

ISO 9001:2008 REGISTERED



# Samarth Electronics

Perfect Cleaning Solution

Website : [www.samarthelectronics.in](http://www.samarthelectronics.in)

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[www.ultrasoniccleanersmfr.com](http://www.ultrasoniccleanersmfr.com)

# Profile

We are pleased to introduce our selves' as a upcoming manufacturing company. Specialized in ultrasonic equipments like Ultrasonic cleaners, Ultrasonic Sonicator, accessories, SMPS Power Source's and Digital timer's. We are ISO 9001:2008 certified quality management system and hard working staff catering to our clients needs 24/7. Our product's have a wide variety of application's, taking into considerate the growing importance of (efficient Ultrasonic technology Nevertheless, we have kept the) flexibility and capability to manufacture equipment's of Special dimension's. Vibrating frequency above 18KHz (18,000 vibration / per sec) is called ultrasound. As a result of these vibration's a large amount of small size Vacuum bubbles are formed in liquid (they are in millions). They implode during high pressure and create highly effective pressure wave.

This phenomenon is called as cavitations and results in removal of dirt contaminations from the object which is to be cleaned. To achieve this effect (Ultrasonic Effect) in the liquid, high frequency generators are used which converts the frequency developed to the corresponding frequency of the ultrasonic unit which again is transformed into mechanical vibrations with the help of electromechanical transducers.

**British  
Certifications Inc.**



*This is to Certify that the Management System of:*

**SAMARTH ELECTRONICS**

2-3, Varenium Plaza, Church Road, Rameshwadi, Badlapur (W),  
Dist.: Thane, Maharashtra, India

*has been assessed and found to comply with the requirement of*

**ISO 9001:2008**

*The Quality Management System is Applicable to*

Manufacturing, Marketing and After Sales Services of Ultrasonic  
Cleaning Equipment and Laboratory Instruments

*Certificate No :* BCI/Q/J/2624

*Date of Certification Audit :* 25.09.2012

*Date of Issue :* 01.10.2012

*Date of Expiry :* 24.09.2015

1st Surveillance Audit : August- 2013

2nd Surveillance Audit : August- 2014

MD



**British Certifications Inc.**

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**NSIC**  
ISO 9001:2008

NSIC ICRA Performance and Credit Rating

**Samarth Electronics, Mumbai**

has been assigned an NSIC ICRA rating of

**SE 3B**

on 6<sup>th</sup> Sep 2013

This rating indicates “Moderate Performance Capability And Moderate Financial Strength”  
this rating is valid till 6<sup>th</sup> Sep 2014

Mumbai

Date : Sep 20, 2013

Senior Group Vice President  
ICRA Limited



# QUALITY POLICY

We shall strive to excel in Quality whatever we do to retain the trust of our valued customers & to be worthy of the trust of new customers.

We shall innovate continually to offer better ultrasonic cleaning equipments & laboratory instruments, better services & more benefits to our customers at reasonable price to achieve the customer satisfaction.

We as a team shall achieve this by continually improving our processes and maintaining quality management system.

Place : Badlapur

Partner

# Optional and Specialized Features

- ☞ Low noise Ultrasonic machines (noise level less than to 70 db certified).
- ☞ Chilling Ultrasonic machine (with a temp less than @10°C from normal room temp).
- ☞ Digital temp controller.
- ☞ Low cost and optimized machine for specialization requirements.
- ☞ Power controller : step less 10% to 100% power control which allow to selected the power level as per.
- ☞ High temp Ultrasonic machines (with a temp range up to 60°C for continuous process).

