

MACHINE FOR PRODUCTION OF FOAMING ELEMENT IN THE PUMPS FOR COSMETIC SUBSTANCES



1. TECHNICAL CHARACTERISTICS.

TYPE	PARAMETER
<i>Length of the mesh</i>	from 20 to 150 meters on each spool;
<i>Width of the mesh</i>	max: 20mm, min: 18mm;
<i>Material of the detail and the mesh</i>	Polypropylene
<i>Dimensions of the detail</i>	Φ8 x Φ6,4
<i>Hight</i>	6
<i>Ultrasonic punching and welding</i>	At the same time
<i>Loading of details</i>	From vibro-bunker and loading chute
<i>Efficiency</i>	1 pc / sec
<i>Power supply</i>	1 PH + neutral + earth 230V / 50 Hz
<i>Air supply</i>	4 - 8 bar
<i>Ultrasonic power</i>	2000W / 40kHz
<i>Number of operators</i>	1 operator
<i>Weight</i>	60 kg
<i>Overall dimensions (LxWxH)</i>	1500 x 1000 x 1400 mm
<i>Ambient operating temperature</i>	10° to 35° C
<i>Ambient humidity</i>	< 80% at 25° C

2. TECHNICAL DESCRIPTION.

The machine for ultrasonic punching of polypropylene mesh and welding the punched element on a ring consists of:

- Automation and control board;
- Remote control panel;
- Loading module – vibrating bunker;
- Ultrasonic punching and welding module, assembling the punched mesh element to a ring;
- Output module for collecting the assembled details;

The separate modules are connected in one machine and operate synchronously. The machine is designed for production of the foaming detail. The detail is mounted in pumps for cosmetic products, such as liquid soap, shaving foam, hair dye and others which require that the cosmetic product is aerated.

The machine features high efficiency of 1 detail per second. The process of ultrasonic punching and welding takes 0,2 to 0,3 sec. The processed materials have to be identical and applicable for ultrasonic welding. The quality of welding depends on the quality of materials.



Use only high-quality materials with constant characteristics to ensure the excellent quality of all finished details.

Description of the machine

The machine for punching and welding mesh to a ring is shown on Fig. 1.

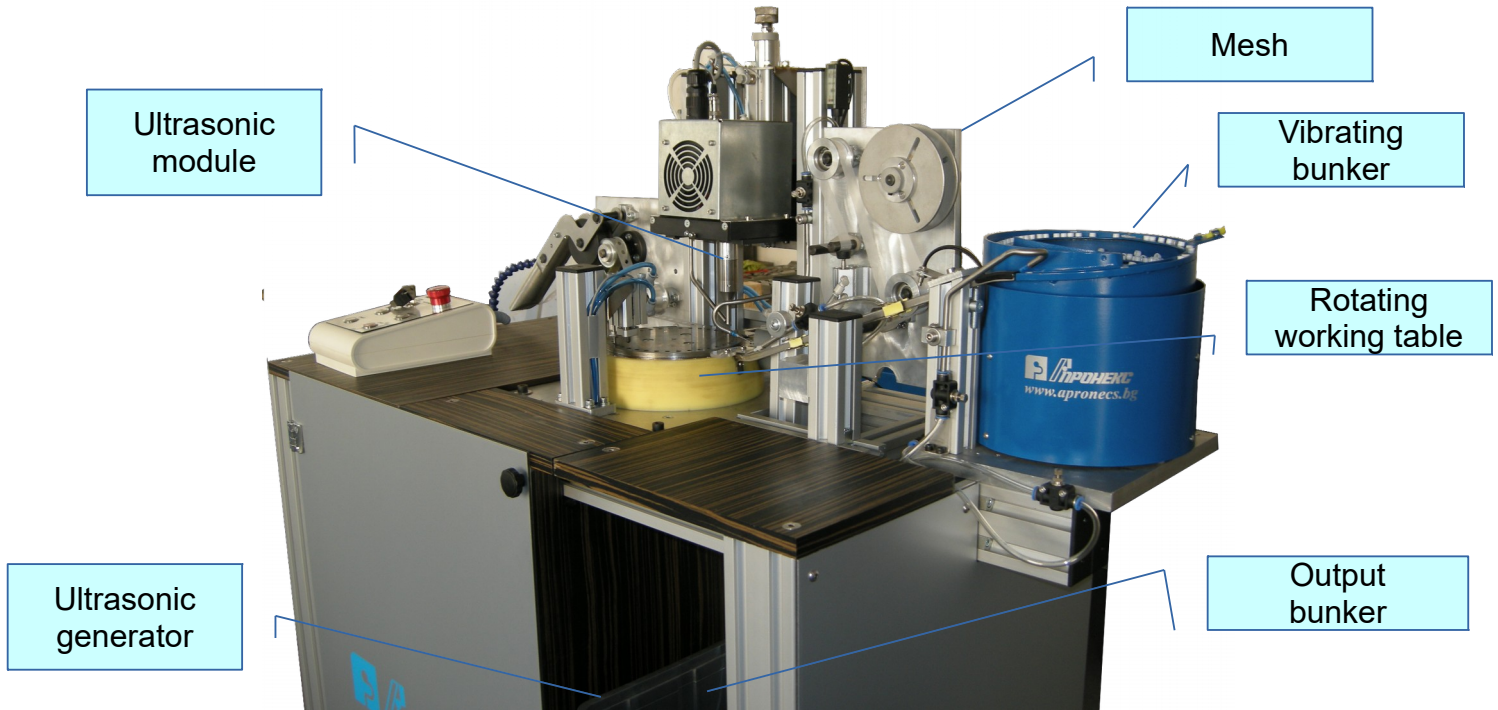


Fig. 1 Bunching and welding module.

The details are loaded in the bunker and arranged in one direction. The rings have a form for orientation. The orientation is achieved by successive passing through different barriers. The rings are fed to a vibrating chute, which loads them in the positions of the rotating table. One ring is loaded from the chute at each move of the table.

The mesh is loaded on a spool and is pulled through the ultrasonic module by successively placed rollers.

When the rotating table is in a position with a loaded ring, the ultrasonic sonotrode goes down, punches a circle from the mesh and welds it to the periphery of the ring.

After this operation, the table rotates with one position and the process is repeated. The finished details are removed from the working table by means of an air jet and are placed in an output bunker.