



WE ARE
A PLASTIC
joining technology
solutions
provider company.

*Who delivers significant and sustainable value to the
organizations in the plastic components.*

www.protocolvibrationwelders.com

About us

We are a plastic joining technology solutions provider company, who delivers significant and sustainable value to the organizations in the plastic components. **“Protool Vibration Welders LLP”** is located at Dombivali, Thane, Maharashtra. Our focus of sourcing goods is in India to different parts of the world.

Our Perspective

We believe that India is country of opportunity for the medium to long term. An Increased penetration, formalization of the economy, high savings and investment rates, and rapid digitalization will help sustain high economic growth rates for a long time. In fact, according to Capital Economics estimates, the Indian economy will triple in size in the next two decades, and its share of world GDP will increase from 8 percent to 16 percent.

And we are sure that, we as **“Protool Vibration Welders LLP”**, will contribute best of our self, in this emerging economy to exceed expectations of our customers, by applying our knowledge, innovation and intelligence, to develop products relevant to customers' requirements.



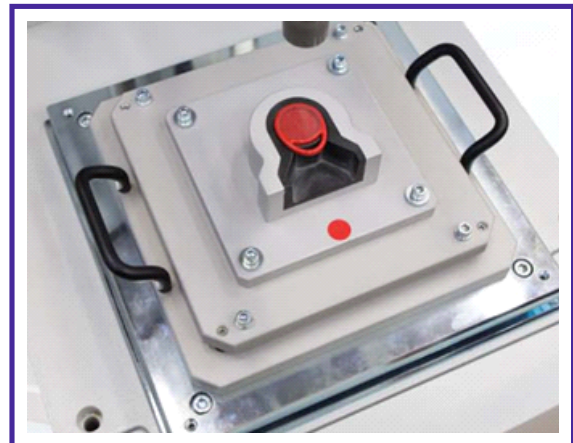
ULTRASONIC WELDING HORN AND HOLDING FIXTURES

The main function of the ultrasonic horn is to change the amplitude of the transducer (generally increase), increase the vibration ratio, improve the efficiency, improve the mechanical quality factor, enhance the heat resistance, expand the temperature range, and extend the use of the transducer life. The ultrasonic transducer adjusts the load matching between the transducer and the ultrasonic tool head by installing an ultrasonic horn, which reduces the resonance impedance and makes it work at the resonance frequency to improve the electro-acoustic conversion efficiency, thereby effectively reducing the ultrasonic wave exchange, and increasing the service life.

The design shape of the ultrasonic horn (ultrasonic horn) differs depending on the application of the ultrasonic wave. Generally, the horns are divided into a rod shape, a step shape, a cone shape, an exponential shape, a catenary shape, a Gauss shape, a composite shape and the like.

SCOPE OF APPLICATION

Ultrasonic horns are widely used in plastic welding, metal welding, cleaning, and many other fields. We "Protool Vibration Welders" manufacturer of Ultrasonic welding Horn and Holding fixtures in different shapes and sizes to meet various welding scenarios. And to achieve good weld joints with ease of loading and unloading in fixture.



