

Vibronics® Private Limited

ISO 9001:2015 CERTIFIED COMPANY

APPROVED BY IRQS



Manufacturers & Exporters of Ultrasonic Equipments

Website: www.vibronicsindia.com/www.vibronics.co.in

E-mail: sales@vibronics.in, accounts@vibronics.in

**Regd. Office & Works: W-400, T.T.C. Industrial Area,
MIDC, Rabale, Navi Mumbai- 400 701.**

Dist. Thane, Maharashtra, India.

Telephone: 27690440 / 27690593 Fax: 27690636

Vibronics® Private Limited- Since 1964

- Vibronics Pvt. Ltd. was established in the year 1964 and since then till date it is delivering the industry with high end cleaning solutions. We dedicate ourselves to design, manufacture and the supply of ultrasonic based systems and accessories using a state of art technology to deliver an optimum customized solution.
- We strive for continual improvement to satisfy our clients by using QMS Standards.
- With our mission to create a healthy relationship with our prospective clients we offer you with a good knowledge of the Indian market, maturity in dealings and a smooth delivery process.
- Our clients have been our strength and have also helped us to carve our own niche and distinguish ourselves, from others. Our product range is of prime quality delivered with precision.
- Our precision designed systems feature the equipment our clients require for attaining simply the best ultrasonic cleaning. We are offering our clients with Reliable, Long service life, Easy installation, Sturdy construction, Optimum functionality, Low power consumption, High operational efficiency cleaning solution.

Vibronics[®] Private Limited- Since 1964

About Us

- Extensive range of products
- State of art Infrastructure
- Stringent Quality Checks
- Cater to Entire range of Industries
- Client base outstretched across nation

Why Us?

- Offer Free Trials
- Modern & Innovative Approach
- Technically Sound Products
- Complete Quality Assurance
- Smooth delivery Process
- Experienced & Expert Workforce

Products

- **Ultrasonic Cleaning System**

Automatic Multi Stage Ultrasonic cleaning System

Manual Multi Stage Ultrasonic cleaning System

Single Stage Ultrasonic Cleaner

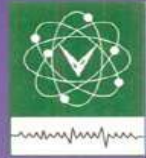
Ultrasonic Filter Cleaning System

Ultrasonic Screen Cleaning System

- **Ultrasonic Flaw Detector**
- **Ultrasonic Processor**
- **Ultrasonic Thickness Gauge**
- **Ultrasonic Sieve Vibrator**
- **Automatic Drying System**
- **Ultrasonic Cleaning Chemicals**

Few of Our Important Clients

- ✓ Bharat Oman Refineries Ltd., Bina
- ✓ HPCL- Mittal Energy Ltd., Bhatinda
- ✓ HPCL, Mumbai
- ✓ BPCL, Mumbai & Cochi
- ✓ Essar Oil Ltd., Jamnagar
- ✓ Essar Steel Ltd., Vizag
- ✓ Bhabha Atomic Research Center, Mumbai
- ✓ Yasref, Saudi Arabia
- ✓ Reliance Industries Ltd.
- ✓ Crompton Greaves Ltd., Nasik
- ✓ Bhilosa Industries Pvt. Ltd., Silvassa
- ✓ Birla Cellulose, Kharach
- ✓ Eagle- Brugmann India Pvt. Ltd., Pune
- ✓ Flow serve India Ltd., Bangalore
- ✓ Flextronics Technologies India Pvt. Ltd., Chennai
- ✓ Mahindra & Mahindra Ltd., Nagpur
- ✓ Eicher Tractors Ltd., MP
- ✓ Lucas TVS Ltd., Chennai



Vibronics[®] Private Limited

ISO 9001:2008 CERTIFIED COMPANY



AUTOMATIC MULTISTAGE ULTRASONIC CLEANING SYSTEM

W 400, TTC Industrial Area, MIDC Rabale
Navi Mumbai-400 701, Dist. Thane, Maharashtra, India
Tel / Fax No. : 022-2769 0440 / 0593 / 0636
Email: sales@vibronics.in, vibronics@iname.com



Vibronics[®] Private Limited
ISO 9001:2008 CERTIFIED COMPANY



AUTOMATIC MULTISTAGE ULTRASONIC CLEANING SYSTEM

W 400, TTC Industrial Area, MIDC Rabale
Navi Mumbai-400 701, Dist. Thane, Maharastra, India
Tel / Fax No. : 022-2769 0440 / 0593 / 0636
Email: sales@vibronics.in, vibronics@iname.com