# SPECIFICATION



MODEL	:	SM-35US
TANK SIZE	:	9" X 6" X 4" ( L X W X H )
OUTER SIZE	:	12" X 9.8" X 11.6" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	3.5 LITER'S
ULTRASONIC POWER	:	100 WATTS.
HEATER POWER	:	150 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE )
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-50US
TANK SIZE	:	8" X 8" X 5" ( L X W X H )
OUTER SIZE	:	11.2" X 12" X 12.4" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	5 LITER'S
ULTRASONIC POWER	:	100 WATTS.
HEATER POWER	:	150 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-65US
TANK SIZE	:	12" X 6" X 6" ( L X W X H )
OUTER SIZE	:	15" X 9.8" X 15.4" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	6.5 LITER'S
ULTRASONIC POWER	:	150 WATTS.
HEATER POWER	:	500 WATTS.
ULTRASONIC FREQUENCY	:	33 KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE )
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-100US
TANK SIZE	:	12" X 9" X 6" ( L X W X H )
OUTER SIZE	:	15" X 12.4" X 15.4" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	10 LITER'S
ULTRASONIC POWER	:	250 WATTS.
HEATER POWER	:	500 WATTS.
ULTRASONIC FREQUENCY	:	33 KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE )
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-140US
TANK SIZE	:	21" X 7" X 6" ( L X W X H )
OUTER SIZE	:	23" X 10" X 15.4" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	14 LITER'S
ULTRASONIC POWER	:	300 WATTS.
HEATER POWER	:	500 WATTS.
ULTRASONIC FREQUENCY	:	33 KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE )
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-200 US
TANK SIZE	:	14" X 12" X 8" ( L X W X H )
OUTER SIZE	:	17.4" X 16" X 16.8" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	20 LITER'S
ULTRASONIC POWER	:	400 WATTS.
HEATER POWER	:	500 WATTS.
ULTRASONIC FREQUENCY	:	33 KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE )
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-200 US ( L )
TANK SIZE	:	24" X 9" X 6" ( L X W X H )
OUTER SIZE	:	26" X 12" X 15.4" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	20 LITER'S
ULTRASONIC POWER	:	400 WATTS.
HEATER POWER	:	500 WATTS.
ULTRASONIC FREQUENCY	:	33 KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE )
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-250 US
TANK SIZE	:	16" X 16" X 6" ( L X W X H )
OUTER SIZE	:	18" X 19" X 15.8" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	25 LITER'S
ULTRASONIC POWER	:	500 WATTS.
HEATER POWER	:	500 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE )
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-300 US
TANK SIZE	:	15" X 15" X 8" ( L X W X H )
OUTER SIZE	:	19.2" X 19.8" X 19" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	30 LITER'S
ULTRASONIC POWER	:	600 WATTS.
HEATER POWER	:	1000 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# SPECIFICATION



MODEL	:	SM-500 US
TANK SIZE	:	22" X 12" X 12" ( L X W X H )
OUTER SIZE	:	24" X 15" X 21.4" ( L X W X H )
TANK	:	SS 304 (16G)
ENCLOSURE	:	SS 304 (18 / 20 G)
TANK CAPACITY	:	50 LITER'S
ULTRASONIC POWER	:	750 WATTS.
HEATER POWER	:	1000 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)

# ULTRASONIC WITH CHILLER



# SPECIFICATION

## ULTRASONIC WITH CHILLER

MODEL	:	SM-250 US/CH
TANK SIZE	:	16" X 16" X 6" ( L X W X H )
TANK	:	SS 304 16G
ENCLOSURE	:	SS 304 18 G
TANK CAPACITY	:	25 LITER'S
ULTRASONIC POWER	:	500 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
CHILLER UNIT	:	INBUILT
TEMPERATURE	:	2 DEGREE TO AMBIENT
COMPRESSOR	:	EMMERSON MAKE
ACCESSORIES	:	LID, BASKET, POWERCORD
OPTIONAL ACCESSORIES	:	BEAKER POSITIONER, FLASK HOLDER