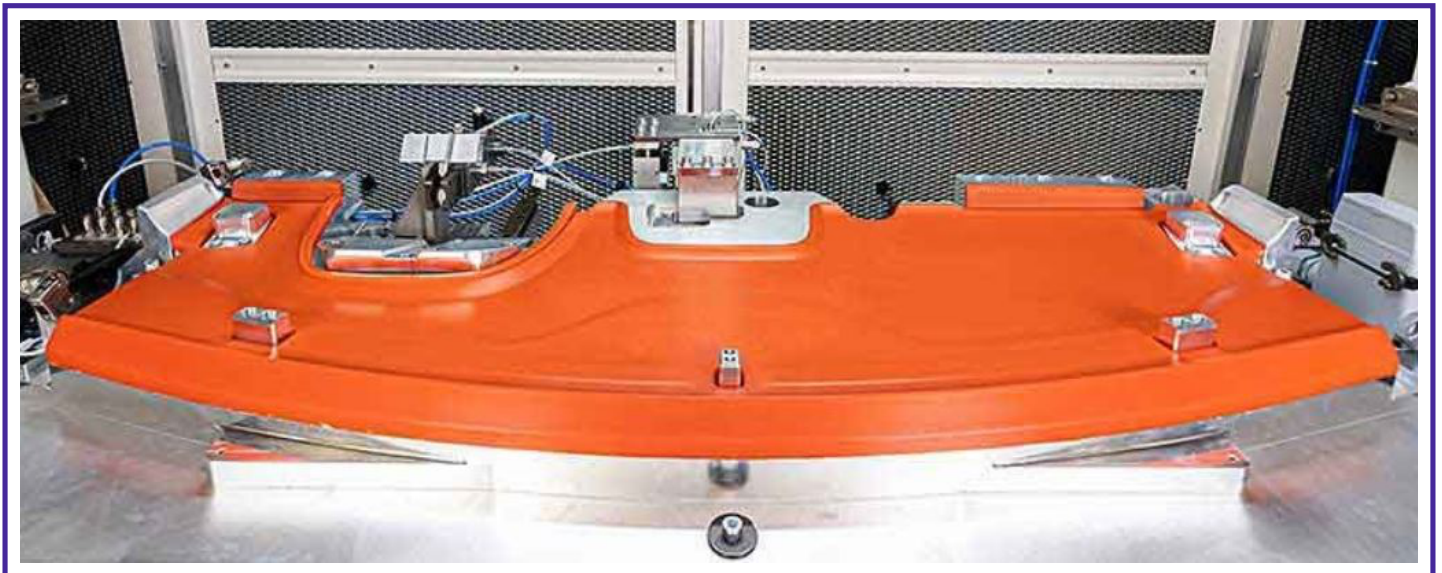
VIBRATION WELDING

Vibration welding refers to a process in which two work pieces are brought in contact under pressure, and a reciprocating motion (vibration) is applied along the common interface in order to generate heat. The resulting heat melts the work pieces, and they become welded when the vibration stops and the interface cools. This entire process takes 6-8 seconds for medium size parts and 14-20 seconds for larger size part like Instrument panel, Defrost duct etc. Most equipment is available that runs between 100–240 Hz. vibration can be achieved either through linear vibration welding, which uses a one dimensional back and forth motion, or orbital vibration welding which moves the pieces in small orbits relative to each other.

The automotive industries has made extensive use of the process to produce parts like manifold and lighting assemblies whose complex geometric prevent single component molding processes.

CAST URETHANE VIBRATION WELDING TOOLING

Urethane casting helps to protect esthetic “A” surface parts like IP, Soft IP, Glove Box, Top Bin, Lamps etc. from marking. Urethane is poured in to an Aluminum machined block initially, once it gets solid then machining is performed with suit to part profile requirements.



PU TAPE VIBRATION WELDING TOOLING

Pu tape helps to protect esthetic “A” surface parts from marking as well as it provides soft grip to the part during vibration welding. It is widely used in large parts like IP.

Below mentioned few Vibrations welded parts where we “Protool Vibration Welders” have rich experience in designing and manufacturing of Vibration welding tools.

Esthetic Part “A” Surface

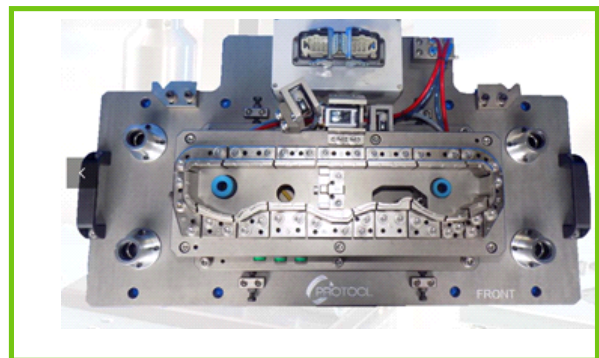
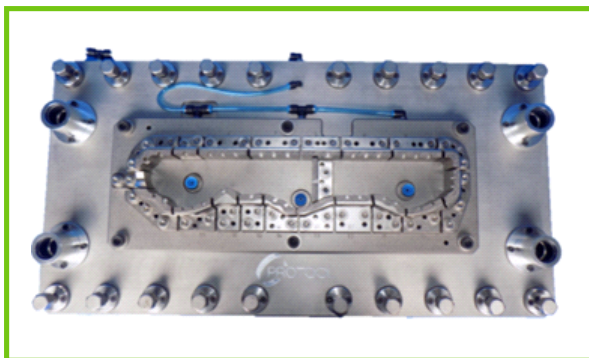
- Instrument Panel to PAB Chute
- Instrument Panel to Defrost Duct
- Glove Box
- Top Bin

