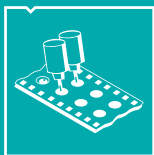


## Smart card – chip module encapsulation MS610



encapsulation

### MS610

Providing the most often sold manufacturing equipment in the worldwide semiconductor market, ruhlamat proves its innovation and solid reputation again in its chip module encapsulation machine MS610.

Customers benefit from the known ruhlamat machinery reliability and precision, as well as the highest throughput with best performance qualities in its class. The MS610 performs the encapsulation of ICs on 35mm tape, using a fill or dam & fill process. The standard MS610 modular system consists of the ruhlamat standalone input and output reel, module transport system, 12-head dispensing unit(s),

heating system for tape and dispensing head, UV curing unit(s) and a camera system. The throughput depends mainly on the characteristics of the materials for fill process and the encapsulation geometry, which can be easily programmed by our compact software package Easy Create.

UV-curing modules support specific curing times for resin. Additional quality control systems for module height and geometry are available. Reject modules will be marked by ink or punched. External cast resin units for the processes of mixing, evacuation and heating supporting a mass preparation.

# Smart card – chip module encapsulation MS610

## Applications

- IC module production / automatic encapsulation of (wire) bonded chips on module tape including UV curing and measuring control on module tape

## Benefits & features

- high throughput / high accuracy dispensing
- fill or dam & fill process, modular machine design
- programmable movement of dosing heads
- programmable dispensing parameters
- heating of module tape & dosing heads
- process control visualisation
- UV curing including intensity control system
- 100% height measurement
- additional globe top form inspection
- process data capture / statistics
- graphic display with teach-in function
- module tape splicer

## Technical specifications

### tape specifications:

- module tape: 35 mm; pitch 9.5 or 14.25
- spacer tape: 35 mm
- reel dimensions: for module tape and protection tape max 530 mm (larger size on request)

### IC module types:

- processor and memory modules M2, M3, M4, ...  
(up to the latest development)

### facilities:

- compressed air: 7 bar, oil-free, dry
- electrical supply: 3 x 400V, 50 Hz (other's possible),  
15 kW x 32A fuse

### environmental conditions:

- ambient temperature: 22°C ± 5°
- degree of relative humidity: max. 70%

### machine dimensions (approx.):

- height: 2,100 mm
- length: 3,800 mm
- width: 1,500 mm
- weight: 2,100 kg

### throughput:

- exceeding 33,000 uph