

THERMAL SYSTEMS

# The best results for conformal coating

Perfect performance – even for small batches



ProtectoXC  
Coating



# Coating

Optimum coating processes  
even for small batches

## Protective lacquer coating with a focus on what matters most

**The upper surface of a plant's leaves is its outermost defence, not only protecting it against pests and water loss, but also helping shake off dirt or increase resistance. This is a particularly well-known characteristic of the lotus flower – water just drips right off it. This was the biological inspiration behind innovative, self-cleaning surface coatings with what is known as the “lotus effect”.**

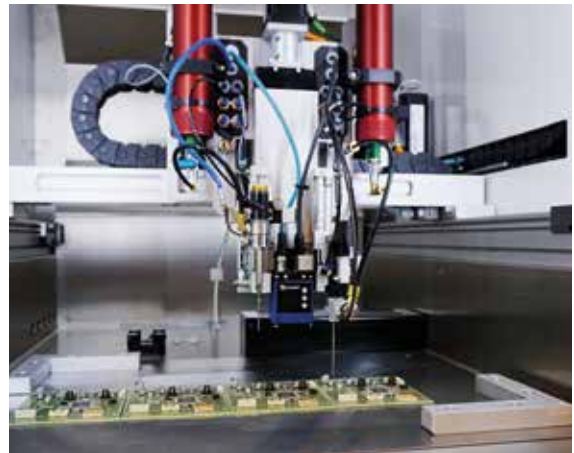
The protective lacquer coating on electronic units acts in a similar way. It is now absolutely essential to protect sensitive components from aggressive environmental influences such as moisture, corrosion, chemicals, dust or vibration. High-selectivity conformal coating is the key to ensuring electronics work reliably and is indispensable in modern manufacturing.

Rehm has expanded its product range, introducing a compact, high-performance coating system to the market in ProtectoXC. Its low investment costs make it particularly appealing to electronics manufacturers who process low throughput. The device combines precise coating with a focus on what matters most: perfect protection for your electronics.

# Material application

## Stable and precise for a great result

At the heart of the ProtectoXC is coating management working in tandem with nozzle technology. Up to two coating applicators can be used – with a wide range of possibilities. The same nozzle can be used to switch between dispensing, spraying and jetting procedures “on the fly”. Parts which are high up (up to 80 mm) or close together (up to 2,5 mm) are easy to reach thanks to the slim nozzle design. If necessary, parts can be flushed from below, ensuring that hidden ports can also be protected.



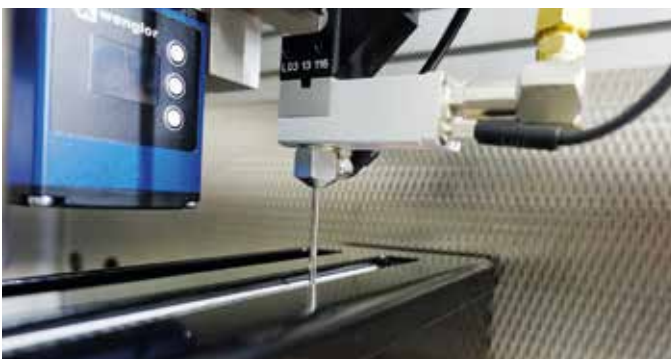
ProtectoXC with two coating applicators

### Equipped for the task

Optical tools are there to assist the user from programming right up to the coating process. For example, a fully automated independent needle-offset is recognised and corrected for every project. High-power white light LEDs provide optimum lighting for the working area. Real-time material monitoring and regulation allows coating to be handled as efficiently as possible, ensuring the right material quantity is always used at the right time and the results are repeatable.



### Cleaning and maintenance



Cleaning system: spick and span in 20 minutes

The cleaning tank protects nozzles, cables, connections and ports from drying out and automatically cleans the system during downtime, without wasting resources. This allows long processes to run without requiring maintenance. Depending on the type of material, ProtectoXC also makes long downtimes without cleaning and flushing the valves or system possible. All control elements and lacquer stocks are easy to access for the performance of maintenance tasks.