Engine Parts

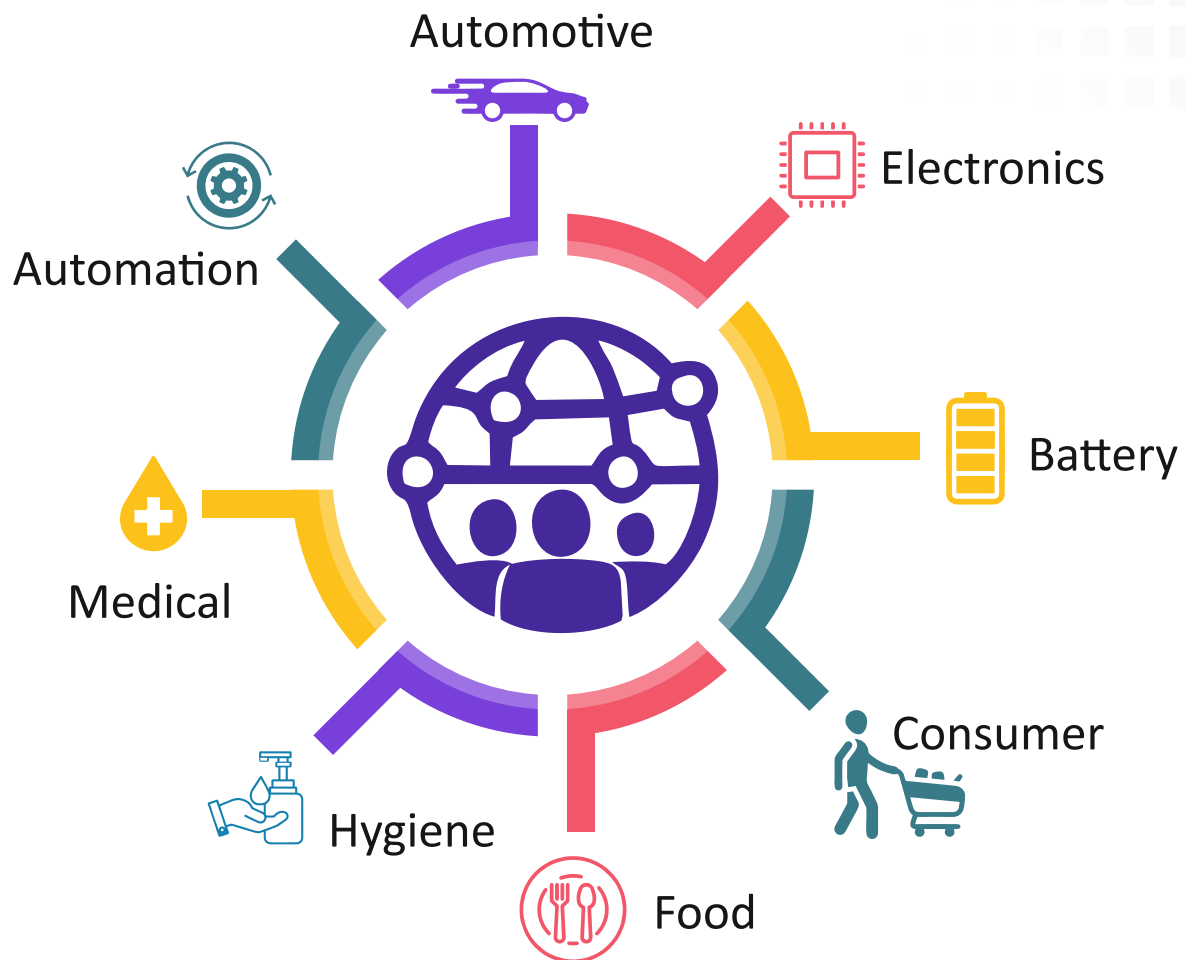
- Manifold
- Cam Cover
- Air Duct
- Oil Mist Filter

Lighting Parts

- Tail lamps
- Fog Lamps
- Reflectors
- Side Turn Indicator



SECTORS WHICH WE SERVE



OUR STRENGTH

- ✔ Complete Project Assistance From Very Early Stage.
- ✔ Committed To Fulfill All Your Requirements.
- ✔ Rich Experience In Plastic Joining.
- ✔ Immediate Response For All Your Needs.
- ✔ One Point Of Contact For All Your Queries.

WHY TO CHOOSE US?

