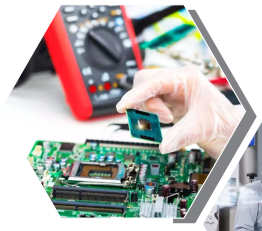
ULTRA AUTOSONIC

Our Mission... Value Addition...



ELECTRONICS

MEDICAL

PHARMA

CONSTRUCTION

HEALTH

SOLAR

GREEN ENERGY

AGRICULTURE

SUGAR

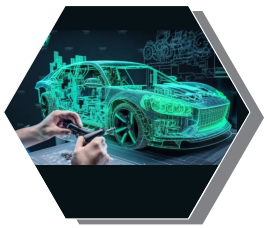
OFFICIAL

PACKAGING

TOYS

FOOD

CHEMICAL



AUTOMOBILE

TEXTILES

CONSUMPTION

Ultrasonic Makes Life Easier

MAKE IN INDIA

MICRO, SMALL & MEDIUM ENTERPRISES
सूक्ष्म, लघु एवं मध्यम उद्यम

CERTIFIED ISO 9001:2015 COMPANY

CE

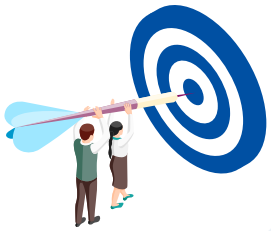
RoHS compliant

COMPANY PROFILE

ULTRAAUTOSONIC is the pioneer and expert manufacturer of world class ultrasonic equipment's. "We are Manufactures of Ultrasonic Equipment's. We are glad to introduce ourselves as an UltraAutosonic. ULTRAAUTOSONIC is leader in design, development, manufacturing and marketing of wide range of Ultrasonic Products in all over world. We utilize latest automation technology together with cost efficient production methods, which allow us to deliver high systems at competitive prices. We are manufacturing the export quality machines. We are regular exporting USA, UK, UAE, Srilanka, Germany, Singapore, Russia, Canada, Norway, Japan etc.

WE DEAL IN

Manufacturers, Importers & Exporters, Suppliers and Services of Ultrasonic Equipment, Electronic & Electrical Industries, Chemical Processing Industries, Processing & Food Equipment, Agriculture-based Products, Green Energy based Products, Renewable Energy, Automobile Industry. Software & Technology, Scientific Equipment, And Healthcare Products.



VISION :

To Increase brand exposure and eruption Domestically & Globally within 5 years.

MISSION :

Our mission is to add value to our customers' lives through the best quality products and services.

CORPORATE RESPONSIBILITY

Ultraautosonic LLP supports a wide variety of social groups and is committed to people who follow their dreams and provide the company with new impulse. In our company we continue to develop progressively advancing technologies. For this reason, we like to focus our sponsoring on the activities of innovative and creative associations and the support of committed people who consistently pursue their targets.

- **Durable**
- **Sturdy**
- **Dimensionally Accurate**
- **Precision Engineered**
- **Corrosion Resistant**
- **High Performance**
- **Easy Installation**
- **Low maintenance**

QUALITY ASSURANCE

Quality reflects not only in our manufactured range but also in our business policies and packaging. We always endeavour to satisfy our clients offering best quality ultrasonic Products that are engineered to perfection and bear the hallmark of supreme quality. Fabricated from the best grades of raw material our array confirms to the industry standards and are stringently checked by our expert team of quality controllers. They take initiative in thorough testing of the procured raw material as well as the manufactured ensuring that the final range to be delivered to the mark breathes in quality, durability and flawlessness.

RESEARCH & DEVELOPMENT

Our research and development unit are managed by our researchers who focus on continuous R&D activities. They carry out extensive market research and help us in comprehending the market trends, thereby, fruitfully targeting our prospective customers in an effective manner. They work in close coordination with all the units especially the production and designing unit and enable us in the development and up gradation of our entire range. In other words, our team of R & D is an important factor behind the success we incurred over the years and effectively aid bringing forth our production with pioneering ideas and designs and remain ahead of our competitors. Owing to their deliberate efforts we successfully cater to our broad client base thereby challenging our competitors in the market.

We take pride in our team of expert and qualified professionals engaged in the fabrication of our qualitative gamut of machines with utmost dedication and sincerity. They work in an incredible harmony and are continuously driven organization.

TEAMWORK

Our Team Comprises of:

- Qualified engineers
- Quality controllers
- Procuring agents
- Sales and marketing executives
- Packaging experts
- Researchers

All the members of our team have profound knowledge and expertise in this realm and are continuously driven towards achieving fame and recognition Their tremendous efforts enable us in offering maximum client satisfaction, thereby, strengthening our position in the market.

ULTRASONIC GENERATOR

Description

An ultrasonic generator is an electronic device that produces high-frequency electrical energy, typically in the range of 20 kHz to several MHz, which is then converted into high-frequency mechanical vibrations using a piezoelectric transducer. Ultrasonic generators are commonly used in industrial applications for cleaning, welding, cutting, and drilling, as well as in medical and scientific research.

MODEL - ULTRA UG Series

ULTRA UG 15-2600	ULTRA UG 20-1800
ULTRA UG 20-1000	ULTRA UG 20-2000
ULTRA UG 20-1200	ULTRA UG 30-600
ULTRA UG 20-1500	ULTRA UG 40-500

In ultrasonic cleaning applications, the high-frequency mechanical vibrations produced by the generator cause cavitation bubbles to form and collapse rapidly in a liquid cleaning solution, which helps to remove dirt and other contaminants from surfaces.

In ultrasonic welding applications, the high-frequency mechanical vibrations produced by the generator are used to bond two materials together by creating localized heating and melting of the materials.

Ultrasonic generators can also be used for non-destructive testing and evaluation of materials, such as detecting defects in metal parts or measuring the thickness of coatings.

Specifications

Frequency (kHz)	15	20	30	40
Power (Watt)	2600	1000/1200/1500/1800/2000	600	500
Horn	Design as per the customized application			
Actual Weight	Approx. 20 kg			
Actual Size (L x W x H)	Approx. (483 X 458 X 238) mm			
Packaging Type and Size	Corrugated Box and Approx. Size (585 X 560 X 336) mm			

Operational Requirement	
Input Power Supply	AC 230V 50/60Hz, 16Amp
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage

ULTRASONIC GENERATOR

Features

- Frequency Tracking is Automatic.
- The Ultrasonic generator has protection against overheating and excess current.
- It has an accurate timer.
- It Can Accommodate other control devices via an external control connector
- It has the ability to display frequency.

Advantages

- We design the machine user-friendly.
- LCD Display.
- Time control.
- Horn material Titanium Alloys / Aluminium

Our latest ultrasonic generator is the use of full-bridge digital pulse drive. Compared to the half-bridge drive control circuit, it has the advantages of small size, simple peripheral circuits, stable ultrasonic effects, and high conversion efficiency. And comes with frequency tuning function, to ensure that the machine is in the best working condition from beginning to end, can maximize the potential of ultrasonic transducer, but also has a perfect over-current protection, output short circuit protection. Integrated digital display ampere meter, frequency, time control and PLC remote control, light bar indicating power and other functions.

Applications

- Ultrasonic Plastic Welding Machine
- Ultrasonic Plastic Hand Gun
- Ultrasonic Liquid Sonication
- Probe Sonicator
- Ultrasonic Sealing Machine
- Ultrasonic Food Cutting Machine
- Ultrasonic Loop Handel Machine
- Ultrasonic PP Corrugated Box Welding Machine
- Ultrasonic N95 Mask Making Machine
- Ultrasonic PP Box Hand Gun
- Ultrasonic Metal Welding Machine

ULTRASONIC PROBE SONICATOR

Description

A probe sonicator is a laboratory instrument that uses high-frequency sound waves to disrupt and homogenize samples. It is also known as a sonicating probe or ultrasonic homogenizer.

The probe sonicator consists of two main components: a generator and a sonication probe. The generator produces high-frequency electrical energy, typically in the range of 20 kHz to 20 MHz, which is then converted into mechanical energy by the sonication probe. The probe typically has a titanium or stainless-steel tip that vibrates at high frequency when immersed in a liquid sample.

