

THERMAL SYSTEMS

Innovation in UV applications

Rehm's UV dryer successfully transforms demanding processes



RDS UV
Drying | Hardening



Drying | Hardening

Optimal protection
for sensitive components

Cure UV coatings and adhesives reliably with innovative equipment from Rehm

UV coatings and adhesives can be hardened within just a matter of seconds. This shortens cycle times, increases production speeds, and combines environmental with economic benefits. In addition, UV coatings also offer qualitative advantages, such as higher gloss levels and improved durability and scratch resistance on a coating surface. It is no wonder that UV coatings are becoming more frequently used in production by the electronics industry.

Decreasing coating cycle times now require hardening times to be shorter. This can be achieved through the use of a UV curing system. Rehm Thermal Systems has responded to this trend by developing the new RDS UV, a compact dryer designed specifically for hardening UV coatings and adhesives. UV coatings do not contain any solvents, which means that they are particularly easy to work with and environmentally friendly. UV coatings are becoming more frequently used as corrosion protection for musical instruments, electronic components in the automotive industry as well as the cosmetic and household electronics industries. With the RDS UV, Rehm offers a flexible and reliable drying system that causes UV coatings to harden within seconds. Thanks to its adjustable exhaust flow rate and short heating phase, the system is immediately ready for use after switching it on and much more energy-efficient than other comparable systems. By using a higher coating thickness, you can ensure the highest level of protection for your circuit boards and achieve the highest quality possible.

Compact and high in quality

The new RDS UV curing system

Applying a protective coating improves the reliability and lifespan of your products. The coating improves your components' surface insulation resistance and protects electronic components from aggressive environmental influences. Rehm has developed an innovative UV dryer for curing

all types of UV coating and adhesives. Depending on the material requirement, the system is available with UV curing lamps with either medium-pressure mercury lamps or UV LED lamps. Thanks to its compact design, the system can be adapted to suit any production environment.



- › Stable process for reliable results
- › Quick hardening within seconds
- › Optimal application of energy due to energy source adjustable in height
- › Light sources with specific wavelengths and long life
- › Low energy consumption in standby mode
- › Low maintenance

Technical details

Overview of the RDS UV

The RDS UV system can be equipped with different lamps to suit the customer's requirements. The following lamps are available: medium-pressure undoped mercury lamps, doped UV lamps, UV LED arrays, and special lamps that emit specific light spectrums. Lamps can be installed above

and/or below the conveyor. Depending on the required conveyor width, the system can also be equipped with lamps of different lengths. This offers the highest possible level of flexibility and makes production efficient and cost-effective.

Medium-pressure mercury lamps

The standard RDS UV system is equipped with medium-pressure undoped mercury lamps. The lamps have a lifespan of over 8,000 hours. The distance between the conveyor and the lamps can be freely adjusted from 50 mm to 100 mm.

- › **High power density**
- › **Suitable for continuous operation**
- › **Low energy consumption in standby mode**
- › **Quick start-up from standby mode**



High-performance lamps in the RDS UV system dry all types of UV coating

UV LED arrays



UV LED arrays

Depending on the type of material to be cured, the system can also be configured with UV LED arrays with integrated air-cooling for the LEDs. The UV LED arrays have an average lifespan of around 20,000 hours (the manufacturer guarantees a 10,000 hours lifespan). As a cold light source, the LED arrays are particularly suitable for use on sensitive materials.

- › **Homogeneous distribution of light density**
- › **Stable light output at constant high levels, even when working distance varies**
- › **Encapsulation protects LEDs from dust and dirt**
- › **Low maintenance and replacement part costs**
- › **No warm-up time required and high availability**

Facts and figures

Detail information on the RDS UV



Dimensions

Length incl. inlet and outlet:	1990 mm
Width:	1275 mm
Height:	2175 mm

Exhaust air

Exhaust volume flow rate:	max. 1200 m ³ /h
Pressure:	5 mbar

Conveyor

Conveyor height:	950 mm ± 50 mm
Conveyor width:	80 – 480 mm
Speed:	30 – 3000 mm/min.
Clearance above/below:	100 mm
Max. component clearance:	± 100 mm

Conveyor



Able to process circuit boards with tall components without any problems

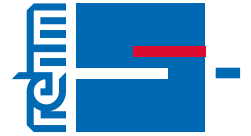
The standard RDS UV system is equipped with a pin-chain conveyor system. The conveyor system can be adjusted to suit your components, regardless of the geometry of circuit boards. The conveyor's tracks and speed are also fully adjustable.

- › **Secure, stable conveyor system**
- › **Adjustable conveyor height +/- 100 mm**
- › **Conveyor width 80 – 480 mm**
- › **Quick start-up from standby mode**
- › **Safety sluices in inlet/outlet**

Easy maintenance

Our RDS UV system is highly accessible for minimum maintenance effort. The system casing and the dryer's doors can be opened. All electronic and mechanical components on the back of the system are neatly arranged, which allows for easy maintenance.

low 
maintenance
expenses



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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



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