

ULTRASONIC WELDER

Inline ultrasonic welding processes fully automated with proven Schunk Sonosystems welding technology and with well-established automation systems of Infotech AG

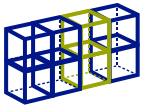


ULTRASONIC WELDER

Schunk Sonosystems and Infotech AG

Thanks to intensive fundamental research and a host of innovations, Schunk Sonosystems has achieved a major technological lead in ultrasonic metal welding and Infotech in fully automated power module production lines.

The Schunk Sonosystems 35kHz ultrasonic welding head with the flexural Sonotrode type performing within the Infotech proven automation platform, supported with peripherals from the Infotech component matrix, **allows fully automated ultrasonic welding processes of pin housings or any leads** e.g. from lead frames anywhere in the assembly line where it is needed.



The ultrasonic welding unit can be integrated anywhere within a production line



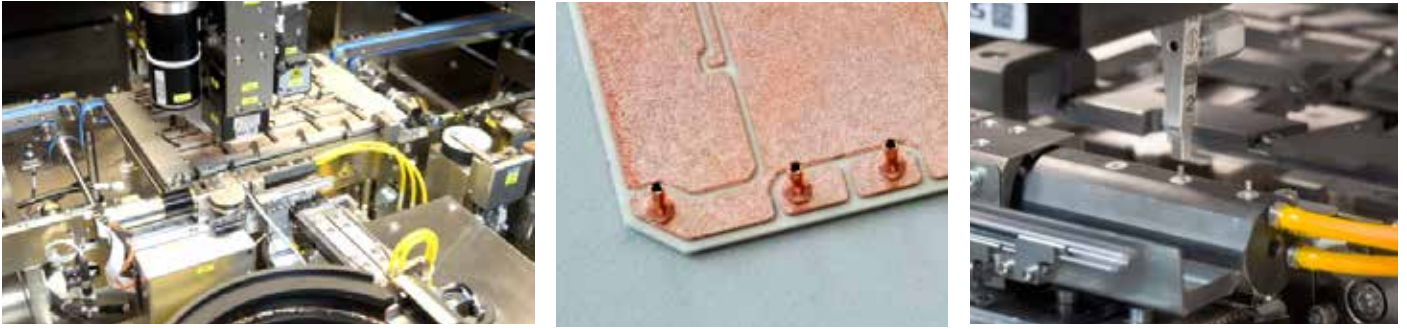
Fully automatic feeding system by Infotech



Welding technology by Schunk Sonosystems, automation flexibility by Infotech



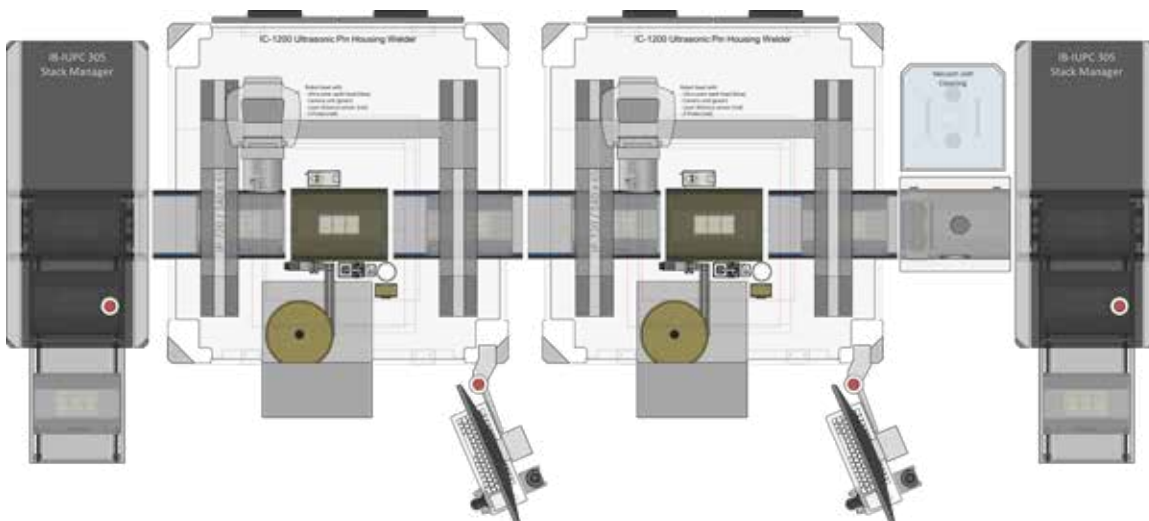
ULTRASONIC WELDER



- 35 kHz ultrasonic welding head with Flexural Sonotrode type
- Sonotrode identification for traceability
- Sonotrode calibration by table camera for high accuracy
- Integrated force with force profile during welding process
- Z-height detection touchless or with touch probe
- Integrated head camera
- Site location-, pre-weld- and post-weld inspection
- Pick & place capability directly with Sonotrode (pin housing)
- Stand alone or Inline capabilities using SMEMA interface
- Flat belt transport system with motion controlled buffers
- Process station with anchorage with vacuum and active clamping – application specific
- Table camera for any object inspection
- Automatic Sonotrode calibration X / Y / Z
- Automatic Sonotrode welding process calibration
- Feeding peripherals from Infotech Component Matrix
- Inline cleaning options with air blade or Taifun cleaner
- Full traceability with MES communication to customer`s host

PIN HOUSING WELDER

Using pin housings allows to weld the connection onto the substrate much earlier in the production flow compared with welding the pins directly onto the substrates, at the stage, when the power module is almost completed. This way the welding contact can be analyzed together with all other connections at substrate level. For the pin insertion process at the end of the module production process, Infotech offers special pin insertion machines.