The high-frequency vibration of the probe creates cavitation bubbles in the liquid, which collapse violently and generate shock waves. These shock waves disrupt the sample, breaking apart cells or other structures and dispersing the contents of the sample throughout the liquid.

Probe sonicators are commonly used in biological and chemical research labs for various applications such as cell lysis, DNA and protein extraction, nanoparticle synthesis, and emulsification. The intensity of sonication can be controlled by adjusting the power output, duration, and pulse mode of the generator. However, it is important to optimize sonication conditions for each specific application, as excessive sonication can lead to sample degradation or denaturation.

MODEL-ULTRA UFCR Series

PS_ Classic | PS_ Advance | PS_ Premium

Specifications

Frequency (kHz)	20/30/40	20/30/40
Power (Watt)	125/150/250/	500/750
Probe / Sonotrode (mm)	Ø3, Ø6, Ø13 mm	Ø20, Ø25 mm
Actual Weight	Approx. 13 kg	Approx. 22 kg
Actual Size (L x W x H)	Approx. (409 X 262 X 262) mm	Approx. (484 X 458 X 238) mm
Packaging Type and Size	Corrugated Box and Approx. Size (507 X 360 X 360) mm	Corrugated Box and Approx. Size (581 X 556 X 336) mm
Operational Requirement		
Input Power Supply	AC 230V 50/60Hz, 16Amp	
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage	

ULTRASONIC PROBE SONICATOR

Features

There are a few salient features associated with our instruments which include:

- Our devices are easy to clean and maintain.
- We provide modular generator for easy servicing of our machines.
- Our instruments come with rugged and corrosion free stainless-steel finish.
- These devices are equipped with extensively protected electronic circuits for longer and safer functioning.
- The parameters like total time, pulse on time, pulse off time can be adjusted.
- Adjustable operation modes to reduce the heat rise in temperature sensitive samples is available with our devices.
- Probe material Titanium Alloys
- Variable Amplitude
- Touchpad / Touch Screen Display
- Power Protection
- High-Temperature Protection
- High Voltage Protection & Dry run protection

Advantages

- Fully Controllable
- Replaceable tips
- Even Distribution throughout the Sample
- Short sonication time
- Fully programmable in parameters such as processing time and pulse on off time
- Replaceable tips
- Fully controllable in parameters such as Temperature, overloading
- Amplitude controllable
- Titanium probe will not react with any liquid.

ULTRASONIC PROBE SONICATOR

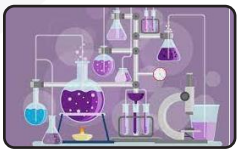
- We can control the power through the amplitude.
- Customer will get the display option as per his requirement.
- We provide different types of protection options. Which will help to increase the life of the machine.

Application

- Emulsification of immiscible components.
- Homogenization of cosmetic ingredients.
- Dissolving of solids and powders.
- Dispersion of nano particles into liquid and breaking down the size of particles.
- In food industry for protein extraction and other food extractions.
- Extraction of DNA.
- To accelerate chemical reactions.
- Lab research purposes.
- Disrupt cell membranes and release cellular contents.
- Artificial ageing of liquors and other alcoholic beverages.
- Used in speeding the filtration process as it kills bacteria.
- Study of different parts of soil.
- Chemical Engineering
- Bio-Fuels & Oils Industries
- All IIT's/NIT's/Engineering Colleges
- Mixing of Nano particles with solution
- Mixing 2 different solutions
- Ultrasonic Homogenization of Liquids

Research Institutes

R & D Laboratories



Chemical Engineering

Bio-Fuels & Oils Industries

All IIT's/NIT's/Engineering Colleges

Mixing of Nano particles with solution

Sonication For Different Solutions

ULTRASONIC PROBE SONICATOR

Classic	Advance	Premium
10 Programs Run	50 Programs Run	98 Programs Run
1 Year Warranty	1 Year Warranty	1 Year Warranty
LCD Touched Pad	LCD touched Pad	Touch screen display

Common Features of ALL MODEL PS

- Comes with different frequencies such as 20, 30,40KHz.
- Our machine is amplitude controllable. Amplitude can be control from 0 – 100 in 4 stages.
- Our machine is programmable in parameter such as processing time or pulse ON-OFF time.
- Our machines come with overload protection; machine will automatically shut down in case load reaches maximum.
- Our machine had temp. Control indicator; machine will indicate when temp reaches limit.
- Our probe is manufactured with titanium material & can be replaceable with even low liquid capacity.

PROBE SONICATOR MODEL RANGE


ULTRA-PS CLASSIC STAND SMALL


ULTRA-PS CLASSIC SE SMALL


ULTRA-PS ADVANCE Stand SMALL


ULTRA-PS ADVANCE SE SMALL


ULTRA-PS PREMIUM STAND SMALL


ULTRA-PS PREMIUM SE SMALL


ULTRA-PS CLASSIC STAND BIG


ULTRA-PS CLASSIC SE BIG


ULTRA-PS ADVANCE STAND BIG


ULTRA-PS ADVANCE SE BIG


ULTRA-PS PREMIUM STAND BIG


ULTRA-PS PREMIUM SE BIG

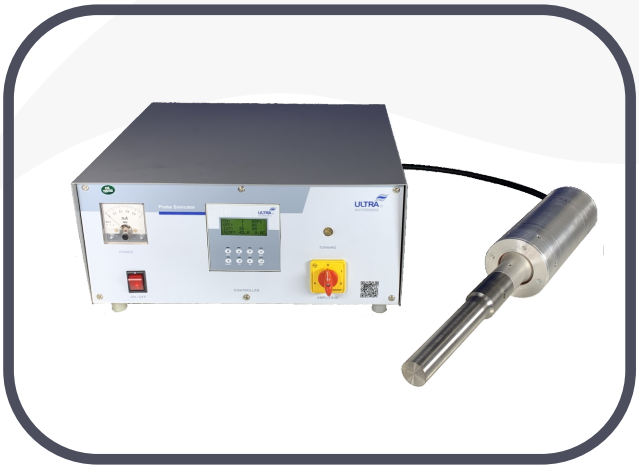
ULTRASONIC HIGH VOLUME PROBE SONICATOR

Description

A high volume probe sonicator is a laboratory instrument used for the disruption, homogenization, and mixing of biological samples in high volumes. It operates by using ultrasonic waves to break apart cells, tissues, and other biological materials.

The sonicator consists of an ultrasonic generator, a probe, and a power supply. The probe is a metal horn that vibrates at high frequency, typically between 20 kHz and 40 kHz, when it is immersed in a liquid sample. This creates high-intensity sound waves that cause cavitation, which is the formation and collapse of microscopic bubbles in the sample. This process generates high shear forces and turbulence, which can break apart cells and release their contents.

High volume probe sonicators are typically used for large-scale processing of samples, such as in bioprocessing, food processing, and chemical manufacturing. They can also be used for DNA and RNA extraction, cell lysis, and protein extraction. The volume capacity of these instruments can range from a few millilitres to several litters, depending on the model.



MODEL-ULTRA HVPS Series

PS_ Classic	PS_ Premium

ULTRASONIC HIGH VOLUME PROBE SONICATOR

Specifications

Frequency (kHz)	20
Power (Watt)	1000/1200/1500/1800
Probe / Sonotrode (mm)	Ø28, Ø32,Ø36, Ø40 mm
Actual Weight	Approx. 22 kg
Actual Size (L x W x H)	Approx. (484 X 458 X 238) mm
Packaging Type and Size	Wooden Box and Approx. Size (581 X 556 X 336) mm
Operational Requirement	
Input Power Supply	AC 230V 50/60Hz, 16Amp
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage

Features

- Precise and convenient digital displaying and controlling.
- Digital display can show you the output power directly.
- Pulse width and interval time can be separately set.
- It is timer controlled and can switch off automatically when the set time is run off. You can turn it off when necessary.
- Various kinds of optional tips are available.
- Wide Range of Tips
- Temperature control: You can set the maximum limit of temperature after crossing that limit the working of Sonicator will automatically stop preventing degradation of sample.
- Probe material Titanium Alloys
- Variable Amplitude
- Touch Screen Display
- Overload Protection
- Power Protection
- High-Temperature Protection
- High Voltage Protection & Dry run protection

- We provide different types of protection options. Which will help to increase the life of the machine.

