

UniSoft NT Ltd

Thermocouple producing machines

UniSoft NT has developed and produced various automatic machines for the production of bifilar thermocouples for installation in domestic natural gas appliances.

The newest machine is shown in the picture. It features a 28-position rotary table and additional stations for producing the Constantan/T1 pair. The thermocouples range in length from 250 mm to 1200 mm, with both ends fully processed. The machine operates fully automatically and performs multiple operations, such as:

Production of the Constantan/T1 pair from wire with a diameter of 1/1.2 mm

Processing of the cold end of the thermocouple, including:

- Straightening, shaving, and cutting piram
- FASTON crimping
- Laser welding of the FASTON to the piram
- Placement of plastic connector body using a Vibro Bowl Feeder

Processing the warm end, including:

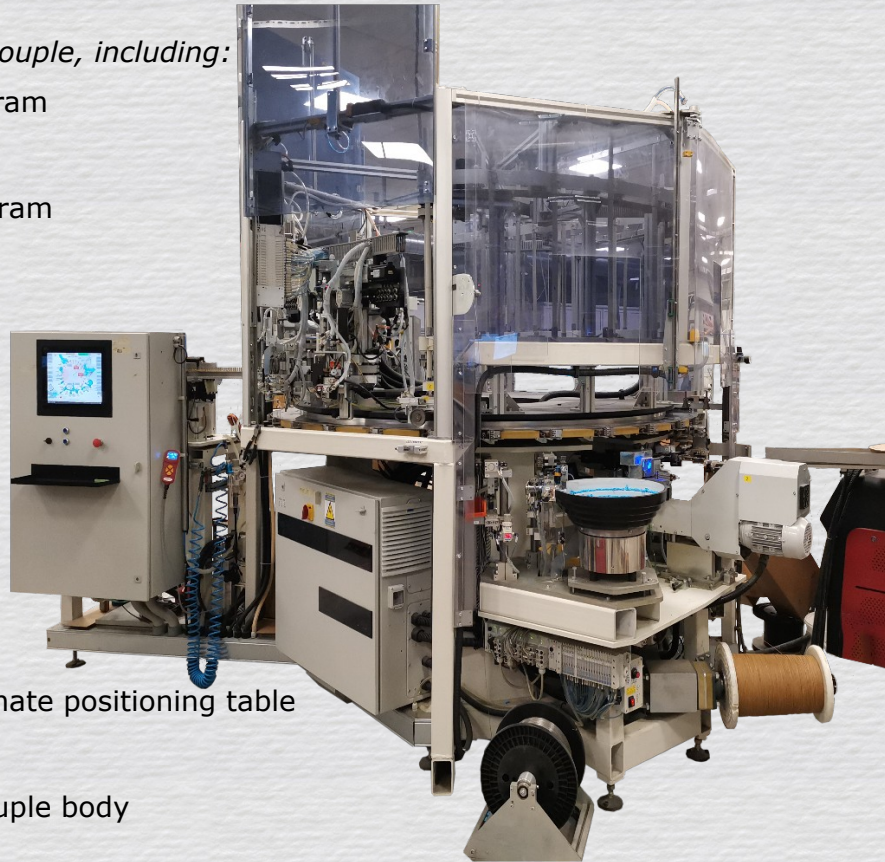
- Making a Constantan/T1 pair
- Welding the pair to the piram using TIG welding
- Hose installation
- Placement of the thermocouple body using a Vibro Bowl Feeder or a coordinate positioning table
- TIG top welding of the body
- Measuring the height of the thermocouple body with an accuracy of 0.02mm

Ground cable production:

- Cable cutting
- Cavalier pin crimping
- Laser welding of the cavalier to the cable.

The machine also performs numerous additional operations and tests during its operation and unloads the good and bad parts into separate boxes.

