

Industrial class ultrasonic cleaner

Instruction Manual

Application:

Electronic factory, utensil, hardware, machinery, communication, biological, medical instrument, glasses, optical, jewelry, clock, watch, chemical, textile auto part, ships, aviation, mining area, commercial cleaning.

Contact ATO:

Web: www.ato.com

Email: sales@ato.com

Tel: +1 800-585-1519

PREFACE OF USE

Thanks for purchase ultrasonic cleaner, please read the instruction manual carefully before operation to avoid damage to the machine or any danger to personal safety. And please keep it for reference.

Please make sure power supply is in rated range, before plug the machine. Refitting is strictly prohibited! Attention that the control panel will be eroded by organic solution, strong acid and strong alkali.

THE BASIC PRINCIPLE OF ULTRASONIC CLEANING

The cleaner uses ultrasonic energy (40 kHz) in the form of sound waves to create millions of tiny microscopic bubbles in the solution that even works its way into holes and hidden cavities. Loosening dirt on all surfaces that the solution touches. This action called cavitation, occurs thousands of times per second to gently yet thoroughly scrub contamination off the article being cleaned. When you lift the item out of the cleaner, it's microscopically clean.

NOTES BEFORE USE

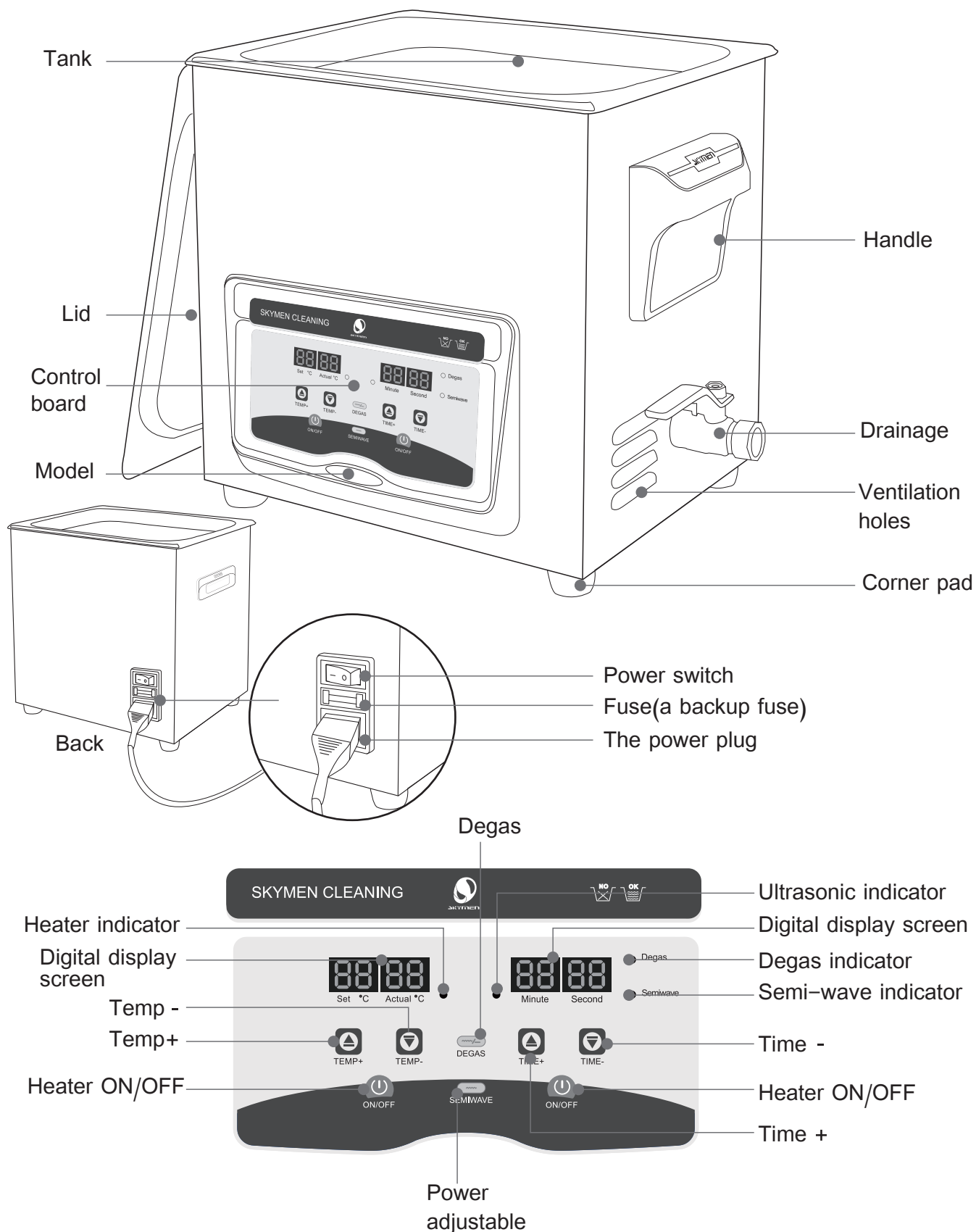
1. Ensure the power supply is in rated range before power cable is connected. Refitting is strictly prohibited! Attention that the control panel will be eroded by organic solution, strong acid and strong alkali.
2. Ensure the earth wiring is well connected before starting.
3. Ensure the power key or knob is on the "OFF" place before starting.
4. Do not operate if the tank is empty, or ultrasonic generator will be damaged. If heating is needed, the water level shouldn't be less than 2/3.
6. Please close the lid to reduce noise and pay attention to water and steam in case of burning skin while open the lid.
7. Do not relocate the machine when fluid in the tank in case of overflow.
8. Please choose the proper sizes or types of baskets according the object to be cleaned
9. Suggest using water-soluble liquid for benchtop ultrasonic cleaners. Strong acid or flammability cleaner is forbidden. Do not heat when using flammable liquid such as alcohol, gasoline, etc., heating is strictly prohibited, ultrasonic vibration for a long time cause temperature of liquid increase, caution fire!
10. Do not use the machine in severe environment :