ULTRASONIC HIGH VOLUME PROBE SONICATOR

Advantages

- **Large screen LCD**
- **Full intensity control:**

  Intensity is controlled from 1-100% giving a greater degree of resolution and ability to pinpoint the amplitude needed to effectively process sample.

- **Programmability:**

  Parameters like total time, Pulse on Time, Pulse Off Time can be adjusted

- **Pulse mode:**

  Adjustable Pulse on and Off time mode to reduce the heat rise in the temperature sensitive samples

- **Temperature monitoring:**

  Integrated temperature control to prevent overheating of the sample

- **Titanium probe will not react with any liquid.**

Application

- Prepare Tissue
- Accelerate Enzymatic Reactions
- Disperse Solids
- Dissolve Powders
- Extract DNA / RNA
- Degassing of Liquids
- Dissolve Tablets
- Extract Proteins
- Immiscible Liquids
- Stimulate Bacterial Activity

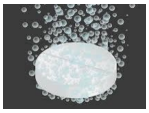

Dissolve Powders


Extract DNA / RNA


Prepare Emulsions


Accelerate Chemical Reactions


Degassing of Liquids


Dissolve Tablets


Extract Proteins

Classic	Premium
10 Programs Run	98 Programs Run
1 Year Warranty	1 Year Warranty
LCD Touched Pad	Touch screen display

ULTRASONIC INDUSTRIAL PROBE SONICATOR

Description

An industrial probe sonicator is a device used for ultrasonic homogenization, dispersion, and emulsification in industrial settings. It consists of a high-frequency ultrasonic generator, a probe (also called a horn), and a power supply.

The probe is immersed in a liquid or other material being processed, and the ultrasonic waves generated by the device create cavitation bubbles that rapidly expand and collapse. The resulting high energy and shear forces can break down particles, create emulsions, and disrupt cell membranes.

Industrial probe sonicators are used in a variety of industries, including pharmaceuticals, biotechnology, food and beverage, chemical processing, and materials science. They can be used for applications such as sample preparation, cell lysis, particle size reduction, and homogenization of liquids and slurries.

The choice of probe and ultrasonic frequency will depend on the specific application and material being processed. Industrial probe sonicators are often designed for continuous operation and may have features such as temperature control and automatic frequency tuning.

MODEL-ULTRA IPS Series

ULTRA IPS 20-2000

ULTRA IPS 20-2500

ULTRA IPS 20-3000

ULTRASONIC INDUSTRIAL PROBE SONICATOR

Specifications

Frequency (kHz)	20
Power (Watt)	2000/2500/3000
Probe / Sonotrode (mm)	Ø35, Ø40, Ø54 mm
Actual Weight	Approx. 36 kg
Actual Size (L x W x H)	Approx. (556 X 556 X 238) mm
Packaging Type and Size	Wooden Box and Approx. Size (654 X 654 X 238) mm
Operational Requirement	
Input Power Supply	AC 230V 50/60Hz, 16Amp
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage

Features

- Precise and convenient digital displaying and controlling.
- Digital display can show you the output power directly.
- Pulse width and interval time can be separately set.
- It is timer controlled and can switch off automatically when the set time is run off. You can turn it off when necessary.
- Various kinds of optional tips are available.
- Wide Range of Tips
- Temperature control: You can set the maximum limit of temperature after crossing that limit the working of Sonicator will automatically stop preventing degradation of sample.
- Probe material Titanium Alloys
- Variable Amplitude
- Touch Screen Display
- Overload Protection
- Power Protection
- High-Temperature Protection
- High Voltage Protection & Dry run protection

- We provide different types of protection options. Which will help to increase the life of the machine.

ULTRASONIC INDUSTRIAL PROBE SONICATOR

Advantages

- **Large screen LCD**
- **Full intensity control:**

  Intensity is controlled from 1-100% giving a greater degree of resolution and ability to pinpoint the amplitude needed to effectively process sample.

- **Programmability:**

  Parameters like total time, Pulse on Time, Pulse Off Time can be adjusted

- **Pulse mode:**

  Adjustable Pulse on and Off time mode to reduce the heat rise in the temperature sensitive samples

- **Temperature monitoring:**

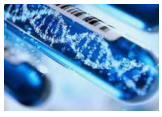
  Integrated temperature control to prevent overheating of the sample

- **Titanium probe will not react with any liquid.**
- **We can control the power through the amplitude.**
- **Customer will get the display option as per his requirement.**

Application

- Prepare Tissue
- Accelerate Enzymatic Reactions
- Disperse Solids
- Dissolve Powders
- Extract DNA / RNA
- Prepare Emulsions
- Accelerate Chemical Reactions
- Degassing of Liquids
- Dissolve Tablets
- Extract Proteins
- Immiscible Liquids
- Stimulate Bacterial Activity
- De-agglomerate Powders
- Emulsify Cosmetics
- Emulsify Liposomes

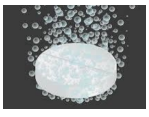

Dissolve Powders


Extract DNA / RNA


Prepare Emulsions


Accelerate Chemical Reactions


Degassing of Liquids


Dissolve Tablets

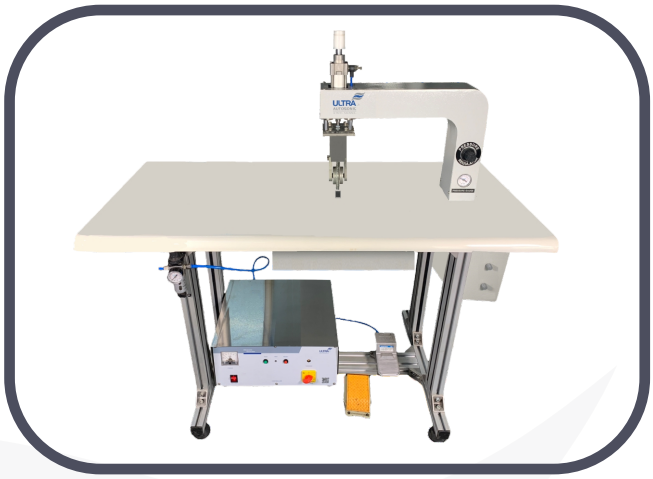

Extract Proteins

ULTRASONIC SEWING MACHINE

Description

An ultrasonic sewing machine is a type of sewing machine that uses high-frequency ultrasonic vibrations to weld or bond fabrics together. Unlike traditional sewing machines that use a needle and thread to stitch fabric together, ultrasonic sewing machines use ultrasonic vibrations to create a permanent bond between two or more layers of fabric.

The ultrasonic vibrations are created by a transducer that converts electrical energy into mechanical energy. This energy is then transmitted to a horn or sonotrode that amplifies the vibrations and directs them to the fabric.



MODEL-ULTRA USM Series

ULTRA-USM 1 20-1000	ULTRA-USM 2 20-1500

When the fabric is placed between the horn and anvil, the vibrations cause the fibers in the fabric to vibrate and create frictional heat. This heat melts the thermoplastic fibers in the fabric and fuses them together, creating a strong and permanent bond.

Ultrasonic sewing machines are commonly used in the textile industry for a variety of applications, such as sewing hems, attaching zippers, and creating decorative patterns on fabrics. They are also used in the production of medical and personal protective equipment, such as surgical gowns and face masks, as the ultrasonic bonding creates a strong and secure seam that is resistant to liquid penetration.