# SPECIFICATION



## COMPACT TABLE TOP CHILLER SONICATOR

MODEL	:	SM-200 US/CH
TANK SIZE	:	450 X 300 X 150 MM ( L X W X H )
TANK ENCLOSURE SIZE	:	600 X 500 X 500 MM ( L X W X H )
TANK	:	SS 304 16G
ENCLOSURE	:	SS 304 18 G
TANK CAPACITY	:	20 LITER'S
ULTRASONIC POWER	:	400 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
CHILLER UNIT	:	INBUILT
TEMPERATURE	:	5 - 35 DEGREE
COMPRESSOR	:	EMMERSON MAKE
ACCESSORIES	:	LID, ADJUSTABLE BASKET, POWERCORD
OPTIONAL ACCESSORIES	:	BEAKER POSITIONER, FLASK HOLDER

# OPERATING INSTRUCTION

Note: please fill the  $\frac{3}{4}$  level of the bath with water before plugging the chiller sonicator bath.

HOW TO OPERATE chiller SONICator bath:

## A) HOW TO SET DEGASSING MODE:

- If required degassing mode press the Degas "ON" switch to start degassing cycle (5min)
- Press the Degassing switch again if you want to stop Degassing before degassing cycle is over.
- Note: During this process your display will show "SE" in Time display and in Temp Display your Actual temp will be indicating. No other keys will function during this process.

## B) HOW TO SET TIME:

- Press SET/ACT switch for setting (SET LED ON).
- Set for TIME then set the required time (In mints) by UP? & DOWN? Keys below the time display.
- Your Default time (Factory default) is 50 mints.

## C) HOW TO SET CHILLER TEMPERATURE:

- Press SET/ACT switch for setting (SET LED ON).
- Set for Time then set the required TEMP (In °Centigrade) by UP ? & DOWN ? keys below the temperature display.
- Now press the CHILLER "ON" switch.
- Your Default temperature (Factory default) is 05°C / Maximum temp is 30°C.

## D) HOW TO SET PSP (PULSE SWEEP POWER):

- To operate the state of art "PSP" (PULSE SWEEP POWER) you have to switch "ON" the PSP switch before switching the ULTRA"ON"
- Note: Your PSP switch will not operate once you start the ULTRASONIC"ON" switch First.

## E) HOW TO SET ULTRASONIC ON:

- After complete setting of your all parameters (TIME/TEMP) you have to switch the ULTRA"ON".
- Now your ultrasonic machine will be in "ON" till your settable are achieved.
- For repeat cycle press the ULTRA "ON" switch once again.

# SPECIFICATION

## ULTRASONIC PIPETTE WASHER

MODEL	:	SM-200 US (PW)
TANK SIZE	:	6" X 6" X 36" ( L X W X H )
TANK	:	SS 304 16G
ENCLOSURE	:	SS 304 18 G
TANK CAPACITY	:	20 LITER'S
ULTRASONIC POWER	:	400 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 99 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE SIDE OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD
SPECIAL FEATURES	:	WATER INLET, OVERFLOW, WATER LEVEL SENSOR PROVIDED
OPTIONAL FEATURES	:	ALSO AVAILABLE IN SUPERMICRO MODEL (WITH DIGITAL TEMPERATURE CONTROLLER)



# SPECIFICATION



MODEL	:	M -1 US
TANK SIZE	:	150 X 140 X 65 mm ( L X W X H )
OUTER SIZE	:	176 X 165 X 200 mm ( L X W X H )
TANK	:	SS 304
ENCLOSURE	:	SS 304
TANK CAPACITY	:	1 LITER'S
ULTRASONIC POWER	:	50 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 20 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET.

