

Royonic®

Your reliable partner
for state of the art
solutions



THT Assembly Station ROYONIC 712

Maximize Your Productivity and Product Quality with ROYONIC Assembly Systems

Since 1977, ROYONIC has been the worldwide market leader with over 10.000 systems installed. Attention to quality, reliability and service are the primary drivers. Representing the finest in world-renown German craftsmanship, ROYONIC has become synonymous with quality.

Royonic THT Assembly Stations are designed to improve assembly productivity and quality. Supplying the correct part and prompting the operator where to install it virtually eliminates assemblies with missing or incorrectly placed components, and the subsequent cost to repair are eliminated. In addition, time studies indicate an improvement in assembly rates of up to two times better than manual assembly. Because only one bin per assembly step is presented to the operator, the correct component

value is always selected from its corresponding bin. The benefits of making the insertion process more efficient and less fatiguing results in greater profits and happier employees.

With our Model 712 users take advantage of its fast, random access feature, allowing for easy bin filling, particularly if more than one board type can be built at a single station and when there are a significant number of common parts. Without employing any program optimization the high-speed, random access feature allows to access from any bin-to-bin location in less than 4 seconds. The time savings in stocking parts directly on a 712, rather than sequentially organizing the bins, is a persuasive argument in favour of the Model 712.

Unique ergonomic design

Higher yields, productivity and profitability are certainly important, but good machine design must also take into consideration sound ergonomic principals. The patented bin delivery and light projection of the ROYONIC 712 are key factors in optimizing operator comfort. ROYONIC ergonomics are proven to enhance productivity by minimizing operator fatigue.



Light-Pattern Indication System

Shortest Bin-to-Board-Reach

Access to the component bins do not require any side reaches. The bin is always directly in front of the operator, located between the operator and the PCB being assembled. The PCB is kept in stationary, even with large PCBs, the board is directly in front of the operator, and the much shorter bin-to-board distance does not vary significantly from one insertion to another.

Minimized Eye Movement

Each component is presented directly in front of the operator under programmable control. There is no need to look away from the board. All bin delivery mechanism are designed for fast bin access, as little as 1-3 seconds, even when bin selection is random. Typically, the operator is never waiting for the next component. An adjustable footrest allows for individual operator comfort.

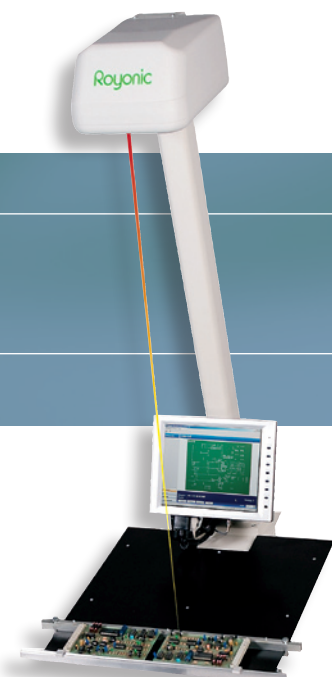
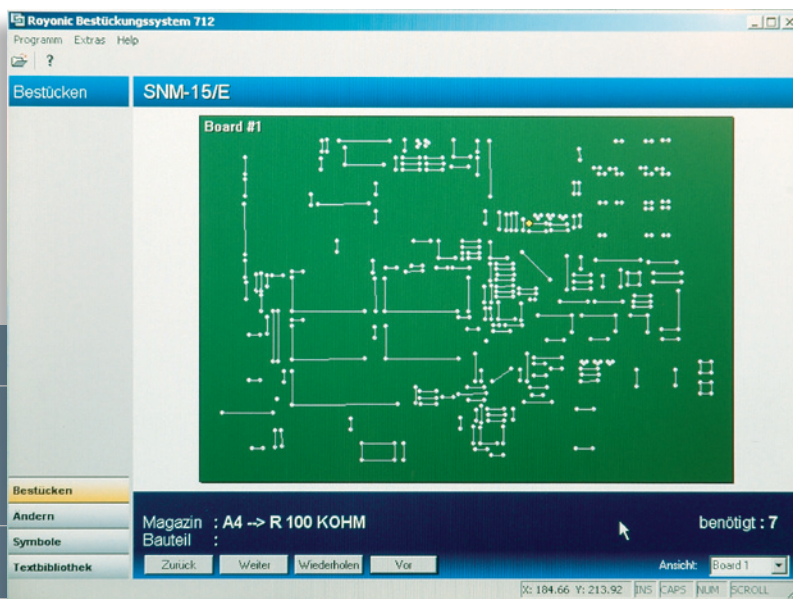
The operator can choose to sequence the next bin by either a hand-operated "nudge" bar, conveniently located directly in front of the component bin, or an optional foot switch. The PCB-fixture is mounted to an inclined rigid working area, providing rapid set up, secure positioning and alignment of the PCB.

