

Ultrasonic Cleaning Solution

R. K. Transonic Engineers Pvt. Ltd.



About Us

Most Advanced Ultrasonic Cleaning Solutions



Incepted in **2004**, **R. K. Trasonic Engineers Pvt. Ltd.**, is an ISO 9001:2008 certified company that is engaged in the manufacturing, supplying and exporting of a comprehensive range of Industrial Cleaning Systems.

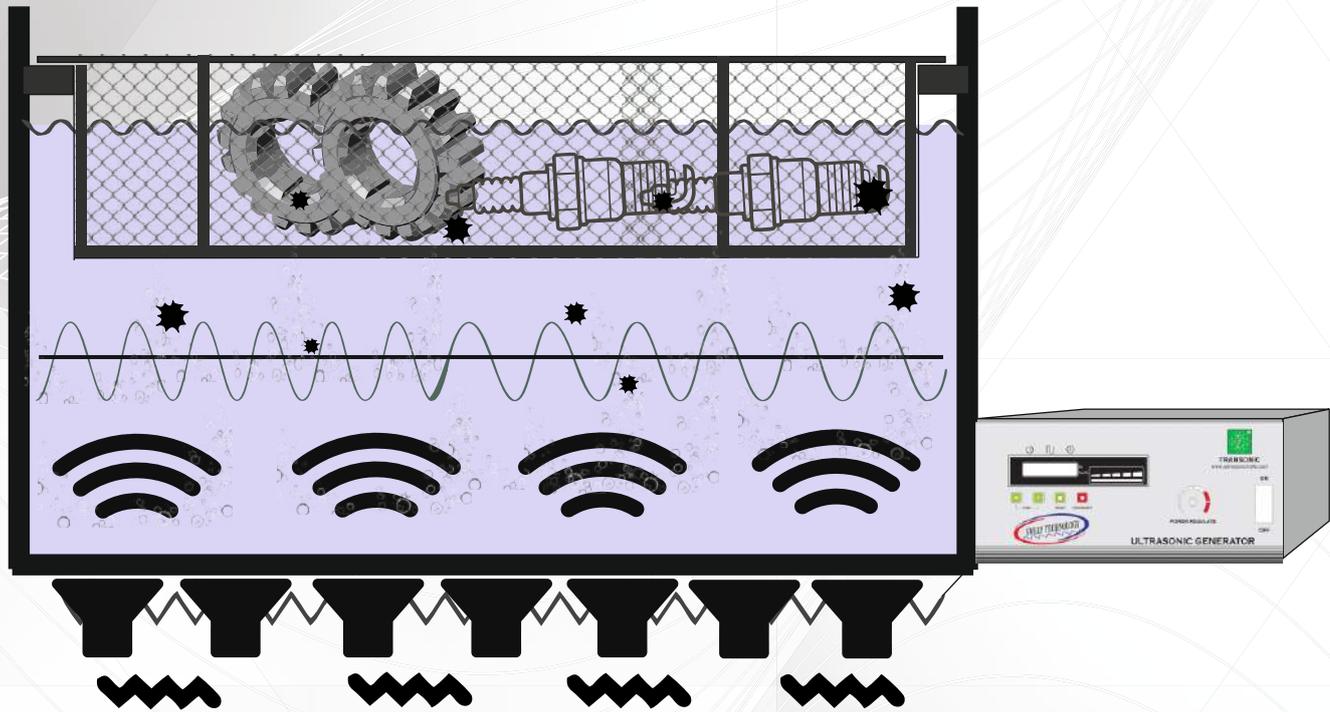
We offer a wide range of products such as Single Tank Ultrasonic Cleaning Systems, Multi Stage Aqueous Ultrasonic Cleaners and related chemicals. We use latest technology and quality raw material during the production of above mentioned products to serve the clients with utmost quality which has enabled us in securing a conspicuous position in the market.

With our expertise and an undeviating urge to satisfy clients, we have established a standard in attaining maximum customer satisfaction.





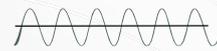
How An Ultrasonic Cleaner Works ?



