

Rotary Indexing Tables

AUTOMATION

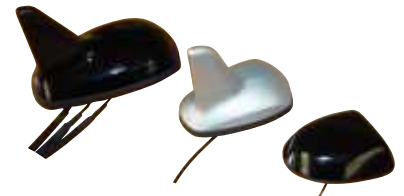


Final assembly and functional testing of antennas

13400 - 1

Rotary Table for motor vehicle antennas

Text and assembly system for roof antennas with changeable product carriers for different antenna types. Electrical rotary indexing table with 5er division.



Antennas for GPS, GSM, DAB (Digital-Audio-Broadcast) and SDARS (Satellite-Digital Audio-Radio-Services, North America)



Rotary Indexing Tables

AUTOMATION

Final assembly and functional testing of antennas

13400 - 2

Realisation

Station 1: Insertion station

- Manual inserting of the antenna caps, identification of the product variant via bar code
- Insertion of the electronics assembly with wiring harness into the antenna cap
- Manual putting of the RF cables. The multi colour plugs are identified over color sensors.
- Manual putting of the bracket. The availability of the rubber seals and the position of the bracket (position of the rib) are monitored by a vision system.

Station 2: Screwing station

- Automatic screwing of the electronics assembly with the antenna cap by a torque and depth controlled screwdriver.
- X-Y coordinate system for approaching the screwing position, depending upon product variant 2,3 or 4 screws are inserted.

Station 3: Testing station

- pneumatic contacting from downside on the plug interface
- scope of testing:
 - transmission measurement
 - adjustment measurement
 - current measurement
 - resistance measurement
 - error statistics - entry in the data bank

Station 4: Bracket assembling

- Automatic screwing of the bracket up to the required dimension, accuracy 0.3 mm for the product variants

Station 5: Parts-removal station

- Removal of the DUT and manual packing

Controlled reject part tray

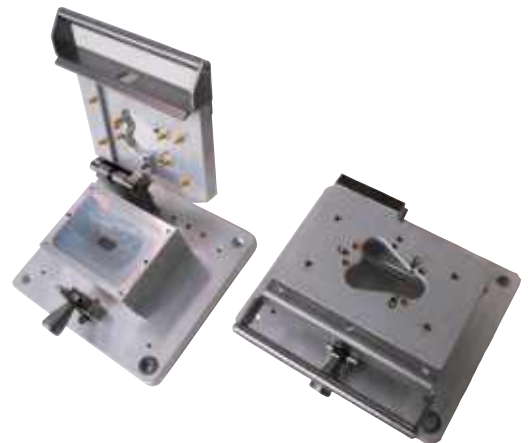
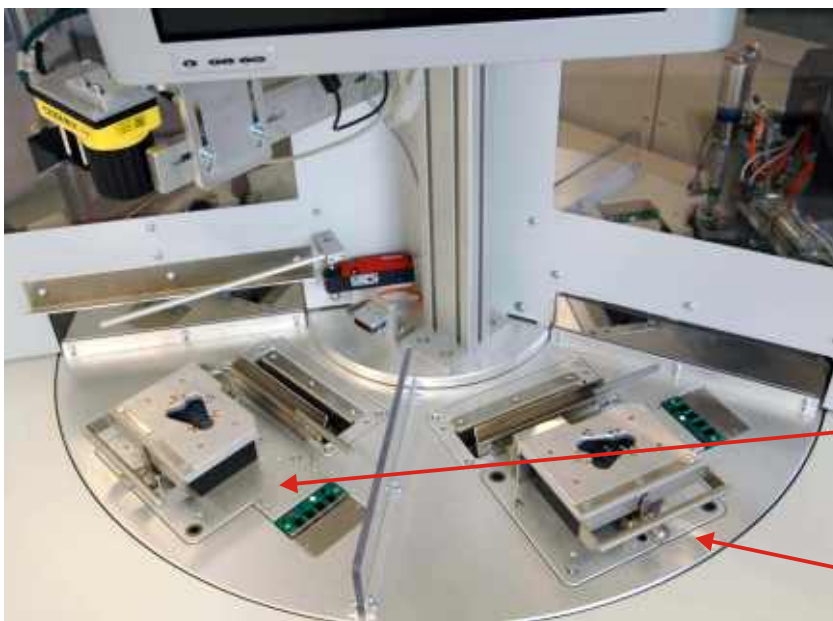
If it don't pass the test the DUT must be put on the reject part tray.
The faile-button must be operated.

→ The tray descends and the DUT slips monitored into a reject part box.

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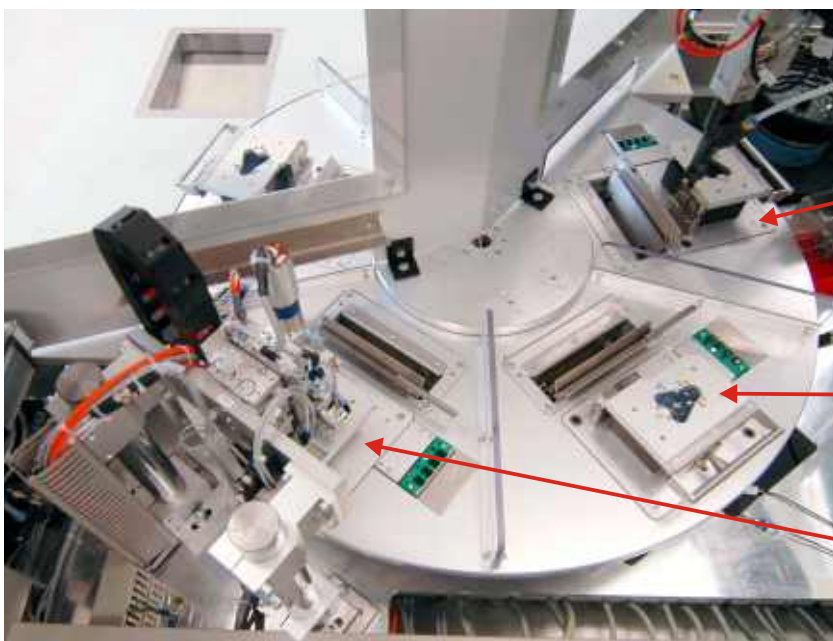
Final assembly and functional testing of antennas 13400 - 3

Rotary Table with 5 segments (Direction of rotation in the clockwise direction)



Station 1
Insertion station

Station 5
Parts-removal station



Station 2
Screwing station

Station 3
Testing station

Station 4
Bracket assembling