Specifications

Machine Type	USM-1	USM-2
Frequency (kHz)	20 kHz	
Power (Watt)	1000 Watt	1500 Watt
Actual Weight	Approx. 80 kg	Approx. 95 kg
Actual Size (L x W x H)	Approx. (1193 X 605 X 1267) mm	
Packaging Type and Size	Wooden Box and Approx. Size (1340 X 752 X 1414) mm	
Operational Requirement		
Input Power Supply	AC 230V 50/60Hz, 16Amp	
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage	
Working Pressure	2 to 6 bars (Air Compressor required 1Hp 50Ltr)	

ULTRASONIC SEWING MACHINE

Features

- Four times faster than normal thread sewing machine
- Motor - Staple motor - No Inching
- Pulley – Aluminium - No rusting
- Belt - Timing Belt

Advantages

- Non Woven Ultrasonic Sewing Machine is equipped with High Ultrasonic component it can seal different size Thickness Material
- No greasing oil required
- Environmentally friendly because it does not need any adhesives and solvents
- Two or more layers of fabric stitched together without thread, Good sealing strength.
- Maintenance - Not required

Applications

- Nonwovens Bags
- Sports apparel.
- surgical gowns
- surgical drapes and covers
- surgical masks
- shoe covers
- House Hold – Tea and Coffee bags, Aprons, Table cloths, Ironing Board Pads, Table Softener sheets
- Agriculture Covering and seed strips
- Envelops
- Roofing products

ULTRASONIC SEWING MACHINE

Protective Clothing

Non-woven Bags

Garment

Surgical Gowen

Textile
Cutting & Sealing

Composits
Cutting & Sealing

Medical Healthcare
Cutting & Sealing

Compare to Others

Description	Other	UltraAutosonic
Belt	Chain Belt	Timing Belt Advantages: 1.No assembly voice 2.No greasing oil required
Power	1000 Watt	1000 / 1500 Watt
Motor	AE Motor	Stepper motor Advantages: 1.No Inching
Pulley	Iron	Aluminium Advantages: 1.No rusting
Maintenance	Required	Not required

ULTRASONIC SPOT WELDING MACHINE

Description

An ultrasonic spot welding machine is a type of welding equipment that uses high-frequency ultrasonic vibrations to join two materials together. The machine typically consists of a generator that produces the ultrasonic vibrations, a transducer that converts the vibrations into mechanical motion, and a welding tool or horn that applies the mechanical motion to the materials being welded.

MODEL-ULTRA SWM Series

ULTRA-SWM 1 20-1000	ULTRA-SWM 2 20-1500

To perform a weld, the two materials are placed together under pressure, and the welding tool is brought into contact with the materials. The ultrasonic vibrations are then applied to the materials through the welding tool, causing the materials to heat up and soften at the point of contact. As the vibrations continue, the softened materials fuse together, forming a strong, permanent bond.

Ultrasonic spot welding is commonly used in the manufacture of plastic parts, such as automotive components, medical devices, and consumer products. It has several advantages over other welding methods, including the ability to join dissimilar materials, the absence of consumables or adhesives, and the ability to produce clean, precise welds without damaging the surrounding material.

Specifications

Machine Type	Single Spot	Double Spot
Frequency (kHz)	20 kHz	
Power (Watt)	1000 Watt	1500 Watt
Actual Weight	Approx. 52 kg	Approx. 60 kg
Actual Size (L x W x H)	Approx. (997 X 605 X 1169) mm	
Packaging Type and Size	Wooden Box and Approx. Size (1144 X 752 X 1316) mm	
Operational Requirement		
Input Power Supply	AC 230V 50/60Hz,16Amp	
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage	
Working Pressure	2 to 6 bars (Air Compressor required 1Hp 50Ltr)	

ULTRASONIC SPOT WELDING MACHINE

Features

- Dynamic Force and Amplitude Control with Multi-Step Welding.
- Capability of unique force and amplitude parameters.
- Higher Efficiency and Quality Control.
- High durability
- Least maintenance
- Reliability and long-lasting performance.

Advantages

- Non Woven Ultrasonic Spot Welding Machine is equipped with High Ultrasonic component it can seal different size Thickness Material
- No greasing oil required
- Two or more layers of fabric stitched together without thread, Good sealing strength.
- Maintenance - Not required
- No assembly voices
- High strength between welded portions
- Easy To Operate
- Fast welding without adding filler material
- Speed: Very short process time
- Reliability: Once assembled and tested, ultrasonic welding equipment will function with a high level of reliability.
- Welding Joint quality Excellent.
- Safety: Using ultrasonic welding equipment is extremely safe compared to other welding techniques.
- Flexibility: Ultrasonic welding can be applied to a variety of materials and parts.
- Low energy requirement for welding
- Faster, Safer, Cleaner, More Efficient
- Equipment & Tooling Reliability

ULTRASONIC SPOT WELDING MACHINE

These are advantages of ultrasonic Spot welding Machine which make it an ideal choice for many industrial applications, especially those that involve a high volume of plastic parts.

Applications

- Non woven bag handle
- Surgical gown
- Saloon Gown
- Velcro
- Surgical Elastics
- I-Card Lace Welding
- PVC/PP Belt welding

Loop Handel Bags

Head loop Mask

ID Card Less Spot Welding

ULTRASONIC FOOD CUTTING MACHINE

Description

An ultrasonic food cutting machine is a type of cutting equipment that uses ultrasonic vibrations to slice through food products. These machines are designed to provide precise and clean cuts, which are especially important in the food industry where presentation and quality are key factors.

Ultrasonic cutting works by creating high-frequency vibrations in a blade or horn, which is then transmitted to the food product being cut. This vibration causes the blade to slice through the food with minimal force, resulting in a clean and precise cut.

Ultrasonic food cutting machines are commonly used for cutting baked goods such as bread, cakes, and pastries, as well as delicate food products like cheese and meats. They are also used for cutting frozen foods, which can be difficult to cut with traditional cutting methods.

Benefits of using ultrasonic food cutting machines include reduced product waste, increased productivity, and improved product quality. These machines are also easy to clean and maintain, making them a popular choice for food processing facilities.

MODEL-ULTRA FC Series

ULTRA FC 20-1000	ULTRA FC 20-1800
ULTRA FC 20-1200	ULTRA FC 20-2000
ULTRA FC 20-1500	ULTRA FC 40-500

Specifications

Frequency (kHz)	20	40
Power (Watt)	1000/1200/1500/1800/2000	500
Cutter / Blade Size (mm)	100, 140, 170, 205, 305 mm	85 mm
Actual Weight	Approx. 22 kg	
Actual Size (L x W x H)	Approx. (483 X 458 X 238) mm	
Packaging Type and Size	Corrugated Box and Approx. Size (581 X 556 X 336) mm	
Operational Requirement		
Input Power Supply	AC 230V 50/60Hz, 16Amp	
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage	

ULTRASONIC FOOD CUTTING MACHINE

Features

- Non-stick knife, smooth and neat cutting
- Wide range of cutting objects
- Cutting at constant temperature, high temperature and low temperature
- Significantly improve cutting speed
- There is no debris and will not damage the edge of the cut food
- Multi-layer products can be cut without colour mixing
- High quality cut edge
- Extremely narrow cuts possible
- Can be used to cut thick sections
- Can be used manually or mechanised
- Very high cutting speeds
- No heat generated
- Reduce scrap by not crushing products or damaging them
- No need to frequently clean blades when cutting sticky products

Advantages

- Non-stick 20 kHz knife.
- Perfectly clean cutting surfaces.
- Compact ultrasonics equipment.
- Modular machines.
- Large range of products that can be cut without changing blade.
- No diameter, weight or and thickness limits.
- Easy washing and maintenance.
- Max blade width: about 305 mm.

ULTRASONIC FOOD CUTTING MACHINE

Applications

- Ultrasonic Food Slicing System can be widely used in baking products.(such as cream multilayer cake, sandwich mousse cake, date cake, steamed sandwich cake, Napoleon, Swiss roll, brownie, tiramisu, cheese, ham sandwich, etc)
- It can cut baked and frozen foods of various shapes, such as square, triangle, etc. Ultrasonic cutting blades can be customized according to customers' special needs and existing conditions.


Multilayer Cake

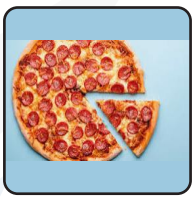

Sandwich Mousse Cake


Brownie


Swiss roll


Ice Cream


Kaju Katali


Pizza


Date Cake


Swiss roll


Cheese


Ham sandwich


Mhaisur Pak


Halwa Slice


Meet Cutting


All Types Sweet


Fish Cutting

ULTRASONIC POULTRY MANURE BELT WELDER

Description

A poultry manure belt welder is a machine used to weld together the ends of a poultry manure belt, which is a type of conveyor belt used in poultry farms to transport manure away from the birds. The welder uses heat and pressure to melt and fuse the ends of the belt together, creating a seamless, continuous loop.