Transducer



Vibration



Sweep
Frequency



Implosion



Ultrasonic
Waves

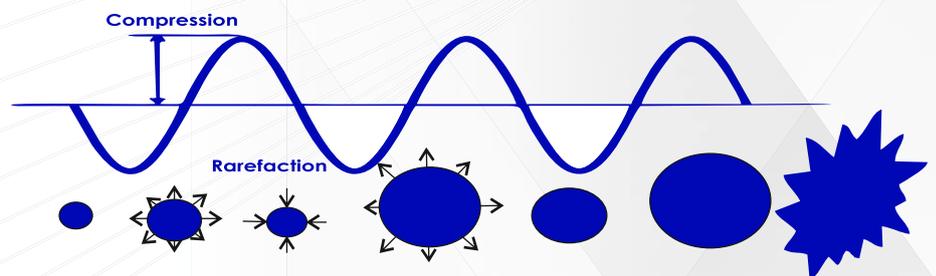


Cavitation
Bubbles

Ultrasonic cleaners are unsurpassed when it comes to removing contaminants from virtually any hard surface that can be safely immersed in a cleaning solution.

Ultrasonic cleaners are fitted with transducers attached to the bottom of a tank filled with cleaning solution. Transducers create vibrations at high frequencies measured in thousands of cycles per second (kHz) and send sound waves through the cleaning solution. These waves produce millions of tiny vacuum-filled bubbles that shoot out powerful jets of liquid when they implode. The force of the implosions, called *cavitation action*, lifts contaminants off the objects being cleaned. The process is tough enough for carburetors but gentle enough for electronics and surgical instruments.

f - 28/40 kHz





Why US ?



Latest Ultrasonic Generators

We use the most advanced True Sweep Technology which allows the generator to regulate a +/- 3 KHz of frequency around the centre frequency at a set repetitive rate thereby allowing the best possible cleaning. Unlike the old traditional generators that use a solid-state circuit, we have designed the most advanced circuit which creates a uniform acoustic field in the cleaning tank resulting in uniform cleaning that allows no part damage.

We strictly use industrial grade Stainless Steel 316 L or 304 with 2 mm sheet thickness as desired by the client and build the machine to perfection with leak-proof fabrication. All machines go under a strict 72 Hour run test before dispatch and are built to last in the harsh industrial settings. All the working tanks are duly passivated and treated for anti-corrosion for longevity.



Material of Construction



Sales & Support

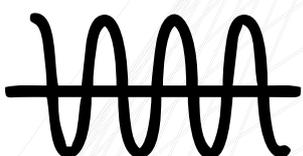
We have a complete in-house sales support team which facilitates commissioning, installations, after sales as well as AMCs if and when required. Although our machines are built to last, however for any support, we are available with a maximum lead time of 72 hours.

- 1) SS Basket
- 2) 316-L, 2MM Thick Stainless Steel
- 3) True Sweep Frequency Generator
- 4) SS Top-Lid
- 5) Digital Controls
- 6) Stainless Steel Frame



Sweep Frequency

The True Sweep frequency mode in our Ultrasonic Generators allows a constant fixed slight variation in the ultrasonic frequency around the resonant frequency. Such operation of the generator allows uniform cleaning thereby avoiding some problems in the old traditional generators which cause standing waves to not only damage the parts but also promote inferior cleaning.



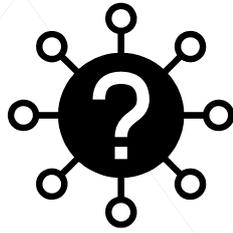
With the all new True Sweep frequency, we not only ensure that the parts are cleaned more evenly, but also the shelf life of the working tank is enhanced as compared to the traditional ultrasonic generators. Our generators are proven to perform a greater cleaning level due to the uniform acoustic field distribution in the ultrasonic tank.



How to choose an Ultrasonic Cleaner ?

1) Purpose of Ultrasonic Cleaner:

An Ultrasonic cleaner can do much more than just cleaning parts. It is used to degas solvents, disperse nano particles, emulsify & dissolve solvents as well as it is used in preparing lab samples. If your primary purpose is to clean parts, then you need to clearly define the size and weight of the parts, type of contamination and the cleanliness criteria that you are seeking.



lxbxh 2) Size of the components to be cleaned:



Measure the dimensions of largest parts to be cleaned and make sure to select a tank that will accommodate these parts. In addition, pay attention to the internal dimensions of the parts basket, since this is most likely where you will put the parts during cleaning.