LEAD FRAME WELDER

Typical lead frame welding process line with return conveyor for the empty work piece carriers:

Station 10:

Load the tested AMB substrates into the workpiece carrier and place the lead frame on top of the AMB's

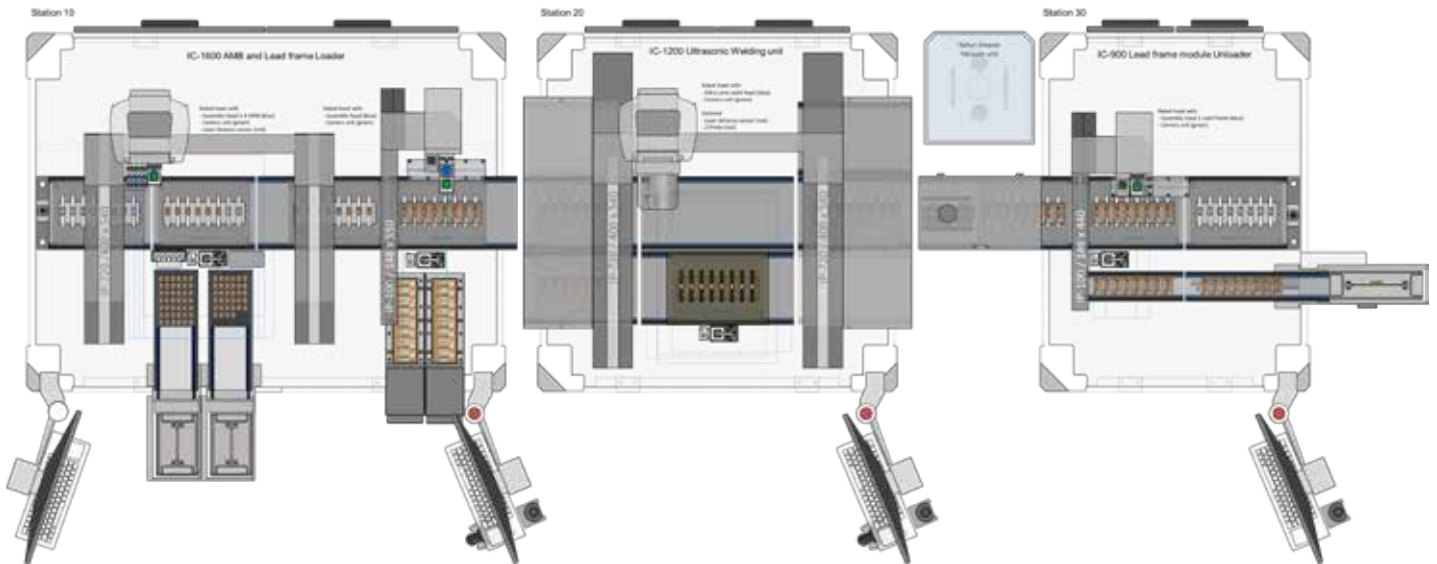
Station 20:

Ultrasonic welding process of the leads from the lead frame onto the AMB substrates

Station 30:

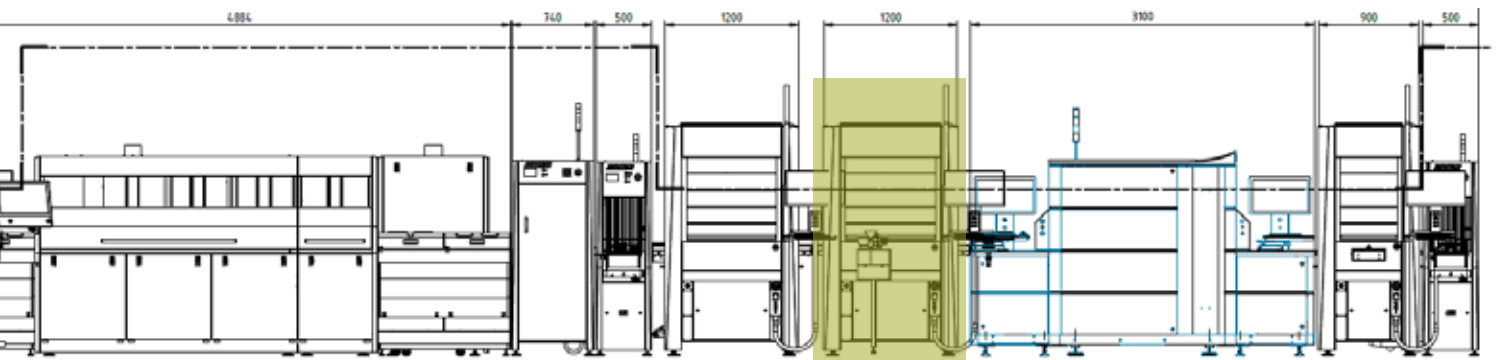
Clean the product using a Taifun cleaner and unload the module onto a transport system into a magazine

To increase the capacity of the production line, station 20 may be doubled or tripled.



FLEXIBLE INTEGRATION INTO PRODUCTION LINES

Typical DBC Production line with integrated pin housing welder



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