The machine typically consists of a heating element, a pressure mechanism, and a control system. The heating element is used to melt the ends of the belt, while the pressure mechanism ensures that the melted ends are firmly pressed together until they cool and solidify.

MODEL-ULTRA PMBW Series

ULTRA PMBW 40-500

Using a poultry manure belt welder can help improve the efficiency and effectiveness of manure removal in poultry farms by ensuring that the conveyor belt remains intact and does not break or tear during operation. This can help reduce downtime and maintenance costs, as well as improve the overall cleanliness and hygiene of the farm.

Specifications

Frequency (kHz)	40
Power (Watt)	500
Welding Tip	Standard, also make customized as per requirement
Actual Weight	Approx. 9 kg
Actual Size (L x W x H)	Approx. (360 X 213 X 287) mm
Packaging Type and Size	Corrugated Box and Approx. Size (458 X 311 X 385) mm
Operational Requirement	
Input Power Supply	AC 230V 50/60Hz, 6 Amp
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage

ULTRASONIC POULTRY MANURE BELT WELDER

Features

- Portable operation, fast, clean, safe and stable
- Accord with human body engineering design, easy to use and operate.
- It can set the minimum welding time like 1 sec.
- Durable for harsh and demanding environment.
- Rugged & Reliable
- Properly controlled welds take less than five seconds
- Wide Range of Tips

Advantages

- Light weight: 10 kg Easy to handle Lightweight
- SS body: no rusting
- Export quality, our machine is compared with Sonic Italia in the market, we have export quality machine
- Higher frequency:40 KHz
- High-low voltage circuit: Automatic power cut off
- SMPS base machine (Switch mode power supply): even voltages vary output will be same Voltage will be between 180 to 250.
- No stabilizer required: As it's a SMPS based machine no requirement of stabilizer or CVT
- 5-meter cable we provide along with machine, so it's easy to weld even at distance places too
- Single phase machine: So, if customer uses phase to phase supply machine will not damage.
- We provide the voltage meter with a machine; it will indicate voltage fluctuations.

Applications

- Poultry Manure Belt
- Egg Belt
- PP Belts

Poultry Manure Belt

Eggs Belt

ULTRASONIC PLASTIC WELDING MACHINE

Description

Ultrasonic plastic welding is a process of joining thermoplastic materials by applying high-frequency acoustic vibrations to the parts being joined. An ultrasonic plastic welding machine typically consists of a power supply, a transducer, a welding horn, and a fixture or tooling.

The power supply generates high-frequency electrical energy that is then converted to mechanical vibrations by the transducer. The welding horn amplifies the mechanical vibrations and applies them to the parts being joined, causing the plastic material to soften and flow together. The fixture or tooling holds the parts in place during the welding process.

Ultrasonic plastic welding is commonly used in industries such as automotive, medical, packaging, electrical, and consumer goods for joining parts such as housings, panels, filters, and components. It offers several advantages over other welding methods, including fast cycle times, high strength and hermetic seals, and the ability to weld complex geometries and dissimilar materials.

MODEL-ULTRA UPWM Series

ULTRA UPWM 15- 2600	ULTRA UPWM 20-1500
ULTRA UPWM 20-1000	ULTRA UPWM 20-1800
ULTRA UPWM 20-1200	ULTRA UPWM 20-2000

Specifications

Frequency (kHz)	15	20
Power (Watt)	2600	1000/1200/1500/1800/2000
Horn	Design as per the customized application	
Actual Weight	Approx. 96 kg	
Actual Size (L x W x H)	Approx. (728 X 434 X 1193) mm	
Packaging Type and Size	Wooden Box and Approx. Size (875 X 581 X 1340) mm	
Operational Requirement		
Input Power Supply	AC 230V 50/60Hz, 16Amp	
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage	
Working Pressure	2 to 10 bars (Air Compressor required 1Hp 50Ltr)	

ULTRASONIC PLASTIC WELDING MACHINE

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CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage	
Working Pressure	2 to 10 bars (Air Compressor required 1Hp 50Ltr)	

ULTRASONIC PLASTIC WELDING MACHINE

Features

- Rigid mechanical design.
- Low friction slide mechanism.
- Accurate stroke adjustment.
- Adjustable mechanical stop.
- High accuracy pressure regulation and speed control.

Advantages

- **Speed**

Much Faster than Traditional Welding Methods. With the compatible parts, the high-frequency ultrasonic vibration can weld parts quickly. As a result, ultrasonic welding technology guarantees a fast production process, high throughput, and short turnaround times.

- **High Level of Safety**

Due to the indirect application of heat, there is a reduction in operational hazards. Aside from that, heat generated by the process is localized and quickly dissipated. Hence, there is no damage to the welded joints and the surroundings of the materials to be welded.

- **Reliability**

Machines used for the welding process are reliable as they experience minimal breakdowns and faults. Furthermore, with automation, there is a reduction in operational and human error, operation cost, and improvement in welded joint quality.

- **Suitable for Dissimilar materials**

It is a suitable process for welding different materials – an important attribute needed in plastic welding. In contrast, other plastic welding processes are unsuitable for dissimilar plastic materials because there is no molecular bond formation.

- **Minimal Material Costs**

It saves production costs as no filler material is used in Ultrasonic Welding .The process doesn't require consumables, unlike other joining processe, which use connective bolts, solders, and other adhesive materials. Due to that, it is more cost-effective.\

ULTRASONIC PLASTIC WELDING MACHINE

- **Joint Quality**

Quality ultrasonic equipment and tooling will function reliably for thousands and thousands of cycles

It produces a High-Quality Bond and a clean tight seal.

The welded joint does not have defects such as plastic flashes, deformation, or fault. As a result, the welded joint has a high quality, clean, and invisible seam.

Application

- AUTOMOBILE PARTS – Bumpers, Air Filters, Car Audio, Foot pads, Door panels, etc.
- ELECTRICAL & ELECTRONICS – Chargers, Storage battery, Mobile panels, Telephones, Sockets, Humidifiers, etc.
- STATIONARY – Photo Albums, Folder files, Name card holders, Ink bottles cap, etc. PLASTIC TOYS – Joining of two different plastic parts, Assembly of plastic Toys.

OTHER RANDOM APPLICATIONS: -

- Eyelet Welding § Key-chain Welding
- I-card Lace Welding § Impeller & Impeller Bowl Welding
- Air Cooler Parts Welding § Velcro Welding

Food Industry

Electronics Industry

Textile Industry

Stationery

UPWM Applications

Toys

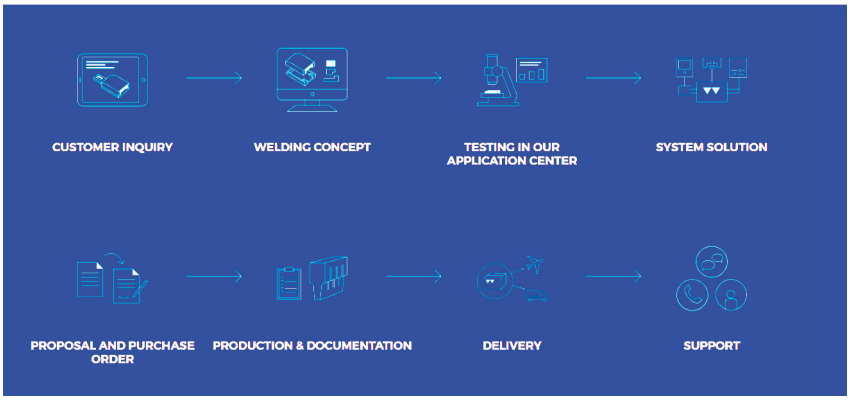
ULTRASONIC PLASTIC WELDING MACHINE

FAQ

What kind of plastic material are suitable for welding ?