Ultrasonic Filter Cleaning System



Ultrasonic Stator Cleaning System



Ultrasonic Screen Cleaning System



Ultrasonic Cleaning Solutions

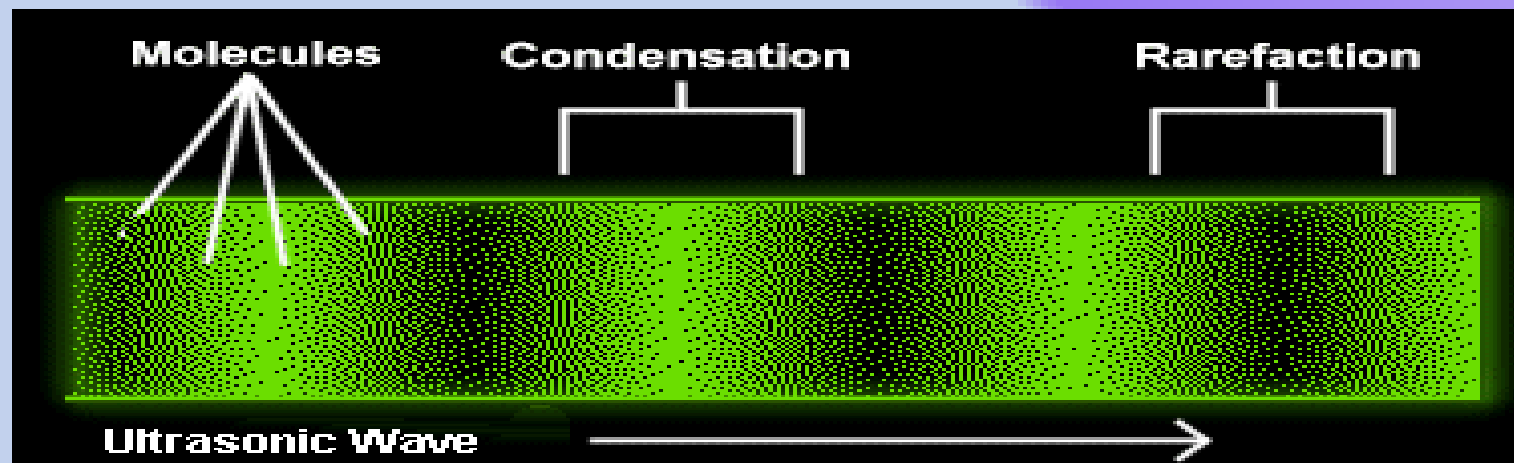
- **Vibrosol 310[®]**
- **Vibrosol 210[®]**
- **Vibrosol 340[®]**
- **Vibrosol DCB[®]**
- **Vibrosol 1000[®]**
- **Vibrosol 1010[®]**
- **Vibrosol DRD[®]**



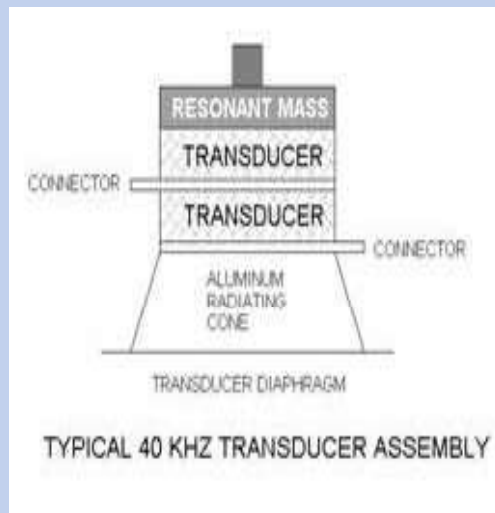
What Is Ultrasonic?

