.3.1   Before switching on.pleaes check if the power supply used is proper .The device should be grounded in a reliable way.l

1.3.2   In the process of use,avoid touching objects with electric connection.

Chapter Two General Description

2.1 Product Overview

ultrasonic cleaners are a kind of fast cleaning equipment suitable for various objects.Especiall y,ultrasonic cleaners have gradually substituted the

traditional technologicalasimmersion cleaning.b rushing, pressure washing,vibration cleaning and steam cleaning in specialized and large manufacturing cnterprises. It has the following advantages:

◆   Good cleaning effect. High cleaning degree and

Solution activity – the amount of visible activity is not necessarily related to optimum cavitation for cleaning.

Degassing – fresh solutions contain many dissolved gases (usually air), which reduce effective ultrasonic action. Although solutions will naturally degas over time, using Degas mode speeds up the degassing process. Solutions that have been sitting unused for 24 hours or longer have reabsorbed some gases.

Heat – increases the chemical activity of cleaning solutions.

Surface tension – can be reduced by adding solution to the bath. Reduced surface tension will increase cavitation.

Renewal – renew cleaning solution often to increase ultrasonic cleaning activity. Solutions, as with most chemicals, become spent over time. Solution can become contaminated with suspended soil particles which coat the tank bottom, inhibiting ultrasonic activity.

5 Application hints

Warning

Solution level – Be sure to maintain solution

Filling - always unplug the line cord before filling the tank. Fill the cleaner to the OPERATING LEVEL, using warm(below 75℃) tap water.

Solution Level - Low solution level will cause the cleaner to fail. When you remove heavy or bulky loads from the tank, the solution level may drop below the operating level. If so, be sure to replace lost solution.

Overload - do not rest any items on the tank bottom. Weight on the tank bottom dampens sound energy and will cause damage to the transducer. Instead, use a basket and/or beaker positioning cover to support all items. Allow at least 20mm between the tank bottom and the beaker or receptacle for adequate cavitation.

Covers - allow the cleaner to heat up faster.

Heater – the heater may cause some discoloration of the tank wall. This is normal and will not affect the performance of the cleaner.

Solution – when ultrasonic and heat are running continuously, the solution will stabilize at 45-55℃ for optimized operation.

Setting the temperature - Setting the temperature at the scope of 45-55℃, the cleaner will shut down at 69℃.

· **Do** keep the control panel and the area around the cleaner clean and dry-wipe up solution which spills over the tank brim.

· **DO NOT** operate the cleaner without proper grounding.

· **DO NOT** remove the grounding prong on the line cord plug.

· **DO NOT** disassemble your cleaner-high voltage inside the cleaner is dangerous.

· **DO NOT** immerse the cleaner in water.

· **Do** change your solution regularly.

· **DO NOT** cover vents on the cover.

· **DO NOT** allow the solution to drop below the OPERATING LEVEL line with heat or ultrasonic on. Failure to comply may cause transducer and/or heater damage and will void your warranty.

2 Installation

The cleaner is used under the AC power of 220V/50Hz(or 230V/60Hz). Position your cleaner within easy reach of a standard grounded electrical outlet before operation. Do not place the cleaner on a circuit which could become overloaded.

If your cleaner does not operate correctly, please

call to contact our customer service center to obtain further information.

3   Operating instructions for ultrasonic cleaner

3.1   Explanation of controls
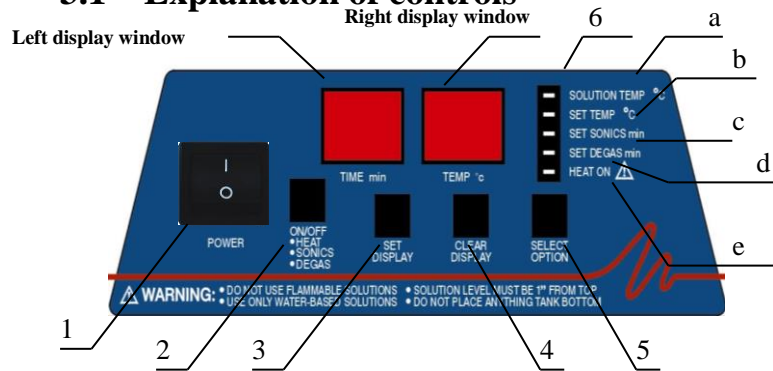
(1) **POWER:** Press to activate/deactivate power to the cleaner.

(2) **ON/OFF:** After you press SELECT OPTION for the selected option, press to activate HEAT, SONICS and DEGAS functions.

(3) **SET DIPLAY:** Press to activate/deactivate the display function. Set temperature, ultrasonic time or degas time, depending on your SELECT OPTION choice. When pressed, the display value will increase.