- ABS material: Styrene copolymer, light in weight, with both brevity, rigidity, impact resistance and chemical resistance, is widely used. This material has good thermal conductivity and is suitable for welding with ultrasonic welding machine.
- PS material, polystyrene plastic, thermoplastic resin, with a shiny and transparent bead or granular solid appearance, strong corrosion resistance to water and chemicals, good insulation, suitable for extrusion or extrusion forming, and mostly used for various toys, decorations, cup washing equipment, lenses and other products. The material has high elastic coefficient and is suitable for welding with ultrasonic welding machine.
- PA material: It is made of strong bremsstrahlung, wear-resistant, extremely low friction coefficient, and acid resistant. It is commonly used as bearing, gear, pipe, kitchen appliance, brush, etc. When ultrasonic welding is used, due to the high melting point and long welding time, it is easier to weld after drying before welding.
- PP material: polypropylene has good formability and good surface luster. The most outstanding property of polypropylene is its bending fatigue resistance.
- PC material: heat-resistant, excellent transparency, high tensile and flexural strength, commonly used in lenses, filters, etc. Due to the high welding point, the required welding time is long. As the material is hygroscopic, it should be dried before welding.
- High density PE material: small specific gravity, flexible at low temperature and room temperature, waterproof, anti-corrosion, and can be made into various colors. The higher the density, the more suitable for ultrasonic welding.

Our Process



ULTRASONIC PLASTIC WELDING HAND GUN

Description

Ultrasonic plastic welding hand guns are handheld devices that use ultrasonic vibrations to weld plastic parts together. They are commonly used in manufacturing processes to join plastic parts without the need for adhesives or fasteners.

The hand gun typically consists of a power supply, a generator, a transducer, and a welding horn or sonotrode. The power supply provides electrical energy to the generator, which converts the electrical energy into high-frequency mechanical vibrations. The transducer then converts the mechanical vibrations into ultrasonic waves, which are transmitted to the welding horn or sonotrode.

MODEL-ULTRA HG Series

ULTRA HG 20-1000	ULTRA HG 30-600
ULTRA HG 20-1500	ULTRA HG 40-500

The welding horn or sonotrode is designed to focus the ultrasonic waves onto the plastic parts to be welded. As the horn vibrates, it creates friction and heat between the plastic parts, causing them to melt and fuse together. The welding process is typically completed in a matter of seconds, and the resulting bond is strong and durable.

Ultrasonic plastic welding hand guns are used in a variety of industries, including automotive, medical, consumer goods, and packaging. They offer a number of advantages over other welding methods, such as lower energy consumption, faster cycle times, and the ability to weld complex shapes and parts.

Specifications

Frequency (kHz)	20	30	40
Power (Watt)	1000/1500	600	500
Horn	Design as per the customized application		
Actual Weight	Approx. 18 kg	Approx. 10 kg	
Actual Size (L x W x H)	Approx. (483 X 458 X 238) mm	Approx. (360 X 213 X 287) mm	
Packaging Type and Size	Corrugated Box and Approx. Size (581 X 556 X 336) mm	Corrugated Box and Approx. Size (458 X 311 X 385) mm	
Operational Requirement			
Input Power Supply	AC 230V 50/60Hz, 6 Amp		
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage		

ULTRASONIC PLASTIC WELDING HAND GUN

Features

- Durable for harsh & demanding environments
- Easy to handle
- User friendly operation
- Portable
- Lightweight
- One key start, simple operation and easy operate
- Auto Tuned, Time mode and Power mode.
- Effectively balance the amplitude while frequency is locked based on the frequency and amplitude control.
- Power outburst mode, save energy comparing to the traditional ultrasonic hand-held welding machine.

Advantages

- Durable for harsh & demanding environments
- Easy to handle Light weight
- User friendly operation
- Easily Portable
- Wide Range of Tips
- This is a lightweight, easy to use and low maintenance.
- Portable operation, fast, clean, safe and stable
- Accord with human body engineering design, easy to use and operate.
- Safe application and stable and reliable operation.
- It can set the minimum welding time like 1 sec.
- After sale service is available.
- It saves time. It is much faster than traditional welding methods, as virtually no time is needed for drying or curing.
- It saves production costs.
- It produces a high-quality bond and a clean, tight seal.

ULTRASONIC PLASTIC WELDING HAND GUN

Applications

- Plastic Panels & Parts – Cooler, Air Conditioners, Refrigerators, etc
- Single point Inserting
- Automobile bumper riveting
- Single welding
- Packing strapping welding
- Plastic Panels & Parts–Cooler
- Air Conditioners
- Refrigerator
- Electronic instruments
- Durable for harsh & demanding environments
- Easy to handle
- User friendly operation
- Portable
- Lightweight
- One key start, simple operation and easy operate
- Auto Tuned, Time mode and Power mode.
- Effectively balance the amplitude while frequency is locked based on the frequency and amplitude control.
- Power outburst mode, save energy comparing to the traditional ultrasonic hand-held welding machine.

Refrigerators

Air Cooler

Air Conditioners

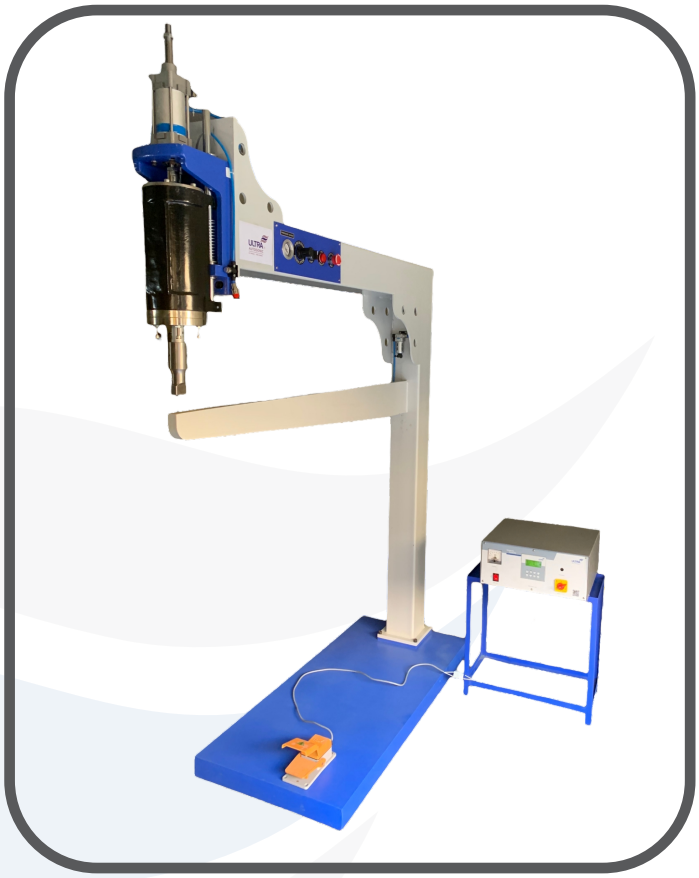
ULTRASONIC PP CORRUGATED BOX WELDING MACHINE

Description

An ultrasonic PP box welding machine is a type of welding machine that uses high-frequency sound waves to join two pieces of polypropylene (PP) plastic together. The process involves applying pressure to the two pieces of PP plastic to be joined, then introducing ultrasonic vibrations that cause the molecules in the plastic to rub against each other, generating heat and melting the plastic at the interface. As the plastic cools and solidifies, it forms a strong, permanent bond.

PP box welding machines are commonly used in the manufacturing of various plastic products, such as plastic containers, packaging materials, and automotive components. The advantages of using ultrasonic welding include fast processing times, consistent weld quality, and the ability to weld intricate shapes and designs.

There are different types of ultrasonic PP box welding machines available, including handheld devices, benchtop machines, and fully automated production lines. The choice of machine depends on the specific application and production requirements.



