RFID Inlay Production

Decades of Experience in Ultrasonic Wire Embedding and Inlay Production

Antenna Laying – Fast and Precise

> 4000 antennas/hours.

Excellent sonotrode know how.

- Easy to thread the wire
- Optimized geometries & materials for ultimate precision and long lifetimes

RFID inlay production for e-passports, contactless and Dual Interface cards

- Highest precision at maximum speed

- Fully automatic material handling systems.

WCE 2000 – The Basic Machine

- Sheet to Sheet (S2S)
- Reel to Sheet (R2S)
- Reel to Reel (R2R)

- Fully automatic material handling systems.

- Sheet to Sheet (S2S)
- Reel to Sheet (R2S)
- Reel to Reel (R2R)

Advantages

- High speed inline architecture (up to 4000 antennas per hour)
- S2S is the solution for fully automatic sheet handling
- Very accurate wire embedding
- Machine is easy to operate
- All module types are possible
- All antenna geometries are possible including meander
- Operator friendly programming software “Easy Create” to create antenna geometry and adjustment of process parameters
- Wire cutting in all directions possible
- Easy transfer of antenna design from CAD to “Easy Create” by CAD converter
- Automatic cleaning of soldering heads
- Inline product testing (ATS)
- Automatic quality control available for each process unit
- Patented ruhlamat wire embedding heads
- > 4000 antennas/hours.

RFID Inlay Production

GERMANY
ruhlamat GmbH
Sonnenacker 2
99819 Marksuhl
+49 36925 929-0
+49 36925 929-111
info@ruhlamat.de

CHINA
ruhlamat Co. Ltd.
Block 2# Hua Yi Square
No. 306 SuHong Road Middle
Suzhou Industrial Park
Suzhou 215021
+86 -512 -6767 1108
+86 -512 -6767 1109
info@ruhlamat.com.cn
www.ruhlamat.com.cn

AMERICA
ruhlamat America Inc.
138B Johns Road
29650 Greer, South Carolina
USA
+1 -480 -289 1886
info@ruhlamat.us
www.ruhlamat.com

MALAYSIA
ruhlamat South Pacific Sdn. Bhd.
Unit C-12-4, Level 12, Block C
Megan Avenue II, 12, Jalan Yap Kwan Seng
Kuala Lumpur
info@ruhlamat-sp.com
www.ruhlamat-sp.com
Patent situation:
The wire embedding technology based on certain methods and devices is legally protected by third party patents in some countries until April 2017. We accept those rights and will not deliver methods & devices in these countries. Please feel free to contact us, if you have any questions.

Chip Module Production
RFID Inlay Production
Card Production
Card Personalisation
Passport Production
Passport Personalisation
Special Machinery

WCE150 / Laboratory System
Ideal for small throughputs as laboratory equipment
For sheet handling
Single station concept
Loading / unloading manually
Punching out module
Pick & place module on sheet
Ultrasonic wire embedding
Thermo compression bonding / soldering

WCE600 / Semi-Automatic Production System
Ideal for medium throughputs
Four station round table concept
For sheet handling
Loading / unloading manually
Punching out module
Pick & place module on sheet
Ultrasonic wire embedding
Thermo compression bonding / soldering

WCE2000 / Automatic Production System
Ideal for high throughputs
Automatic linear transfer concept
For sheet to sheet (S2S), reel to sheet (R2S) and reel to reel (R2R)
Fully automatic material handling
RFID test

Inlay Manufacturing
All in One Solutions for Passport or Card Inlays

Inlay Manufacturing
Sheet to Sheet (S2S)

Inlay Manufacturing
Reel to Sheet (R2S) – Reel to Reel (R2R)

All-in-one: complete inlays including compensation and/or shield layer

2-up-passport inlays

Handing

Process

Testing / Measurement

Features

• Asynchronous handling and RFID inlay production using wire embedding technology
• Production of substrates without deadirteen or web cuts
• Production of complete inlays

Advantages

• Unmatched throughput > 4,000 antennas / hour as antenna embedding machine and up to 2,000 finished RFID inlays/hour as inlay manufacturing line
• Very precise and accurate embedding on various substrates
• Automatic detection of “broken wire” and “uncut wire”
• Any antenna geometry is possible, soft forming included
• Powerful design software “Easy Create” with all functions and tools to create custom and new layouts
• Any internal RFID data can be specifically embedded
• Automatic in-line quality control for each process unit ensures highest quality and yield
• Patented universal wire embedding head