# SPECIFICATION



MODEL	:	M -2 US
TANK SIZE	:	243 X 140 X 100 mm ( L X W X H )
OUTER SIZE	:	265 X 162 X 240 mm ( L X W X H )
TANK	:	SS 304
ENCLOSURE	:	SS 304
TANK CAPACITY	:	2 LITER'S
ULTRASONIC POWER	:	50 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 20 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE WITH HEATER

# SPECIFICATION



MODEL	:	M -3.5 US
TANK SIZE	:	300 X 150 X 100 mm ( L X W X H )
OUTER SIZE	:	325 X 176 X 240 mm ( L X W X H )
TANK	:	SS 304
ENCLOSURE	:	SS 304
TANK CAPACITY	:	3.5 LITER'S
ULTRASONIC POWER	:	100 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 30 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE WITH HEATER AND DIGITAL TEMP. TEMPERATURE CONTROLLER)

# SPECIFICATION



Model	:	M-5 US MICRO PLUS MODEL
No. of chambers	:	One
Tank size	:	235 x 235 x 100 mm (l x w x h)
Encloser size	:	265 x 265 x 250 mm (l x w x h)
Chamber material	:	SS 304
Tank encloser	:	SS 304
Basket	:	SS 304
Total Solvent Capacity	:	5 Ltrs. Approx.
Power Output ( Ultrasonic)	:	100 Watts
Power Input	:	230 VAC,
Timer	:	Digital Display with 0-99 min settable.
Frequency	:	33 khz $\pm$ 3 Khz.
Transducers	:	Imported make PZT type bonded at the bottom of the tank with weld bond technique.
Ultrasonic Generator	:	Advanced latest MOSFET based SMPS
Heater	:	100W for efficient heating.
Digital Temp Controller	:	Digital temperature controller with setting max-60°C
Solvent	:	Aqua/Solvent Based
Accessories	:	SS 304 lid, SS 304 Basket, Drain valve & User friendly operation manual.

# SPECIFICATION



MODEL	:	M -6 US
TANK SIZE	:	300 X 240 X 100 mm ( L X W X H )
OUTER SIZE	:	320 X 276 X 210 mm ( L X W X H )
TANK	:	SS 304
ENCLOSURE	:	SS 304
TANK CAPACITY	:	6 LITER'S
ULTRASONIC POWER	:	150 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 30 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE WITH HEATER AND DIGITAL TEMP. TEMPERATURE CONTROLLER)

# SPECIFICATION



Model	:	M-14 US MICRO PLUS MODEL
No. of chambers	:	One
Tank size	:	500 x 300 x 100 mm (l x w x h)
Encloser size	:	525 x 320 x 345 mm (l x w x h)
Chamber material	:	SS 304
Tank encloser	:	SS 304
Basket	:	SS 304
Total Solvent Capacity	:	14 Ltrs. Approx.
Power Output ( Ultrasonic)	:	300 Watts
Power Input	:	230 VAC,
Timer	:	Digital Display with 0-99 min settable.
Frequency	:	33 khz $\pm$ 3 Khz.
Transducers	:	Imported make PZT type bonded at the bottom of the tank with weld bond technique.
Ultrasonic Generator	:	Advanced latest MOSFET based SMPS
Heater	:	200W for efficient heating.
Digital Temp Controller	:	Digital temperature controller with setting max-60°C
Solvent	:	Aqua/Solvent Based
Accessories	:	SS 304 lid, SS 304 Basket, Drain valve & User friendly operation manual.

# SPECIFICATION



Model	:	M-20 US MICRO PLUS MODEL
No. of chambers	:	One
Tank size	:	500 x 300 x 150 mm (l x w x h)
Encloser size	:	530 x 320 x 400 mm (l x w x h)
Chamber material	:	SS 304
Tank encloser	:	SS 304
Basket	:	SS 304
Total Solvent Capacity	:	20 Ltrs. Approx.
Power Output ( Ultrasonic)	:	400 Watts
Power Input	:	230 VAC,
Timer	:	Digital Display with 0-99 min settable.
Frequency	:	33 khz $\pm$ 3 Khz.
Transducers	:	Imported make PZT type bonded at the bottom of the tank with weld bond technique.
Ultrasonic Generator	:	Advanced latest MOSFET based SMPS
Heater	:	400W for efficient heating.
Digital Temp Controller	:	Digital temperature controller with setting max-60°C
Solvent	:	Aqua/Solvent Based
Accessories	:	SS 304 lid, SS 304 Basket, Drain valve & User friendly operation manual.