MODEL-ULTRA PPBX Series

ULTRA PPBX H1 20-2000

Specifications

Frequency (kHz)	20
Power (Watt)	2000
Horn	Design as per the customized application
Actual Weight	Approx. 150 kg
Actual Size (L x W x H)	Approx. (1702 X 610 X 2312) mm
Packaging Type and Size	Open Packing and Approx. Size (1702 X 610 X 2312) mm
Operational Requirement	
Input Power Supply	AC 230V 50/60Hz, 16Amp
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage
Working Pressure	2 to 10 bars (Air Compressor required 1Hp 50Ltr)

ULTRASONIC PP CORRUGATED BOX WELDING MACHINE

Features

- This machine can weld one, two or three welding spots together which make it production friendly.
- We can design frame of the machine as per customer specification like

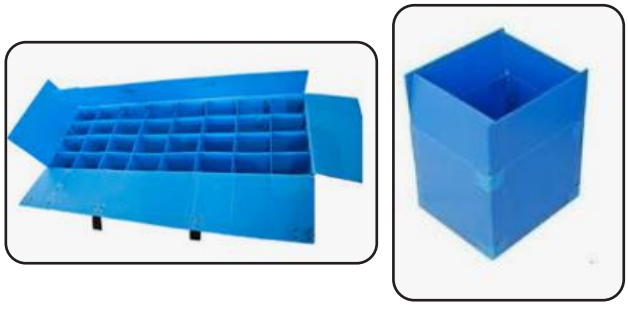
  Multi Head fixed or movable.
- New frame developed by us is very robust and user friendly.
- Ultrasonic system used in these machines already proven.
- All components used in this system are international class.

Advantages

- Strength can bear large pulling force, high pressure
- Quality No water leakage, gas leakage, can close welding
- Not pale, not glue overflow
- Economy No screws, glue, reduce the artificial, low cost.
- No Scratch guarantee for packed items.
- No rejection of packed items
- Better aesthetic looks
- No corrosion of joints means healthy packaging
- Low running costs
- Can weld one or two welding spots together

Applications

- PP Corrugated Box
- PP Sheets Joining
- Riveting PP Sheets



PP Corrugated Box

ULTRASONIC PP CORRUGATED BOX WELDING HAND GUN

Description

An ultrasonic PP (polypropylene) box welding hand gun is a handheld tool that uses ultrasonic vibrations to weld two pieces of PP material together. PP is a thermoplastic polymer that is commonly used in the manufacturing of containers, packaging, and other products.

The hand gun works by generating high-frequency vibrations that create heat between the two pieces of PP material, melting them at the point of contact. As the material cools, the two pieces bond together to form a strong, permanent weld.

Ultrasonic welding is a popular method for bonding thermoplastic materials because it is fast, efficient, and produces a strong weld without the need for adhesives or other consumables. PP is particularly well-suited to ultrasonic welding because it has a low melting point and forms a strong bond when melted.

The ultrasonic PP box welding hand gun is commonly used in the manufacturing of plastic containers, boxes, and other packaging products. It is also used in other industries where PP is a common material, such as automotive manufacturing and medical device production.

MODEL-ULTRA PPBXHG Series

ULTRA PPBXHG 20-1500

ULTRASONIC PP CORRUGATED BOX WELDING HAND GUN

Specifications

Frequency (kHz)	20
Power (Watt)	1500
Horn	Design as per the customized application
Actual Weight	Approx. 18 kg
Actual Size (L x W x H)	Approx. (483 X 458 X 238) mm
Packaging Type and Size	Corrugated Box and Approx. Size (581 X 556 X 336) mm
Operational Requirement	
Input Power Supply	AC 230V 50/60Hz, 6 Amp
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage

Features

- Portable
- Lightweight
- Reliability
- User friendly operation
- Ergonomically designed
- Dimensional accuracy
- Proper part location and holding
- Durable for harsh &demanding environments
- Integrated frequency, power and time
- Weld time controlled by a digital timer
- Hand Gun welding handle
- Competitive prices

Advantages

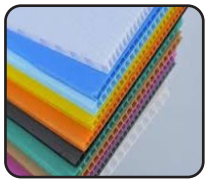
- Strength can bear large pulling force, high pressure
- Not pale, not glue overflow
- Economy No screws, glue, reduce the artificial, low cost.

Applications

- PP Corrugated Box
- PP Sheets Joining
- Riveting PP Sheets

PP Corrugated Box

PP Sheets Joining



PP Sheet

ULTRASONIC FLOW CELL REACTOR

Description

An ultrasonic flow cell reactor is a type of reactor that uses ultrasonic waves to improve the efficiency of chemical reactions. The reactor consists of a flow cell, which is a chamber through which the reactants flow, and one or more ultrasonic transducers that are used to generate high-frequency sound waves.

The ultrasonic waves cause cavitation, the formation and collapse of small bubbles, in the reaction mixture. These bubbles create high-pressure waves and localized heating, which can promote mixing, accelerate reactions, and improve mass transfer.

Ultrasonic flow cell reactors are used in a variety of chemical reactions, including biodiesel production, polymerization, and oxidation.They can be particularly useful in reactions involving viscous or difficult-to-mix liquids, and they can often reduce the amount of energy required to drive a reaction.

MODEL-ULTRA UFCR Series

ULTRA UFCR 20-150	ULTRA UFCR 20-1000
ULTRA UFCR 20-250	ULTRA UFCR 20-2000
ULTRA UFCR 20-500	ULTRA UFCR 20-2500
ULTRA UFCR 20-750	ULTRA UFCR 20-3000

Specifications

Frequency (kHz)	20	
Power (Watt)	150,250,500,750,1000,2000,2500,3000	
Probe	Design as per the customized application	
Actual Weight	Approx. 22 kg	Approx. 30 kg
2 Box	Generator	Flow Cell
Actual Size (L x W x H)	Approx. (483 X 458 X 238) mm	Approx. (311 X 311 X 703) mm
Packaging Type and Size	Corrugated Box and Approx. Size (581 X 556 X 336) mm	Corrugated Box and Approx. Size (409 X 409 X 801) mm
Operational Requirement		
Input Power Supply	AC 230V 50/60Hz, 16Amp	
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage	

ULTRASONIC FLOW CELL REACTOR

Features

- More efficient mixing in multiphasic systems.
- Enhanced temperature control
- Scale-up potential
- Better alignment with “green chemistry.

Advantages

- Short extraction time
- High extraction rate
- More complete extraction
- Mild, non-thermal treatment
- Easy integration and safe operation
- Low cost
- Energy-efficient
- Green extraction
- Environmental-friendly.
- Technical Specifications

Applications

- Emulsification of immiscible components
- Homogenization of cosmetic ingredients
- Dissolving of solids and powders
- Dispersion of nanoparticles into liquid and breaking down the size of particles
- In food industry for protein extraction and other food extractions
- Extraction of DNA
- To accelerate chemical reactions
- Lab research purposes
- Disrupt cell membranes and release cellular contents
- Artificial ageing of liquors and other alcoholic beverages
- Study of different parts of soil

Emulsification

Homogenization of cosmetic ingredients

Dissolving of solids and powders

Extraction of DNA

Accelerate chemical reactions

Lab Research

ULTRASONIC METAL WELDING

Description

Ultrasonic metal welding machine is a type of equipment that uses ultrasonic vibrations to join two metal pieces together. It is commonly used in the manufacturing industry for applications such as aerospace, automotive, electronics, and medical devices.

The ultrasonic welding process involves applying high-frequency vibrations, typically between 20 kHz and 70 kHz, to the metal pieces that need to be joined. The vibrations create friction between the surfaces of the metal, causing them to heat up and soften. The softened metal then fuses together to create a strong, permanent bond.

Ultrasonic metal welding machines typically consist of a power supply, a transducer, a booster, and a horn. The power supply generates the high-frequency vibrations, which are then amplified by the transducer and booster and focused onto the horn. The horn is then brought into contact with the metal pieces that need to be joined, and the vibrations are applied to create the weld.

One advantage of ultrasonic metal welding is that it can join dissimilar metals, such as copper and aluminium, which can be challenging to weld using traditional methods. Additionally, the process is fast, efficient, and produces welds that are strong and reliable.