- Ultrasonic cleaning is a process that uses ultrasound waves having frequency of 20 KHz and above to clean variety of components.
- An ultrasonic cleaner is simply a metal tank [stainless steel] that has piezo ceramic transducers bonded to the bottom or side. These transducers have a unique property of changing size almost instantly when excited by an electrical signal. When excited the transducer increases in size and causes the tank bottom or side to move. This creates a compression wave in the liquid of the tank.
- By using an electrical generator that puts out a high frequency signal [20 to 40 kHz] the transducer rapidly induces compression and rarefaction waves in the liquid. During the rarefaction cycle the liquid is torn apart. This creates a vacuum cavity within the liquid.
- These cavities will grow larger and smaller as the compression waves are continued. When the cavity reaches a certain size [based on the frequency and the wattage of the signal] the cavity can no longer retain its shape. The cavity collapses violently and creates enormous energy, temperatures and pressure that impacts against whatever object is in the tank. There are millions of these bubbles created and collapsing every second in an ultrasonic tank.
- However, they are so small that they do no more than clean and remove surface dirt and contaminants. The higher the frequency, the smaller the nodes between the cavitation points, which allows for cleaning of more intricate detail.
- The significant advantage of this technique is an ability to clean the delicate and complex shape in a short time without damaging the material geometry.

- The ultrasound can be used with just water, but use of a solvent appropriate for the item to be cleaned and the type of soiling present enhances the cleaning effect. The cleaning solution contains ingredients designed to make ultrasonic cleaning more effective. For example, reduction of surface tension increases cavitation levels, so the solution contains a good wetting agent (Surfactant).
- Aqueous cleaning solutions contain detergents, wetting agents and other components, and have a large influence on the cleaning process. Correct composition of the solution is very dependent upon the item to be cleaned. Solutions are mostly used warm, at about 50-65 °C.
- The cleaning process is safe since the energy is localized at the microscopic level. The most important cautionary consideration is the choice of cleaning solution. Potentially adverse effects of the detergent on the material being cleaned will be enhanced by the ultrasonic.