(4) **CLEAR DISPLAY:** Used in conjunction with SELECT OPTION to set or clear the LED display. Press CLEAR DISPLAY and the time displayed in

setting light is on. Press ON/OFF again to close heat. The right window will display the actual solution temperature.

3.6.2 Use a laboratory thermometer to read the solution temperature. For optimum accuracy, calibrate at the midpoint of your expected operating range (for example: for 20-60 ℃ , calibrate at 40℃). If the two readings agree, the cleaner is calibrated.

3.6.3 If not, press ON/OFF with finger for four continued seconds, the left window will display "SC" and the right window will display "-1" and flashes. Then press SET DISPLAY/CLEAR DISPLAY to select the corrected value (the right window displays the corrected value 1, 2,…,-2, -1). Last, press ON/OFF with finger for four continued seconds to confirm and the previous temperature is to be replaced.

4 Optimizing the cleaner

Cleaning - check the tank for contamination whenever you change solution. If necessary, remove contaminants with a nonabrasive cloth and water.

Emptying - always unplug the cleaner before emptying the tank. Empty the solution into a waste disposal unit.

3.4 NOTE

3.4.1   Place the items into a basket or a beaker.

3.4.2   If using a beaker, add cleaning solution to beaker to cover the items.

3.4.3   Slowly lower the tray or beakers into the tank.

3.4.4   Press ON/OFF once to activate ultrasonic function. Do not stir.

3.4.5   When the items are clean, press ON/OFF once to activate ultrasonic function. Then slowly remove the items from the cleaner.

3.4.6   Rinse clean items with clean water and dry, if necessary.

3.5   To calibrate the temperature display

3.6.1 Press **SELECT OPTION** until the **SOLUTION TEMP** light is on. The right window will display the actual solution temperature. In such process, the ultrasonic function will continue. Use a thermometer to display the calibrated reference temperature display. Press ON/OFF to close the ultrasonic function.

Press SELECT OPTION again until the

temperatur

the left window is "01" or the temperature displayed in the right window is "01", which depends on your SELECT OPTION choice.

(5)**SELECT OPTION:** When pressed, toggle through the Function Indicators in the right window. This allows you to check or set the current solution temperature and set ultrasonic or degas time.

(6) **Function Indicators:** Lights indicate the option selected by pressing SELECT OPTION.

a. **SOLUTION TEMP:** Displays current solution temp. (10—69 ℃ ±4℃). The right window displays the current temperature value.

b. **SET TEMP:** Set solution temperature (01-69℃). The right window displays the set value.

c. **SET SONICS:** Set ultrasonic time (01-99min). The left window displays the set value.

d. **SET DEGAS:** Set degas time (01-99min). The left window displays the set value, generally between 5-10min. The right window displays the current solution temperature.

e. **HEAT ON:** Indicates heat is activated and the

right window displays the current solution

temperature at this

time.

3.2 **Before you start cleaning**

3.2.1　Select your cleaning solution.

3.2.2　Allowing for the volume of the parts you will be cleaning and for the cleaning solution, fill the tank to the OPERATING LEVEL line with warm tap water (below 75℃).

3.2.3　Add a cleaning agent to the tank water.

3.2.4　Plug the cleaner into a grounded outlet.

3.2.5. Turn the POWER switch ON. The cleaner will run through a four-second self-test. The function indicator light flashes.

NOTE: If this is the first time you are running the cleaner, or if you have changed cleaning solution, you must degas the solution. If not, operate directly by following the program of "setting operating parameters" as shown below.

3.3Degassing

3.3.1 Set the degas time, the left window displays the previous value and the right window displays the current solution temperature. If necessary, use SET/CLEAR DISPLAY to alter this setting. Default degas time is 5-10mins.

3.3.2 Press ON/OFF once to start the degas process. After completing the degas time,

you are ready to set operating parameters.

3．6 Setting operating parameters

Step	Parameters	Action
	6	
1	SET ULTRASONIC TIME	Press SELECT OPTION until the indicator of SET SONICS is on. The cleaner is now in Set Time mode. The left window displays the previous value (the right window displays the current solution temperature). If necessary, use SET DISPLAY /CLEAR DISPLAY to alter this setting. Press ON/OFF once to activate timed ultrasonic.
2	SET TEMP	Press SELECT OPTION until the indicator of SET TEMP is on. Now, the right window displays the previous value and you may set the solution temperature. Then press SET DISPLAY/CLEAR DISPLAY to alter the setting until the LED display indicates the solution temperature you wish to maintain. Press ON/OFF once to activate heat. The heat indicator (HEAT ON) lights.
3	MONITOR TEMP	To monitor the solution temperature, press SELECT OPTION until the SOLUTION TEMP LED lights. The right

		window displays the current temperature of the solution.