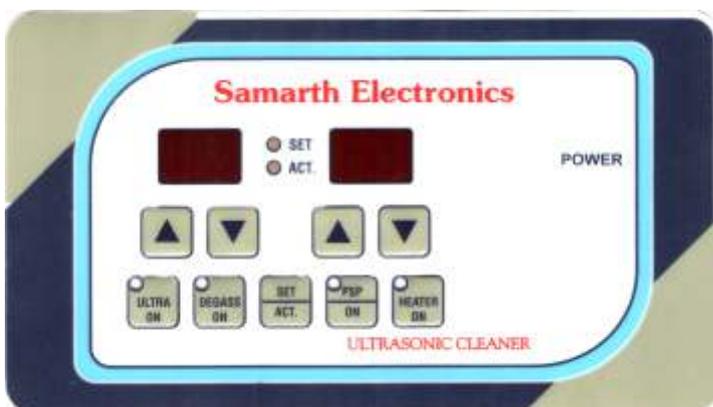
# SPECIFICATION



MODEL	:	M -9 US
TANK SIZE	:	300 X 240 X 150 mm ( L X W X H )
OUTER SIZE	:	325 X 276 X 260 mm ( L X W X H )
TANK	:	SS 304
ENCLOSURE	:	SS 304
TANK CAPACITY	:	9 LITER'S
ULTRASONIC POWER	:	200 WATTS.
ULTRASONIC FREQUENCY	:	33KHz $\pm$ 3Khz.
TIMER	:	0 TO 30 MINUTES.
POWER INPUT	:	230VAC.
TRANSDUCERS	:	PZT TYPE BONDED AT THE BOTTOM OF THE TANK (MORGAN UK MAKE)
ULTRASONIC GENERATOR	:	ADVANCE LATEST MOSFET / IGBT BASED SMPS.
ACCESSORIES	:	LID, BASKET, POWERCORD.
OPTIONAL FEATURES	:	ALSO AVAILABLE WITH HEATER AND DIGITAL TEMP. TEMPERATURE CONTROLLER)

STANDARD MODELS:

- 1) SINGLE DISPLAY
- 2) DIGITAL TIMER
- 3) AUTO DEGASSING FOR 5 MIN.
- 4) HEATER



SUPER-MICRO MODELS:

- 1) DOUBLE DISPLAY.
- 2) DIGITAL TIMER.
- 3) AUTO DEGASSING FOR 5 MIN.
- 4) HEATER.
- 5) PULSE SWEEP POWER FOR UNIFORM DISTRIBUTION OF ULTRASONIC ENERGY.
- 6) DIGITAL TEMPERATURE CONTROLLER WITH 60°C MAXIMUM TEMPERATURE SETTING.

# SPECIFICATION



## ULTRASONIC PROCESSOR

OUT PUT POWER	SE-PS - 250/500/ 750 / 1000 WATTS
OUT PUT FREQUENCY	20KHz $\pm$ 50 hz
CIRCUIT	TRANSISTOR BASED
PROTECTION	OVER POWER
PROTECTION INDICATORS	PLC MESSAGE, LED INDICATORS
CONTROLLER	MICROCONTROLLER
COUNTER	BUILT IN CYCLE COUNTER
WEIGHT	22Kg / 15 Kg
SIZE 500 / 750	580 X 360 X 220 mm
SIZE 250	400 X 300 X 220 mm

# SPECIFICATION



## WATER BATH

TANK CAPACITY	AS PER CUSTOMER REQUIREMENT
TANK MATERIAL	SS 304
TEMPRATURE	UP TO 99 DEGREE WITH DIGITAL DISPLAY
TEMPRATURE RANGE	$\pm 1 \%$
RESOLUTION	0.1°C
SENSOR	PT 100
INSULATION	INSULATION GAP BETWEEN WALL 30 MM
SUPPLY	230 VAC

