RFID Inlay Production

Produce high-quality RFID inlays quickly and economically

Incredibly large quantities of high-quality RFID inlays have already been produced on ruhlamat systems worldwide for e-passports and the contactless card market (e-ID, e-health, e-payment, public transport), including dual interface applications. Our reliable machine solutions offer great flexibility and productivity, enabling you to make both prototypes and mass products in an economical way and with consistently high quality. From antenna embedding to production of complete RFID inlays and eCovers, the options are versatile.

We have comprehensive experience in ultrasonic wire embedding for different industries and applications since 1997. The wire embedding technology for antenna production is superior to all other production technologies in terms of quality, durability, and economy. Antenna embedding is possible on various materials and offers constant electrical properties and mechanical strength at the highest level.

Wire embedded antennas produced on ruhlamat machines are extremely cheap and yet provide the best product characteristics compared to etched or plated antennas. Our excellent sonotrode know-how for various substrate / wire combinations ensures highest precision at wire embedding. Optimised sonotrode geometries and materials guarantee best performing products with proven reliability even in the most demanding applications.

WCE2000 - Automatic Production System

The WCE2000 is our fastest and most productive high-volume system for wire embedding and RFID inlay production. You get unrivalled real-world throughput with up to 4,050 antennas per hour as antenna embedding machine and up to 2,000 finished RFID inlays per hour as inlay manufacturing line.

This modular and flexible system allows processing of various substrates and provides sheet to sheet (S2S), reel to sheet (R2S), or reel to reel (R2R) handling.
WCE700 - Semi-Automatic Production System [2]

The very economical WCE700 can handle both small jobs and high-volume runs easily with up to 1,600 inlay sheets per hour.

The system is capable to work with a wide range of substrates and can also be used for only antenna embedding, with unrivalled speed, accuracy and the quality of antennas that it produces.

WCE150 - Laboratory System [3]

You are looking for a convenient solution for laboratory usage to produce prototypes or low-volume jobs? The affordably priced WCE150 is designed to produce RFID inlays for ID documents in the ID1 and ID3 format with up to 40 inlay sheets per hour.

The machine is capable to work with a wide range of substrates and can also be used for only antenna embedding, providing highest precision and consistently high quality. Variables like the size and shape of the antenna can easily be adapted.

Produce high-quality eCover automatically with superior speed and uptime.


Links