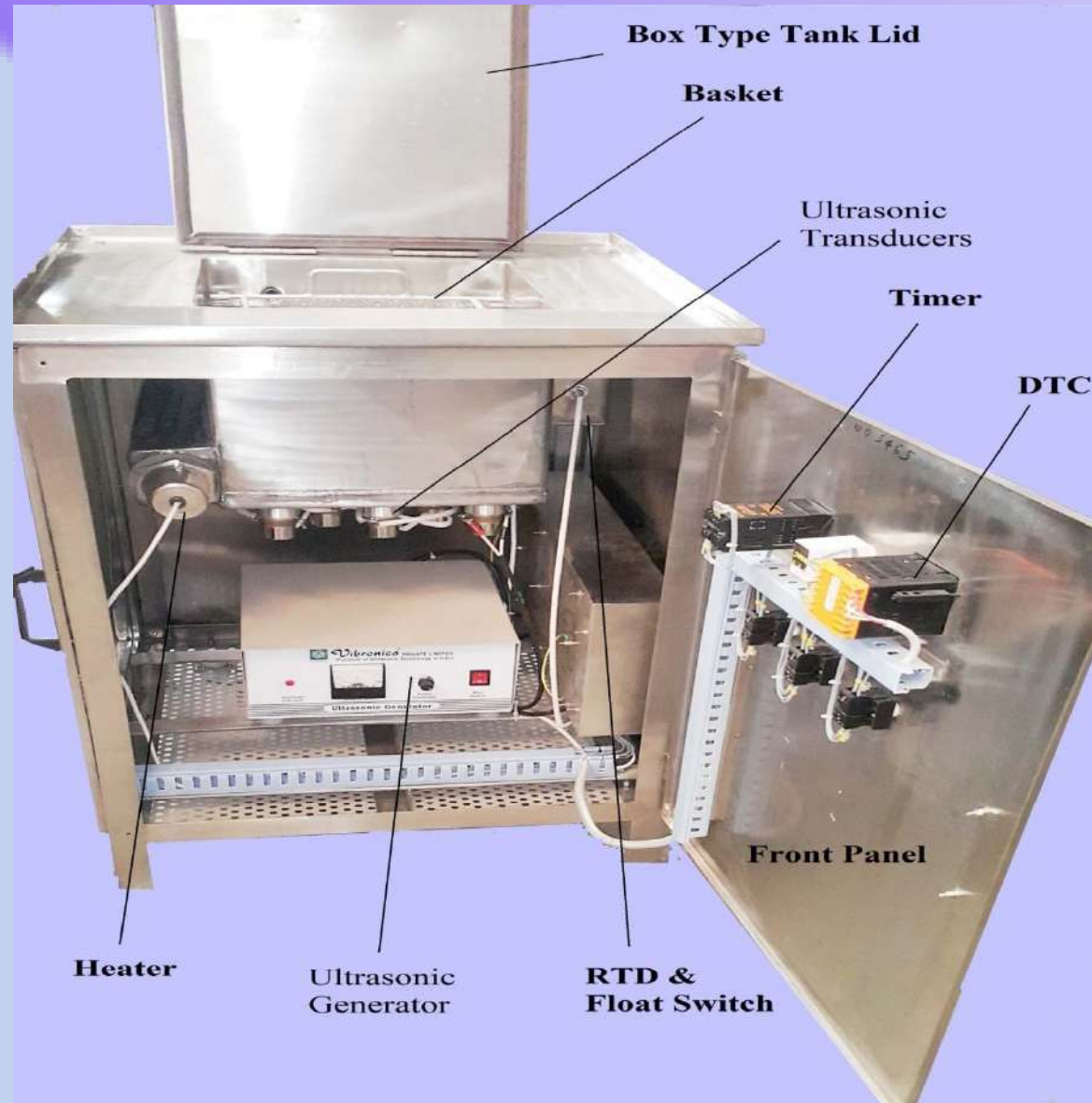


- There are 7 major concerns related to successful ultrasonic cleaning,
 - ✓ Time
 - ✓ Temperature
 - ✓ Chemistry
 - ✓ Proximity to the transducer/part fixture design
 - ✓ Ultrasonic output frequency
 - ✓ Watts per gallon
 - ✓ Loading - the volume (configuration) of the part being cleaned



- A transducer is a piezo material that when excited by an electrical pulse will physically change shape. The reverse is also true.
- Newton's second law [$F=ma$] states that force is equal to inertial mass times acceleration. A transducer emits ultrasonic vibrations by rapidly expanding and contracting in resonance with the frequency of the generator output when it equals the primary operating frequency of the transducer. According to this law a heavier faster accelerating transducer will produce more cleaning force than a lighter, slower accelerating transducer.
- When powered by electrical energy, which is in resonance with operation frequency of the transducer, the transducer vibrates in harmony with the output of the generator powering it. If the output of the generator does not closely match the operating frequency of the transducer, efficiency and power sharply drop.