# SPECIFICATION



## HOT AIR OVEN

Construction	:	Double walled construction.
MOC	:	Inner chamber constructed with 1.0 mm thick, 304 quality stainless steel sheet. Outer Body constructed with 1.0 mm thick, galvanized iron (G.I.)
Shelves	:	S.S. Shelves Wire Mesh Type (S.S. 304 Quality)
Door	:	Front opening type Door.
Door	:	inside constructed with 1.0 mm thick, 304 quality stainless steel sheet.
Door	:	outside constructed with 1.0mm thick, galvanized iron (G.I.)
Door	:	Hinges are made of 3 mm thick S.S. and Brass LATCH & CATCH
Gasket	:	Silicon Rubber Gasket; fitted at front side of chamber.
Vents	:	Fitted at side of the Oven. Constructed with G.I plate 75 mm diameter.
Finish	:	Inner chamber finished with 240 grit mirror finish. Door inner side finished with 240 grit mirror finish. Outside finished with powder coated paint finish.
Insulation	:	Insulation gap between two walls, 50 mm approx. a) Insulation material : High heat resistive Glass Wool Insulation. b) Maximum Temperature Resistant: 600°C
Heater	:	Electrically heated heaters. Especially Designed Fins type Black Heat Designed heaters.
Circulation	:	Air circulation system fitted at top side of Oven to maintain uniform temperature inside System the chamber. Heavy Duty 1/12 HP motor 1440 RPM, fitted with Blower Blade.