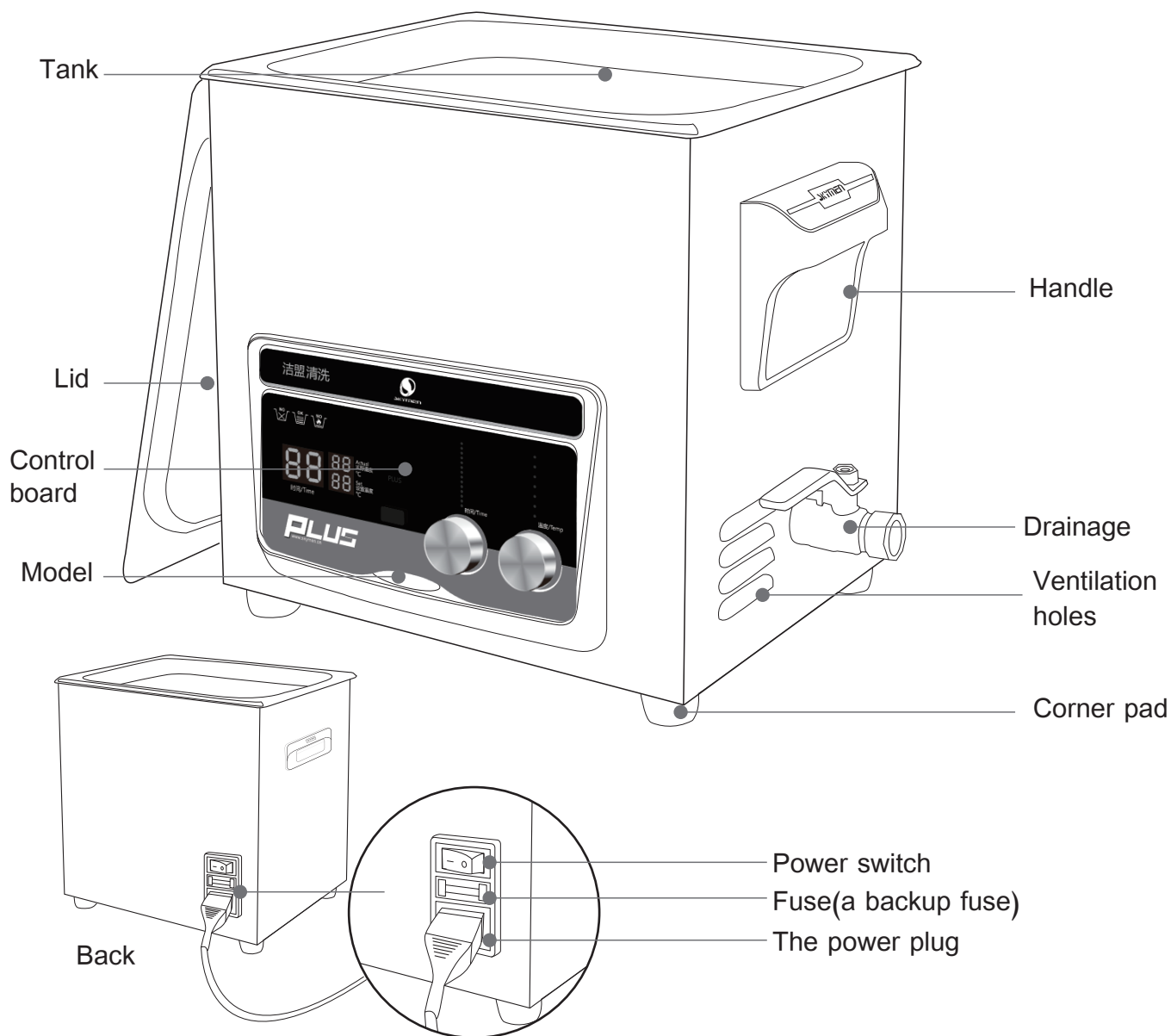
The place where temperature changes fiercely; The place where humidity is too high and is easy to produce dew; The place where vibration or impact is strong; The place where exists corrosive gas or dust; The place where water, oil or chemicals splash; The place where is filled with explosive and flammable gas ;