We “**Protool Vibration Welders LLP**” provide the highest quality work no matter the size of the project. Be it large, medium, or small, we work with utmost dedication so that we deliver our services or solutions, within the set time frame, without compromising on the quality of work. Our clients' delight, satisfaction and expectations, thrive on us to work even hard. We “**Protool Vibration Welders LLP**” are committed to creating value across everything we do.

- Through a closer relationship with our customers, we anticipate their needs to ensure that we remain their preferred partner.
- Respect, integrity and transparency are on top priority for us
- Endeavor to delight our customers, by exceeding their expectations.
- We take all reasonable precautions to protect the information you give us. We do not disclose your information to other parties.
- We strive for excellence in everything we do. We are committed to applying our knowledge, innovation and intelligence, to develop products relevant to your requirements.

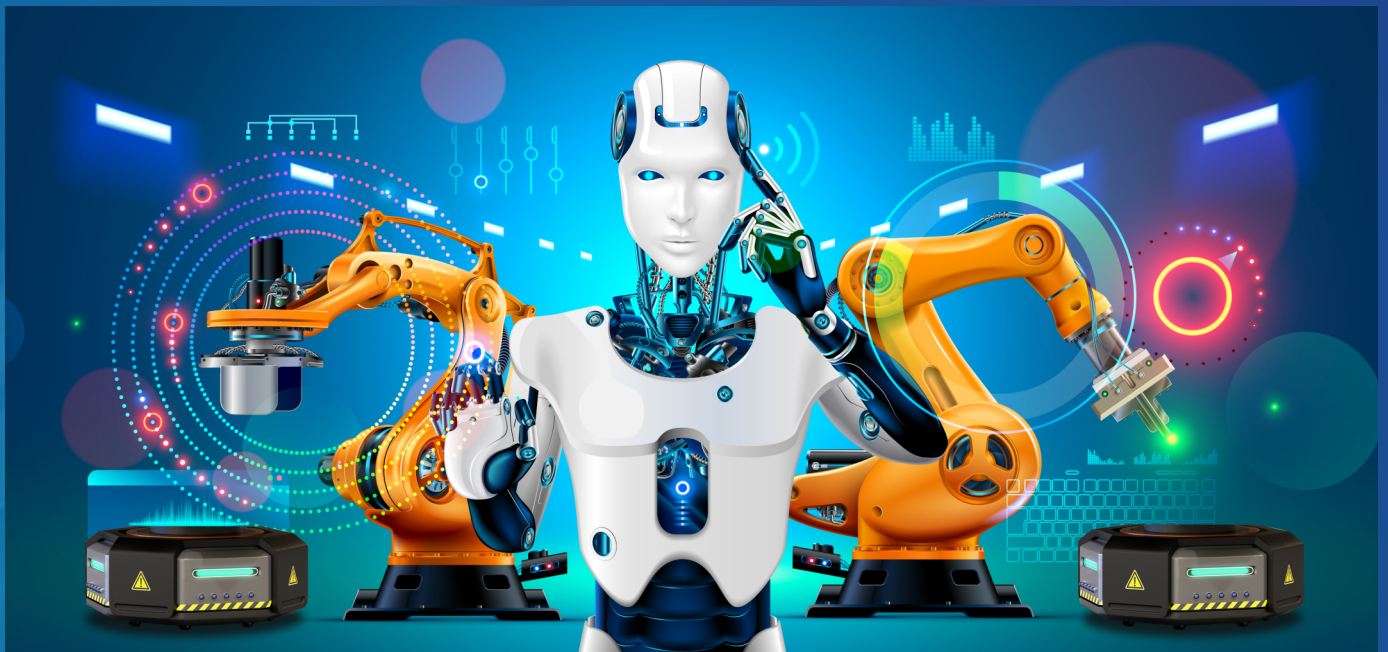


We deliver what we promise, and strive for improvements continuously, which is driven by our desire to learn. Customer satisfaction being our foremost priority, we believe in consistency and commitment, that fosters a work culture, in which our employees execute at the highest level, as we move forward with continuous innovation. We always remember that the position at which we have reached today, would not have been possible without the commitment of our team members towards their work, which they do with the utmost professionalism and uncompromising integrity.

Contact us

If you have any question or queries, a member of our staff will always happy to help.

Feel free to contact us by telephone or email, and We will be ensure that we will be back to you, as soon as possible.



We protool Family Thank You, For Showing Your Interest.



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