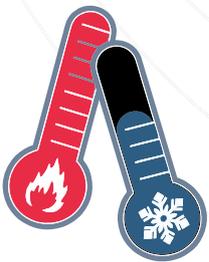
3) Material Handling Basket:

Baskets are used to support parts in an ultrasonic cleaner. They affect cleaning efficiency and the life of the tank. Baskets with insulated handles facilitate placing and removing parts being cleaned in hot liquid. They also keep parts off the tank bottom where they suppress vibration and lower cleaning effectiveness.



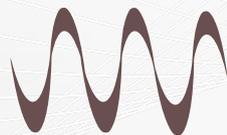
4) Heating element in the tank:

Most cleaning operations are much more effective with heating. It's a lot like doing laundry. A hot cleaning solution is best for removing oils, machining coolants and a whole host of other contaminants from just about any surface one can think of. Although heat is a natural by-product of ultrasonic cavitation, cleaning efficiency increases when you give it a boost by using ultrasonic cleaners with thermostat-controlled heaters.



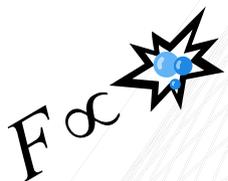
5) Sweep Mode Operation:

We're not talking about brooms here. Sweep mode is a small continuous variation of the ultrasonic frequency around a central value, such as 40 kHz \pm 3 kHz. When an ultrasonic cleaner operates at a fixed frequency without Sweep there are three potential problems: hot spots, dead zones and harmonic vibrations. Select a unit with a Sweep mode such as the Transonic's models if you are cleaning precision parts and surgical instruments when highly uniform cleaning is needed.



6) Choose correct Ultrasonic Frequency:

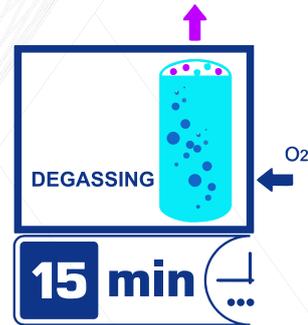
Most ultrasonic cleaners operate between 28 and 40 kHz. This frequency range is well suited to the vast majority of cleaning tasks. A lower frequency such as 28 kHz produces larger cavitation bubbles. When these bubbles implode they release a larger amount of cleaning energy. For coarse cleaning such as removal of lapping abrasives or polishing paste, a lower frequency will be more effective. A higher frequency produces smaller cavitation bubbles. These cover fine featured complex surfaces more thoroughly and are more gentle than low frequencies.





7) Do you need Degas mode?

If you are cleaning parts, keep in mind that every time you fill the tank with fresh cleaning solution you must degas by switching on the generator for 5-10 minutes before the unit can clean effectively. A Degas mode will enable you start cleaning soon after you fill the tank. It does the job by switching on and off causing air bubbles to coalesce and allowing them rise to the surface and burst. Pulse mode provides intermittent spikes of very high ultrasonic power to remove stubborn contaminants. Pulse mode also degasses solutions very effectively.



8) Cleaning Chemical:

The correct cleaning solution chemistry is as important as ultrasonic frequency, power and other points covered in this selection guide. You should contact R. K. Transonic Engineers Pvt. Ltd. for detailed information on the correct formulation for your jobs. Most commonly used chemistries fall into three categories: alkaline, acidic and neutral. They are usually supplied as concentrates so a little goes a long way. Their non-toxic biodegradable chemistry eases disposal concerns.

We facilitate wide range of organic acid & alkaline based chemicals.

<u>Chemical Name</u>	<u>Purpose</u>
RKT ALU 1	Aluminium Cleaning Chemical
SK – 4053 CA	Organic Acid – Carbon Remover
RKT 22 DA	Anilox Roller Cleaning Chemical
SK – 4053 Safe Kleen	Alkaline Multipurpose Degreaser
RKT 36 Special	Neutral Multipurpose Degreaser
RKT B 45	Brass & Copper Cleaning Chemical
RKT U9	Neutral Mould Cleaning Chemical





Our Products



Single Tank Ultrasonic

5 Liters	12 Liters	18 Liters	30 Liters	50 Liters
75 Liters	100 Liters	180 Liters	250 Liters	350 Liters

Multi Tank & Custom Built Ultrasonic

From 18 Liters up to 250 Liters
Multiple Tanks can be fabricated.



Performance Chemicals

Wide range of organic acid and alkaline chemicals.