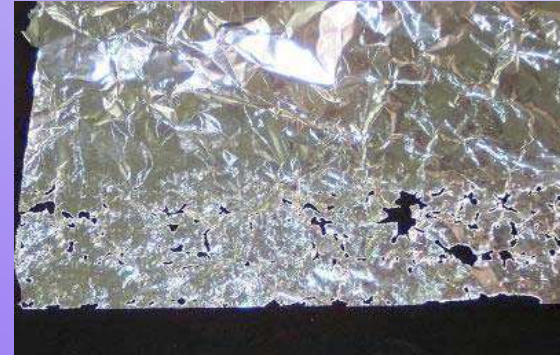
Cleaner Inside



Ultrasonic Cleaner Performance Testing



40 KHz

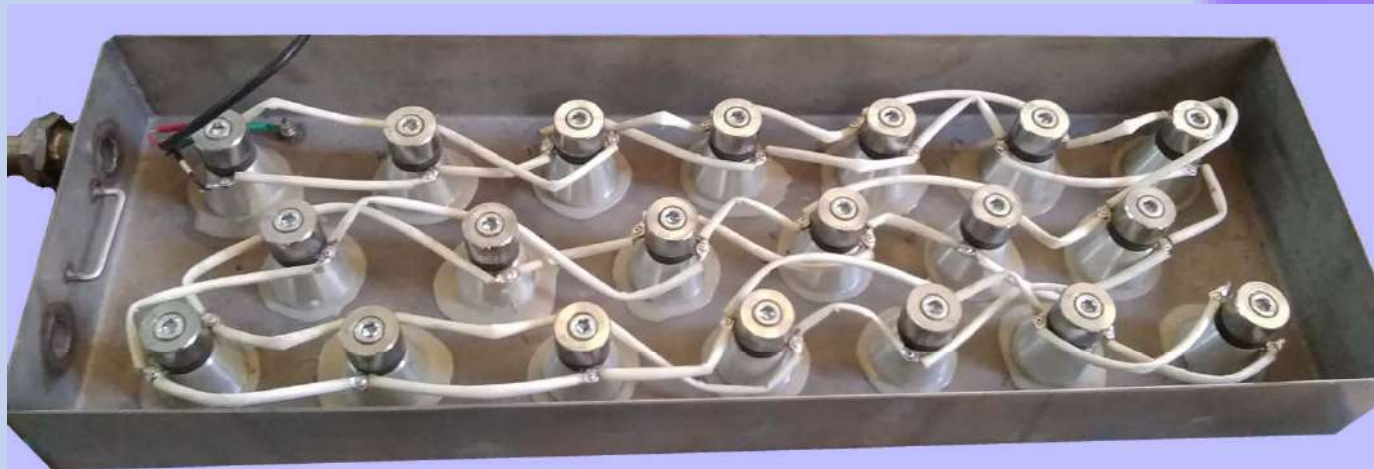


25 KHz

There are two options available for the mounting of the transducers in the tank

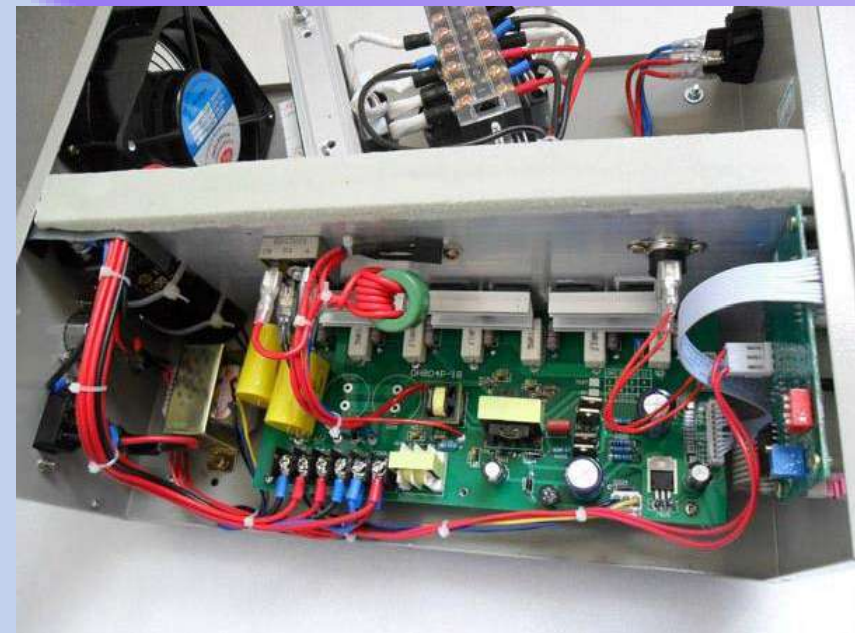


Vibronics® Special



Vibronics® Special

- Over Voltage Protection
- Over Current Protection
- Over Temperature Protection
- Digital Display for fine Tuning
- P Range : 300W to 2KW
- F Range : 19 KHz to 40 KHz



Tubular Backwashing Fuel Filters Before Cleaning



Tubular Backwashing Fuel Filters After Cleaning



Tubular Backwashing/ Cartridge type Fuel Filters After Cleaning



Testing of Cleaned Filters

- Light Test
- Bubble Test











6 Stage Ultrasonic Char Filter Fuse Cleaning System



Control Panel



3 Stage Ultrasonic Billet Cleaning System



Control Panel



Control Panel Inside



Ultrasonic Filter Cleaning System



Ultrasonic Filter Cleaning System - Inside



Ultrasonic Filter Cleaning System – Control Panel



Before



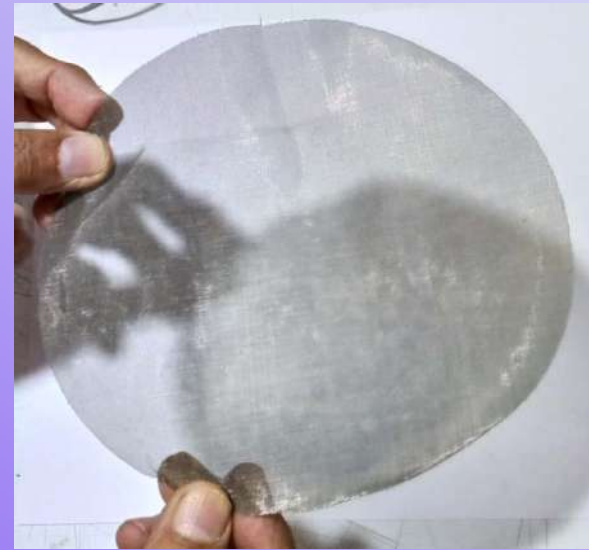
After



Before



After



THANK YOU