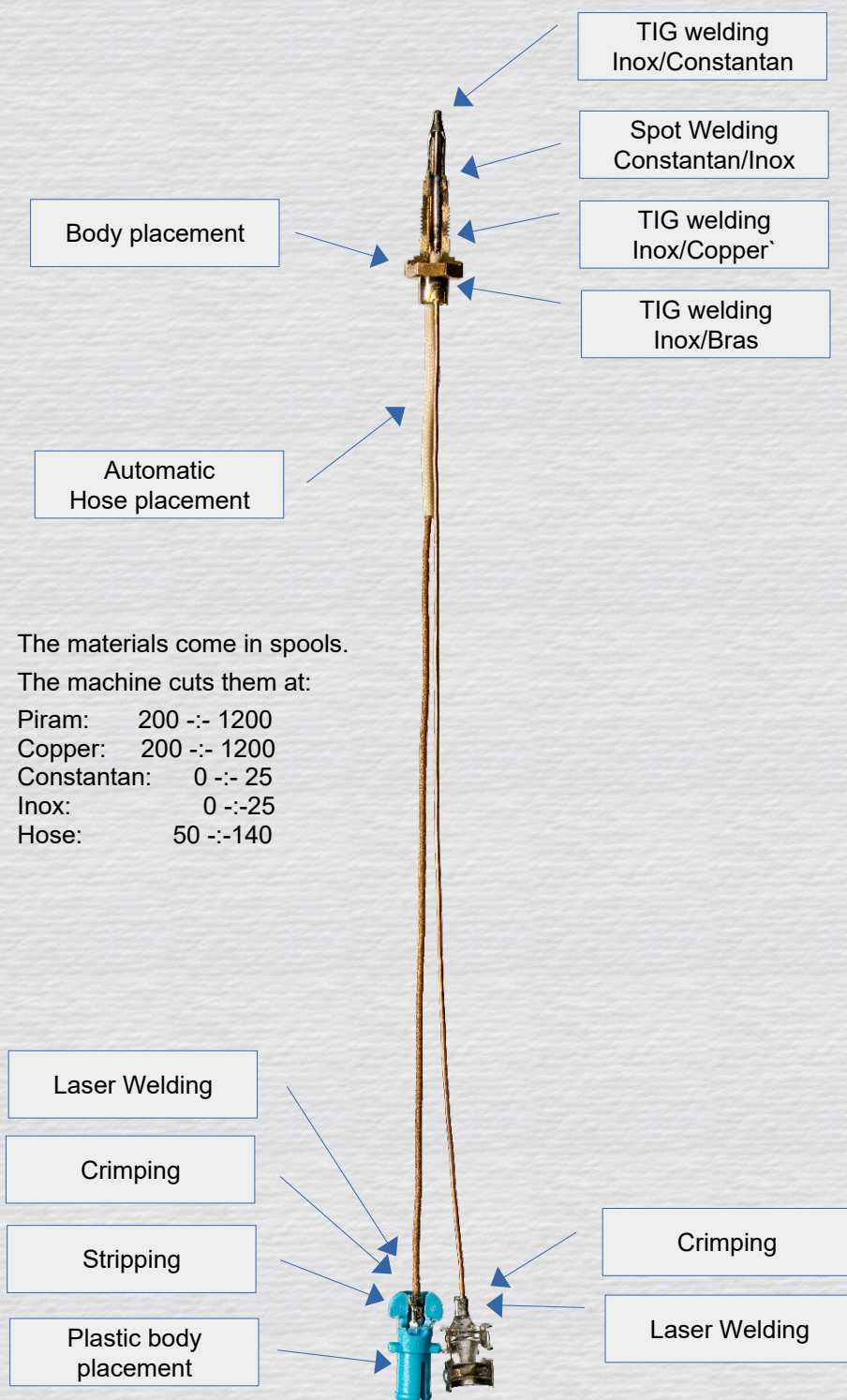
All operations mentioned above are integrated into a single machine with a working cycle of 4.4 seconds.



UniSoft NT Ltd

Thermocouple producing machines

All operations are performed on the same fully automatic machine, processing both ends and conducting numerous measurements and tests.



The materials come in spools.

The machine cuts them at:

Piram: 200 -:- 1200

Copper: 200 -:- 1200

Constantan: 0 -:- 25

Inox: 0 -:- 25

Hose: 50 -:- 140