# Info and facts

## ProtectoXC at a glance



### Dimensions and axes

System dimensions (W/H/D):	1070 x 1750 x 1150 mm
Board dimensions (W/L/H):	450 x 400 x 80 mm
Batch/Inline:	yes/yes
Axis speed:	2000 mm/s
Axis acceleration:	up to 10.000 mm/s <sup>2</sup>
Max. coating speed: (depending on nozzle/valve)	up to 800 mm/s
Positioning accuracy:	± 0,08 mm

### Material and valve connections

Material/valve connections:	2 different, 1 parallel
Material container:	Cartridge 0,05 – 0,33 kg Orig. canister 5 – 25 kg
Pneumatic:	max. 6 – 8 bar

### Additional information

Required exhaust air volume:	350 m <sup>3</sup> /h
Integrated exhaust monitoring:	yes
Suction motor (ex):	Optional
Voltage:	3x 400VAC

### System

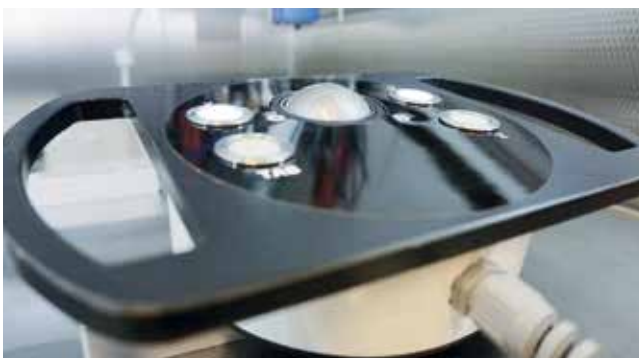
IPC and SPS: Windows-based industry PC system connected to SPS X20 module system and Powerlink connectivity to motor controller and the smart software system

## Unique and self-explanatory

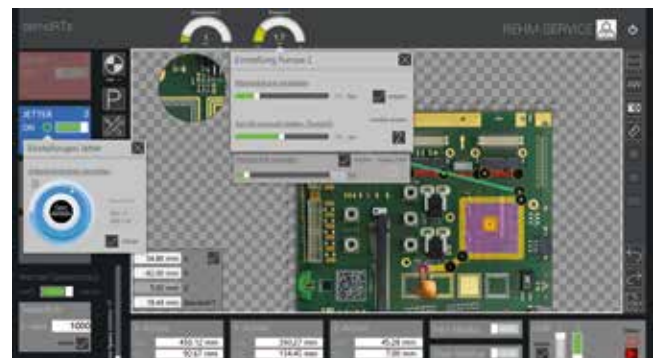
### Intuitive software operation

ProtectoXC uses touch navigation with a trackball. The modern software interface, based on Windows, is self-explanatory. The coating program monitors all user steps in real time while coating coordinates or surfaces are created. It's easy to draw on an uploaded CAD drawing or image with your finger. Zoom functions reveal any details that might

have been hidden by a finger when moving coordinate lines. Offline programming or maintenance from a remote workplace, completely disconnected from the Internet, are also an option. Processes can be easily tracked as all unit details entered are saved in lockfiles and clearly assigned with barcode connectivity.



Practical axis control and 3D interpolation using the high-resolution trackball, making mouse and keyboard a thing of the past