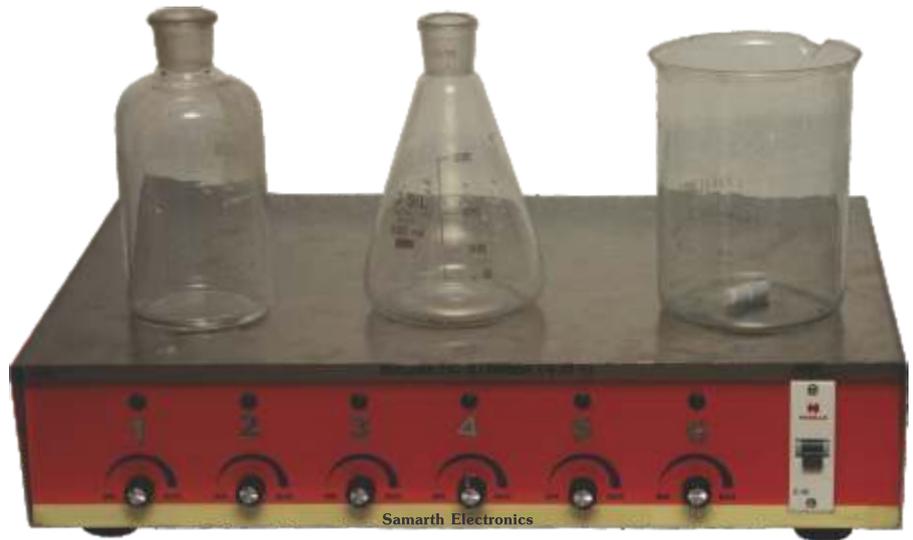
# SPECIFICATION



## OIL BATH WITH MAGNETIC STIRRER

Construction	: Double walled construction.
MOC	: Seamless, died pressed inner Bath constructed with 1.2 mm thick, 304 quality stainless steel sheet. Top and outer body constructed with 1.0 mm thick, 304 quality stainless steel sheet.
LID & HANDLE	: Suitable size LID constructed with 1.0 mm thick, 304 quality stainless steel sheet. Back lite heat resistive Handle fitted at side of bath & knob fitted at LID.
Control Box	: Control box fitted at front side of the bath, fabricated from 1.0 mm thick, Galvanized Iron sheet.
Finish	: Inner Bath finished with 240 grit mirror finish. Top & LID finished with 180 grit mirror finish. Outer Body and control box finished with Powder coated paint finish.
Heater	: Especially black heat designed Electrically heated heaters, made form nichrome wire 80-20 'A' Grade. Heater are in spiral form, insulated with ceramic beads and fiber glass slewing. Wounded surround to inner bath, it helps to maintain uniformity of temperature over all bath.
Insulation	: Insulation gap between two walls, 40 mm approx. a) Insulation material : High heat resistive Cera Wool Insulation. b) Make : Murugappa Morgans Ltd. c) Density : 64 kg/m <sup>3</sup> d) Maximum Temperature Resistant : 1200°C
<b>CONTROL BOX</b>	
Controller	: MICROPROCESSOR based PID Type Controller
Makes	: Samarth Electronics
Display	: 4 Digit RED LED 7 RED LED DISPLAY
Temp. Range	: Ambient to 300° C
Temp. Accuracy	: + / - 1 %
Resolution	: 1°C
Sensor	: PT – 100 (RTD type) Sensor
POWER SUPPLY	: 230 volts AC.

# SPECIFICATION



## MULTI MAGNETIC STIRRER

To mix watery liquid, provided with soft Start facility. Electronic Speed regulator & supplied with S.S. Top and base body, Teflon Magnetic it.

### CONTROL BOX

Controller	:	MICROPROCESSOR based PID Type Controller
Makes	:	Samarth Electronics
Display	:	4 Digit RED LED 7 RED LED DISPLAY
Temp. Range	:	Ambient to 300° C
Temp. Accuracy	:	+ / - 1 %
Resolution	:	1°C
Sensor	:	PT – 100 (RTD type) Sensor
Speed	:	Variable up to 1000 RPM
POWER SUPPLY	:	230 volts AC.

# APPLICATION OF ULTRASONIC CLEANERS

## Application of ultrasonic cleaner in **AUTOMOBILE INDUSTRIES**

- Used for cleaning finished goods prior to dispatch
- Used for cleaning unfinished raw materials
- Used for cleaning up of oil, loose cutting brush, dust, and etc.
- Used for cleaning up of heat treatment jobs
- Used for cleaning die's & molds
- Used for piston & rings cleaning
- Used for bearing cleaning
- Used for crank shaft cleaning
- Used for gears cleaning
- Used for engine assembly cleaning
- Used for carburetors cleaning
- Used for fuel injectors cleaning

## Application of ultrasonic cleaner in **MECHANICAL INDUSTRIES**

- Used for cleaning finished goods prior to dispatch
- Used for cleaning unfinished raw materials
- Used for cleaning up of oil, loose cutting brush, dust, and etc
- Used for cleaning up of heat treatment jobs
- Used for cleaning die's & molds
- Used for cleaning different metal parts
- Used for cleaning metal parts before & after process

## Application of Ultrasonic Cleaner in **ELECTRONIC INDUSTRIES**

- Used for cleaning flux from soldered printed circuit board
- Used for cleaning final assembled pcb
- Used for cleaning dust & solder balls from pcb
- Used for smd pcb also

## Application of ultrasonic cleaner in **TEXTILE INDUSTRIES**

- Used for cleaning spinrates
- Used for cleaning reeds for yarn looms
- Used for cleaning bearings.
- Used for cleaning mechanical parts of textile machines

## Application of ultrasonic cleaner in **HOTEL INDUSTRIES**

- Used for cleaning used utensils (for cleaning oil & food waste)
- Used for cleaning on line dish washing

## Application of ultrasonic cleaner in **PHARMACEUTICAL**

- Used for degassing solvents & mobile phase
- Used for mixing two solvents
- Used for dissolving powder in the solvents
- Used for glass ware cleaning

## Application of ultrasonic cleaner in **MEDICAL FIELD**

- Used for cleaning surgical instruments
- Used for cleaning laproscopic instruments
- Used for cleaning orthoscopic instruments
- Used for cleaning ENT instruments
- Used for cleaning ophthalmic instruments