MODEL-ULTRA UMWM Series

ULTRA UMWM 15 - 2600	ULTRA UMWM 20 - 2500
ULTRA UMWM 20 - 2000	ULTRA UMWM 20 - 3000

ULTRASONIC METAL WELDING

Specifications

Frequency (kHz)	20
Power (Watt)	3000
Horn	Design as per the customized application
Actual Weight	Approx. 96 kg
Actual Size (L x W x H)	Approx. (605 X 556 X 1316) mm
Packaging Type and Size	Wooden Box and Approx. Size (752 X 703 X 1463) mm
Operational Requirement	
Input Power Supply	AC 230V 50/60Hz, 16Amp
CVT / Stabilizers	If the voltage is unstable then use CVT/Stabilizer to avoid damage
Working Pressure	2 to 10 bars (Air Compressor required 1Hp 50Ltr)

Features

- Direct joining of materials with dissimilar properties.
- Very short welding times (fractions of seconds)
- Low heat generation in the welding joint
- Strength in the joints close to the base materials
- No additional joining material required
- Low thermal and electrical transfer resistance
- Can easily be integrated into automatic production lines with options for welding parameter recording / quality control
- Cold welding technique with temperatures of approx. 30-40 % below melting temperature
- Breaking up of oxide skin and flattening of surfaces until atomic bonding forces come into effect
- Diffusion of different materials with each other within fractions of seconds
- Optimum strength since no micro structural changes occur in the boundary layer
- Helium tight metallic joints

ULTRASONIC METAL WELDING

Advantages

- **Speed**

With the compatible parts, the high-frequency ultrasonic vibration can weld parts quickly. As a result, ultrasonic welding technology guarantees a fast production process, high throughput, and short turnaround times.

- **High Level of Safety**

Due to the indirect application of heat, there is a reduction in operational hazards. Aside from that, heat generated by the process is localized and quickly dissipated. Hence, there is no damage to the welded joints and the surroundings of the materials to be welded.

Using ultrasonic welding equipment is extremely safe compared to other welding techniques. The ultrasonic energy is highly targeted, reducing the risk of dangers due to excess electrical energy. Additionally, the heat produced is minimal, localized and quickly dissipated, minimizing the thermal impact on the material and reducing the chances of excess heat damaging any surrounding equipment.

- **Reliability**

Machines used for the welding process are reliable as they experience minimal breakdowns and faults. Furthermore, with automation, there is a reduction in operational and human error, operation cost, and improvement in welded joint quality.

Suitable for Dissimilar materials

It is a suitable process for welding different materials – an important attribute needed in plastic welding. In contrast, other plastic welding processes are unsuitable for dissimilar plastic materials because there is no molecular bond formation.

- **Minimal Material Costs**

The process doesn't require consumables, unlike other joining processes (see the difference between welding and riveting), which use connective bolts, solders, and other adhesive materials. Due to that, it is more cost-effective.ually no time is needed for drying or curing.

- **Joint Quality**

The welded joint does not have defects such as plastic flashes, deformation, or fault. As a result, the welded joint has a high quality, clean, and invisible seam.

ULTRASONIC METAL WELDING

- **It saves time.**

It is much faster than traditional welding methods, as virtually no time is needed for drying or curing.

- **It saves production costs.**
- **Flexibility:**

Ultrasonic welding can be applied to a variety of materials and parts. Thermoplastics and several metals can be welded using this technique, and it is especially useful in welding dissimilar materials. Additionally, ultrasonic welding can weld thin to thick material combinations.

- **Reduced material costs:**

The ultrasonic welding process is very cost-effective in terms of material usage. The process doesn't use connective bolts, solder or adhesive material, so it helps to reduce material costs for the project. Also, because ultrasonic welding is highly precise and produces high-quality joints, part scrapping is kept to a minimum. The ability to minimize human intervention during and after the welding process also keeps labour costs to a minimum.

Applications

- Medical Industry
- Automobile Industry
- Aerospace Industry
- Electronic industry
- Battery production
- Welding of the large heat sinks
- Welding of heat exchange fins and honeycomb cores for various household appliances
- Welding of automotive products.
- Welding electromagnetic switches, useless switches
- Welding of dissimilar metal sheets.
- Welding of the end of metal tube to prevent water and air in filters
- Medical industry uses it for welding face masks, blood and gas filters, and arterial and anaesthesia filters

ULTRASONIC METAL WELDING

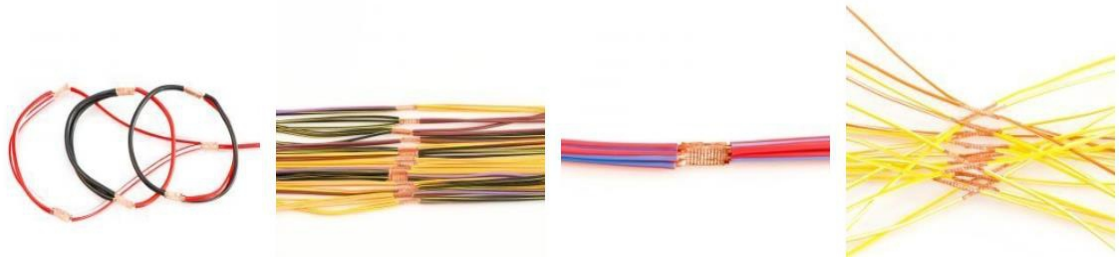
- Automobile industry uses it to join plastics and make components such as door panels, instrument panels, and steering wheels
- Manufacturing parts for the aerospace industry
- Used in electronic industry in joining wired connections
- Ultrasonic metal welding can be used with copper, aluminium, nickel, silver, and gold.

Electronic industry

PP Corrugated Box

Battery production

Samples of copper wire welding



Automobile Industry

OUR PARTNERS IN GROWTH.....

ULTRA AUTOSONIC
Our Mission... Value Addition...

OUR WORLDWIDE NETWORK.....

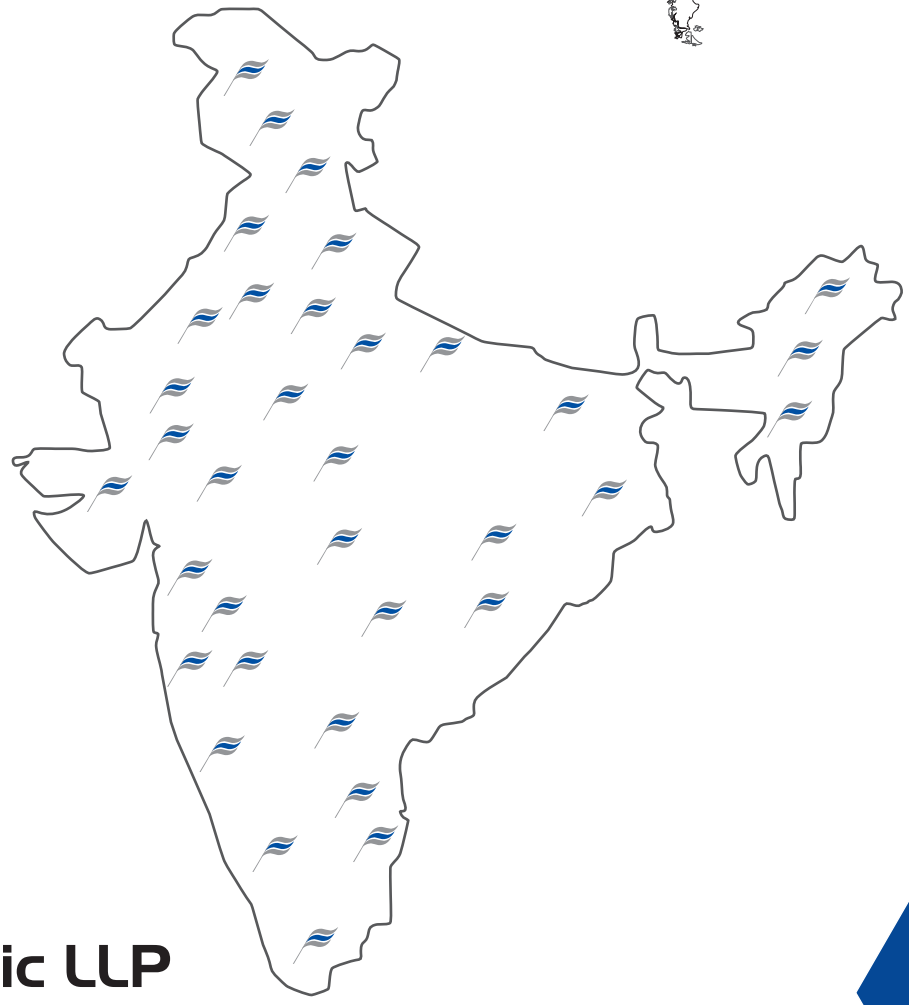
ASIA

MIDDLE EAST

EUROPE

SOUTH AMERICA

AFRICA



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