PRODUCT DRAWING&INDICATION

Digital timer heater adjustable with deeries series

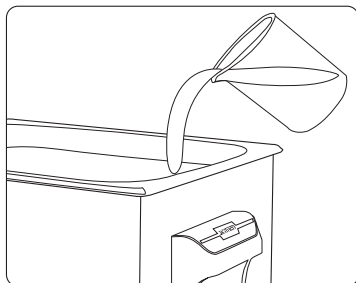


Digital timer heater adjustable plus series

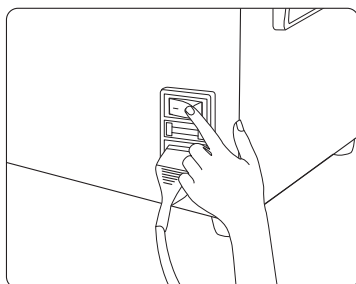


OPERATION STEPS

◆ Before Operating Your Cleaner

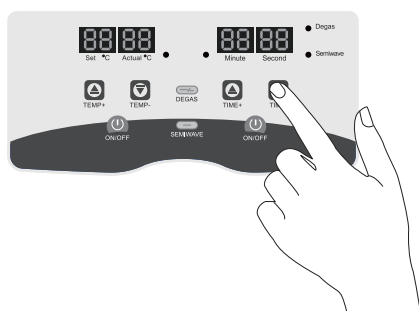


Fill the tank with warm or tap water below the maxline; Add required quantity of deaning solution. When using flammable liquid such as alcohol, gasoline and so on, heating is strictly forbidden! Ultrasonic vibration for a long time cause temperature of liquid increase, cau-tionfire.

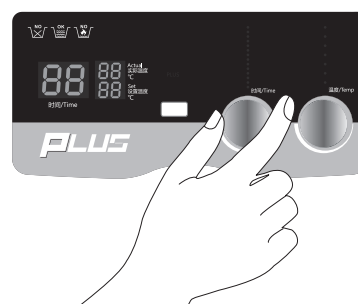


Plug the cleaner into a grounded oudenet. Turn on the power switch at the ank back, then machine is power on.

◆ Start ultrasonic cleaning



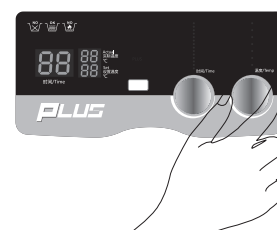
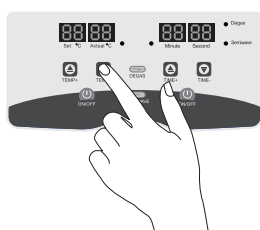
S series: At first setting, the time is random Touch "Time+" or "Time-" to set time, press "On/off" the ultrasonic active and the machine start to countdown.