User-friendly operation

The industry LCD monitor touch screen is designed for use in the manufacturing environment. Touch keys lead directly to the desired function. All options can be accessed with only a few keys. A password protection prevents unauthorized modifications of data. Assembly programs can be quickly generated off line, out of the assembly data or by scanning the PCB and indicating the mounting positions accordingly.

The electronically controlled Indication System provides clarity directly on the PCB. The assembly location is indicated unequivocally. Over the entire projected area of 500 x 500 mm (20 x 20"), inaccuracies are not visible. No worm-up phase, nor adjustment or calibration is required. Assembly programs run without variation on every ROYONIC system.

Under programmable control, a safe and continuous beam of white light clearly indicates the component shape and position. Lasers are only employed for special applications. The halogen light is non-scintillating and can be viewed for long periods without causing eye strain. Movement of a single light spot, along with an audible sound, traces the component shape so that the precise target can be quickly located. Polarity and pin-one orientation are shown by blinking red light. The dynamic light spot principle has been optimized based on an impressive 10.000 man-hours of testing; this transfers into fast, error free assembling.



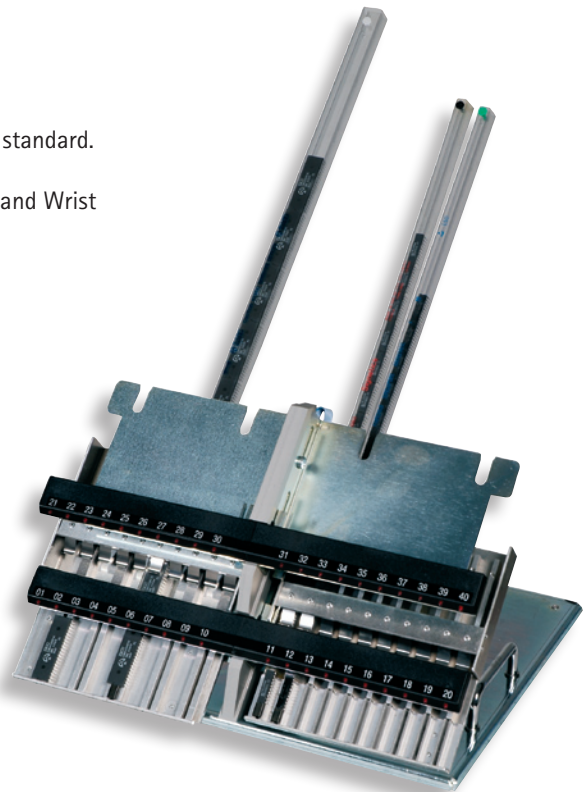
ROYONIC Patented Magazine System

All ROYONIC systems utilize the unique stackable magazine system, which expedites in-plant transport, storage, and station change-over. The bin design provides a unique pinch point bottom securing quick pick up of even the last small component.

Each magazine holds eight single component bins. For storing larger components, one double bin easily replaces two single bins, also partitions are available for dividing magazines into bins of various sizes (triple, width, etc.). The interlocking lids accommodate safe stacking in addition to providing dust-proof closure for the magazines.

712 Standard Features

- Patented Light Indication System.
- Maintenance free Bin Delivery System with high-speed, random access.
- 15 interchangeable Magazines, each consisting of eight removable Single Bins, for a total of 120 bins.
- Controller with AMD Geode LX800 processor, running under Windows Embedded XP
- Memory 1 GB Flash Disc.
- 12" LCD Monitor industry standard.
- Conductive Work Surface and Wrist Strap for ESD protection.
- Adjustable Footrest for operator comfort.
- Utility Cabinet with two lockable doors for security.
- Modular design for easy maintenance.



Technical Data

Bin capacity	
Number of single bins	120
Number of magazines	15
Magazin size W x D x H [mm]	620 x 105 x 50
Single bin size W x D x H [mm]	73 x 88 x 45

Insertion rate / access time	
Maximum assembly performance	1.600
Typical rates range from	700 – 1.000
Typical access time [sec]	< 1,5
Random access time to any bin [sec]	< 4

ESD protection / reliability	
Conductive magazines and bins	surface resistance $10^3 \Omega$ IEC93 compliant
Conductive table surface	resistance to earth according to EN1081 $< 5 \times 10^4 - 10^6 \Omega$
MTBF [h]	> 10.000

Magazines and bins are conductive and grounded during operation. The conductive table surface and a ground strap set ensure ESD-protection according to DIN51 953.

Electrical Data	
Line Voltage	85 – 240 V / 50 – 60 Hz
Power consumption	350 VA
Light source	6 V / 10 W Halogen (Laser on demand)
Dimension (W x D x H)	1.540 x 1.030 x 880 mm (60 x 40,5 x 35 ")
Weight [kg]	195