Applications

01

**Auto-Parts
Cleaning**



02

**Aircraft Parts
Cleaning**



03

**Surgical
Cleaning**



04

**Mould
Cleaning**



05

**PCB
Cleaning**



06

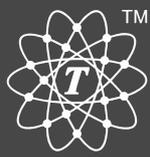
**Anilox Roller
Cleaning**



07

**Jewelry
Cleaning**





Ultrasonic Single Tank Models

<u>Model No.</u>	<u>Tank Size (Inches)</u>	<u>Liters</u>	<u>Ultrasonic Watts</u>	<u>Heater Watts</u>
RKT 180 DTT	10" X 6" X 6"	5 L	180 W	500 W
RKT 300 DTT	12" X 8" X 8"	12 L	300 W	700 W
RKT 420 DTT	12" X 12" X 8"	18 L	420 W	1500 W
RKT 600 DTTA	13" X 12" X 12"	30 L	600 W	2 kW
RKT 600 DTTB	20" X 12" X 8"	30 L	600 W	2 kW
RKT 720 DTT	22" X 12" X 12"	50 L	720 W	2 kW
RKT 900 DTT	24" X 14" X 14"	75 L	900 W	4 kW
RKT 1200 DTT	24" X 16" X 16"	100 L	1200 W	5 kW
RKT 1800 DTT	24" X 24" X 20"	180 L	1800 W	9 kW
RKT 2400 DTT	30" X 26" X 20"	250 L	2400 W	18 kW



Multi-Stage Ultrasonic System

Multi Tank or Multi Chamber Ultrasonic Cleaning machines are ideal for production lines where usually a bulk quantity has to be cleaned daily. Multi Chamber Ultrasonic Cleaning machine becomes a part of the manufacturing line which enables voluminous cleaning of different types of parts.

A usual Multi Tank Ultrasonic Cleaning Machine comprises of the following stages; Ultrasonic Cleaning followed by Rinsing & Drying tank. However, the stages can be customized and added upto 10 tanks or more depending upon the process requirement.

Types of Muti -Tank Ultrasonic Cleaning Machines:

- 1) Manual – Enables manual transfer of baskets from one tank to another
- 2) Semi- Automatic – Enables pneumatic dunking and push slide basket arrangement
- 3) Fully Automatic – Enables minimum human intervention with auto basket transfer from one tank to another

Models of Ultrasonic Multi Tank Cleaning Machines:

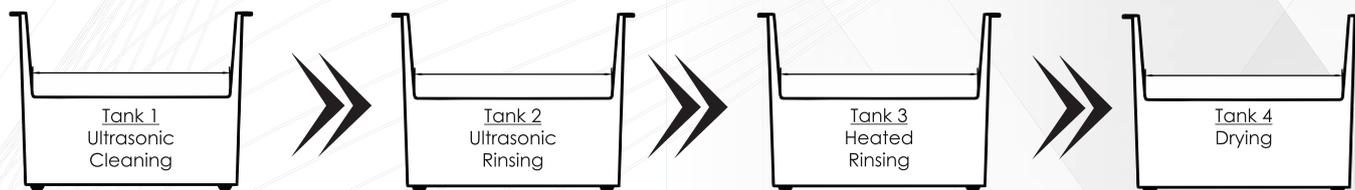
- 1) RKT 2 – Ultrasonic Cleaning + Heated Rinsing
- 2) RKT 3- Ultrasonic Cleaning + Heated Rinsing + Drying
- 3) RKT 4 – Ultrasonic Cleaning + Ultrasonic Rinsing + Heated Rinsing + Drying

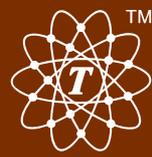
Choose your Ultrasonic Cleaning Tank Size:(L X B X H)* Inches*

- 1) 20" X 12" X 8"
- 2) 13" X 12" X 12"
- 3) 22" X 12" X 12"
- 4) 24" X 14" X 14"
- 5) 24" X 16" X 16"
- 6) 24" X 24" X 20"
- 7) 30" X 26" X 20"

Machine Features

- 1) Oil-Skimmer options
- 2) Low Level float sensors
- 3) Options of Filtration Unit
- 4) Low noise working modules
- 5) Duly Passivated tanks for longevity
- 6) Digital Timer & Temperature controllers
- 7) Fully insulated stainless steel working tanks



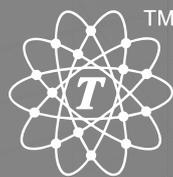


Our Clients





know more about us



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