PLUS series: At first setting, the time is random, progress bar light on, turn the rotary knob clockwise to increase time. Turn counterclockwise to decrease time. Corre-spondinaly the two digits on the left of the display change accordingly, and the time setting done well. Press the rotary knob, ultrasonic start working.

Plus Series Description: Time starts to countdown in minutes. The progress bar indicator lashes to show that the ultrasound starts to work. When the countdown is over, the ultrasound stops working, the progress bar indicator recover light, press the knob again during the work, When ultrasound stops working, the progress bar indicates Light stops flashing. The next boot, display of timer wil default last setting.

◆ Heat



S series: At first setting, the temperature is random. Touch "Temp+" or "Temp-" to increase or decrease temperature. Press "on/Off" button heat will active before reaching the setup temperature.

Plus series: At first setting, the temperature is random. Turn the rotary knob clockwise or counterclockwise to increase or decrease temperature. Press rotary knob heat will active before reaching the setup temperature.

Plus Series Description: Heating in degrees Celsius, the progress bar indicator light flashes, which say heater starts working, heat to the specified temperature, When Heating Stop Working, the progress bar indicator recover light . Press the knob again during the work, the heating stop working, the progress bar indicator light flashes. The next boot, display of heater will default last temperature setting.

◆ Additional functions

Deqas: Ultrasonic work for 9 seconds, stop for 6 seconds, work for 9 seconds ets etc. Till time is out. (some cleaner do not have this function)

Semiwave: Touch "Semiwave" to start half-wave Mode, ultrasonic power will cut in half. (some cleaner do not have this function)

PLUS: The machine will work at 150–180% power (this will not affect the machine's performance life) , which is used to clean object with stubborn stains. (Some machines do not have this func-tion)

◆ Power OFF

Press "ON/OFF" to stop working and then cut off the power, empty out the liquid, clean the tank and the unit with doth for next use.

APPLICATION

Full series standard ultrasonic dleaners are made up of high quality stainless steel plate, which is corrosion resistance and long lifespan, adopt with original South Korea ultrasonic transducer and advanced adhesive technology, high electro-acoustic conversion efficiency and strong ultrasonic power outout. Eauipped with automatic constant temperature heatingq device, heating range: room temperature–80℃

Skymen ultrasonic dleaner widely applied to industry of precision electronics, painting, filter system, watch-clocks, glass, metal, jewelry, and medical instruments deaning etc.

Industry	The cleaning products materials	Cleardirt
Semicon-ductor	Integrated circuit, power tube, slicon wafer, diode, lead frame, 'capillary, tray, etc	Hards, etching oil, stamping oil, pollshing wax, dust partides, etc
Electrical& electronic machine	Tube parts, cathode ray tube, printed circuit board, quartz parts, electronic components, telephone switching equipment, speaker components, power meter, LCD glass, core iron parts, computer floppy disk, vido parts, hoop parts, head, photo die mask, etc	Fingerprint, powder, cutting oil, stamping oil, iron filings, polishing materials, wanut powder, polishing wax, resin, dust etc
Precision machine	Bearing, sewing machine parts, typewriter, textile machine, optical mechanical device, gas valve, watches, cameras, metal fill element, etc,	Machine cutting oil, iron filngs, polishing powder, finger print oil, grease, dirt etc,
Optical device	Glasses, lens prism, optical lens, filter lens, glass device, film, optical fiber, etc.	Plastic, resin, paraffin, finger printing, eto
Hardware & machinery parts	Bearing, gear, bal, metal shaft parts, tools, adjustable valve, and acylinder parts, burner, copm pressors, hydraulic press, gun and ultracentrifuge, city water faucet, etc	Cutting oil, iron flings, grase polishing powder, finger printing, and so on.
Medical instrument	Medical instrument, denture, etc.	Iron filings, polishing powder oil, stamping oil, dirt, etc.