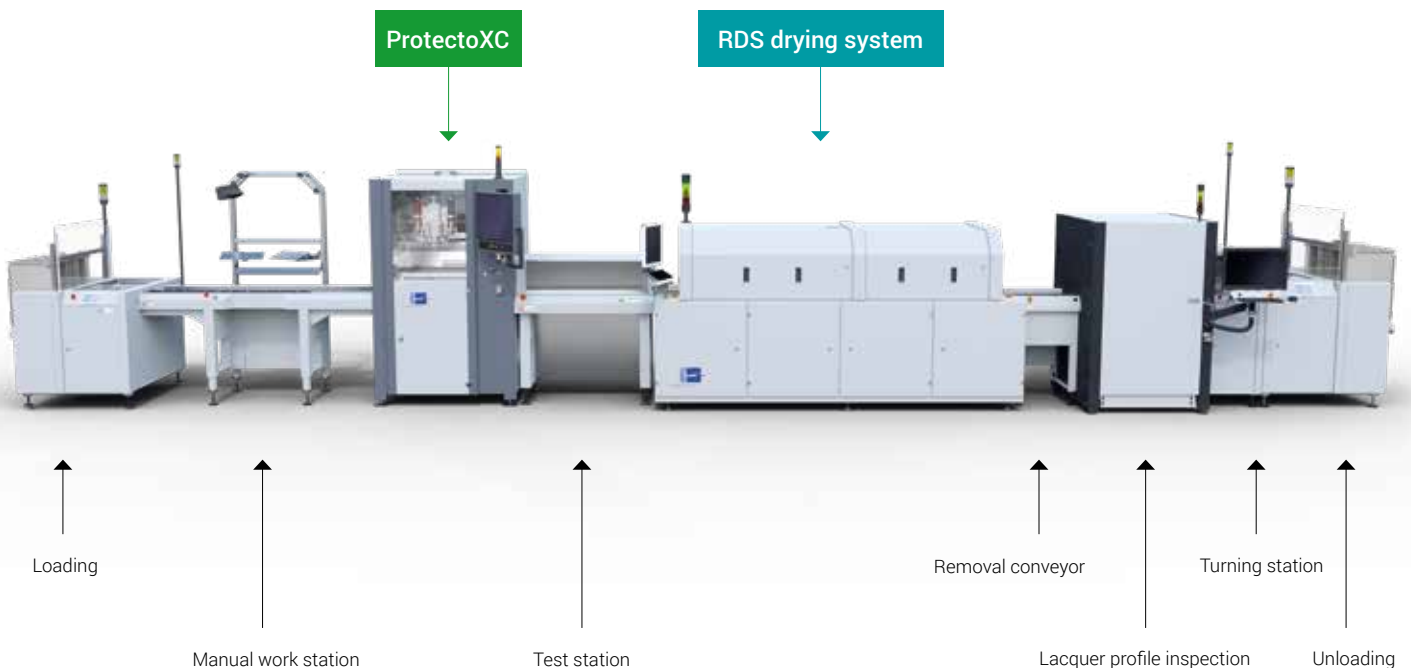
Touchscreen design for quick and intuitive operation of the software interface – as easy as drawing on a smartphone



# Strong process performance even with low throughput

Are you looking for a high-performance facility that can be smoothly integrated into small production spaces, perfectly suited for coating small batches and requiring only manageable investment costs? ProtectoXC can meet all of these requirements. The compact system fits neatly into any production environment – whether batch system or inline. Users can carry out dispensing, spraying and jetting procedures with its two applicators. Circuit boards measuring up to 450 x 400 mm can be handled quickly and easily. With its innovative

cleaning system, the device is also very easy to maintain. But it's not only ProtectoXC's technical aspects that are impressive – with its excellent finish and design, it looks great, too. In the development process, we took care to ensure that the system stood out with its modern design, made working fun for the user with its intuitive controls, but also provided steadfast protection for high-quality circuit boards. The software design is also impressive with a modern, structured layout and touch surface, helping to make day-to-day production easier.



- > **Reliable coating process, even for low throughput**
- > **Compact unit, easily integrated with batch or line production**
- > **Modern software with touch operation and 3D trackball**
- > **Barcode connectivity and optimum process documentation**
- > **Low investment costs, top process performance**
- > **Easy to maintain with its smart cleaning system**



THERMAL SYSTEMS



January 2018. Technical changes without prior notice. Art. No. 1166940

## Rehm Worldwide

As a leading manufacturer of innovative thermal system solutions we have customers on every continent. With our own locations in Europe, America and Asia as well as 27 agencies in 24 countries we are able to serve the international markets quickly and to offer outstanding on-site service – worldwide and round the clock!

- Location
- Production facility
- Representation



### Rehm Thermal Systems GmbH

Leinenstrasse 7  
89143 Blaubeuren, Germany

T +49 73 44 - 96 06 0 | F +49 73 44 - 96 06 525  
info@rehm-group.com | www.rehm-group.com

