

Ultrasonic Fabric Sealing System

Ultrasonic is the term used to describe the sound waves having a frequency above the human audible spectrum. Ultrasonic energy has found extensive use in textiles and their downstream processing. Many of these uses are based on the ability to use ultrasonic energy to induce heat and pressure by vibratory action.

With the Sealing system one can achieve a straight line seam as well as a torn seam. Sealing speed would be a function of the sealing material thickness as well as the sealing.

ROOPTELSONIC ULTRASONIX LTD.

(RTUL) is a joint venture with a well known Ultrasonic Machine Manufacturer, M/s. Telsonic AG, Switzerland. RTUL is a leader in design, development, manufacture and marketing of a wide range of Ultrasonic Machines. It has the most modern manufacturing facilities at Gandhinagar in Gujarat, and at Mumbai, with well equipped application laboratory, tool room and machine shop, sophisticated testing and designing centre and high-tech measuring instruments.



The Ultrasonic Sealing System designed & developed for sealing of Fabrics, Plastic Films, Laminated paper, Non-Woven Fabrics, Filters is a versatile Machine being offered in range of frequency and Power. The Ultrasonic Sealer has tremendous advantages over the conventional stitching machine because of the Non-pin seam. This Ultrasonic Sealing is applied for Sealing of Chemical Fiber Fabrics, Non-Woven Fabrics, Thermo-melt Fabrics and effectively replaces the sewing or stroke type welding.

Typical applications for the systems include protective garments, disposable hospital gowns, shoe covers, face masks, infants' nursery garments, filters, bags, curtains, sails, and web splicing. Sealed edges and seams with no stitch holes prevent penetration of chemicals, liquids, bloodborne pathogens, or particulates, thus providing a benefit over conventional stitching Methods.

It has various applications in sealing of:

- * Filters
- * Laminated Paper
- * BOPP Films
- * Medical Caps
- * Masks
- * & many more. . .

Machine configuration and the location of the horn and anvils enable flexibility and tight turns in sealing. This also provides an unobstructed view of the fabric in the processing area.

Key Features

- * Safety-guarded foot switch.
- * Operator safety : no needles or other moving parts above the work surface.
- * Variable speed drive motor provides continuous operation at speed ranges of 0.5 - 20mtrs. / min.
- * Selectable operating speed enables operator to set the suitable maximum feed speed.
- * Operator controls are conveniently located on front of the machine
- * The envil roller is mounted over the table for Clear operator visibility.
- * Standard sewing table with adjustable height.
- * Stainless steel table surface, stiff support frames
- * Sealing wheels provide the "stitch" pattern for ultrasonic fabric and film sealing applications. Standard pattern wheels or Custom design wheels can be made to order. The wheels are Interchangeable.

SPECIFICATIONS:

Frequency

20KHz 36KHz

Ultrasonic Power

500W, 1000W in 36KHz Frequency and
500W, 1000W, 1500W, 2000W in 20KHz
Frequency

Sealing Speed

Variable - 0.5 - 20mtrs. / min.
(Depends on Fabric / Film to be welded)

Work Table

S. S. 304 Covered

Size of Sealing Machine with Generator

1110 (L) x 570 (W) x 1085 (H)mm

Total Weight

130 Kgs.

UNIQUE FEATURES & ADVANTAGES

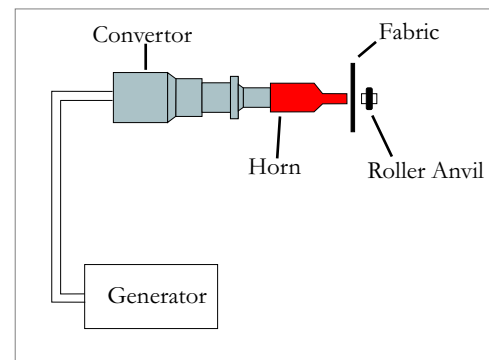
- * Automatic Tuning of Horn & Horn life indication
- * Built in electronic amplitude setting- Allowing the user to choose amplitudes through generator between 70% to 100% without changing the booster.
- * No emission of cutting fumes in the cutting area so reduces the expensive suction System.

Ultrasonic sealing system comprises of:

Electronic Ultrasonic Generator

- Converter
- Booster
- Horn
- Sealing or Cutting Wheel

The sealing system includes a variable speed drive mechanism; pneumatically-activated sealing wheel arm; drive motor; control box; and foot switch or start circuitry to lower and rotate the sealing wheel and start ultrasonics. It is a standalone system in a sewing table. An ultrasonic horn is required for use, along with the appropriate sealing wheel, with configuration dependent upon the specific application. Various sealing patterns can be possible, including standard single stitch, dot, right or left slant, zigzag, or custom-designed patterns.



NOTE: Technical specifications are subject to change without prior notice, due to continuous upgradation.

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