Electroplate	Galvanized parts,mold,stamping parts,etc.	Polishing scrap iron,oil,black iron shell.rust,oxidation shell, scrap iron,polishing powder, stamping oil,dirt etc
Car parts	Poston ring,carburetor,flow meter housing,compressor shell,electrical components,etc	Iron filings,polishing powder,oil, 'stamping oil,dirt,etc
Chemical fiber	Chemical or artificial fiber nozzle filter protector,chemical fiber texture,etc	Chemical colloid,glue, and othersolid material,dust,etc

MAINTENANCE

◆ Maintenance

Regularly use high–pressure wind blown away dust for electrical parts Clean the tank at least once a week

◆ Troubleshooting

NO	Problems	Possible causes	Solutions	Remarks
1	No Ultrasonic	A.Power supply not connect B. Fuse broken C.Cable short circuit D.Transducer short circuit E.PCB Board broken F.Other reasons	A.Check and plug power switch B.Check the fitted power supply and change the same specification fuse C.Connect fitted cable or replace a new D.Inquiry our after service engineer E.Check the broken part and change it F.Inquiry our after service engineer	
2	Time control failure	A.Timer failure B.other reasons	A.Replace timer or digital control panel B.Inquiry our after service engineer	
3	No heating	A.Heater power switch bad linkage B.Fuse burn out C.Heating pad burn out D.Digital display board out of control E.Other reasons	A.Check heating plug and connect wel.check outlet line with multimeterif OK and resistance value is few hundred OHMs. B.Change the same specification fuse C.Replace the bad heating pad if open circuit D.Check the broken part and change it E.Inquiry our after service engineer	Suggestion 50–60°C
4	Temperatur control failure	A.Thermostant loosen B.Thermostat tube broken C.Digital display out of controll D.Other reasons	A.Fasten the thermostat header. B.Replace thermostat. C.Check the broken part and change it. D.Inquiry our after service engineer	
5	Not well cleaning	A.too high too low liquid surface B.too high too low temperature C.Not suitable cleaning liquid D.Other reasons	A.Adjust liquid into the best surface B. Adjust temperature into the most fitted C.Stop and switch off power supply,replace suitable liquid after the previous liquid cool down D.Inquiry our after service engineer	Suggestion 50–60°C
6	Electricleakage	A.Customer side not grounded B.Machine not grounded	A.To ensure grounded B.Check if machine earth wire looser	
7	Other problems			

OPERATION PROCEDURE

>>>>> Mechanical time & heater adjustable series <<<<<<

model	Frequency (KHz)	Transducer (Pes)	Capacity (L)	Tank size(mm)	Unit size(mm)	Heating power (W)	Ultrasonic power (W)	Time(M)	Temperature (°C)
JP-020S	40	2	3.2	240x135x100	270x185x230	100	120/60	0~30	room temp~80
JP-030S	40	3	4.5	300x150x100	330x200x235	200	180/90	0~30	room temp~80
JP-031S	40	3	6.5	300x150x150	375x200x275	200	240/120	0~30	room temp~80
JP-040S	40	4	10	300x240x150	380x290x280	200	300/150	0~30	room temp~80
JP-050S	40	5	14.5	300x240x200	370x270x325	200	360/180	0~30	room temp~80
JP-060S	40	6	15	330x300x150	400x350x280	300	480/240	0~30	room temp~80
JP-070S	40	8	20	330x300x200	400x300x200	300	480/240	0~30	room temp~80
JP-080S	40	8	22	500x300x150	585x330x280	500	480/240	0~30	room temp~80
JP-100S	40	10	30	500x300x200	585x327x333	500	600/300	0~30	room temp~80

>>>>> Digital timer heater adjustable plus serie <<<<<<

model	Frequency (KHz)	Transducer (Pes)	Capacity (L)	Tank size(mm)	Unit size(mm)	Heating power (W)	Ultrasonic power (W)	PLUS-Ultrasonic power (W)	Time(M)	Temperature (°C)
JP-020 _{PLUS}	40	3	3.2	240x135x100	270x185x275	100	120	180	0~99	room temp~80
JP-030 _{PLUS}	40	5	4.5	300x150x100	330x200x280	200	180	300	0~99	room temp~80
JP-040 _{PLUS}	40	8	10	300x240x150	380x290x315	200	240	480	0~99	room temp~80
JP-060 _{PLUS}	40	10	15	330x300x150	400x357x320	300	360	600	0~99	room temp~80
JP-080 _{PLUS}	40	14	22	500x300x150	580x335x330	500	480	840	0~99	room temp~80
JP-100 _{PLUS}	40	18	30	500x300x200	580x335x385	500	600	1080	0~99	room temp~80

MAINTENANCE CARD

Ultrasonic cleaner			
EX factory date:			
Machine number:			
Work voltage			
Work current			
Rated power			
Maintenance care records			
	Maintenance care solution	replacement part	contact person
01			
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
Please contact supplier if trouble cannot be removed !			