LED-UV / UV / IR

PRODUCTS AND APPLICATIONS

High-performance units and systems for curing inks, varnishes, adhesives and sealants and for disinfection

Components and spare parts for UV and IRsystems, manufactured inhouse

- LED-UV units / LED-UV systems
- UV systems / UV units
- UV disinfection systems
- Inert UV systems
- IR / IR hotair units
- LED-UV/ UV measuring
- Electronic power supplies
- UV and IR lamps
- Reflectors

HOENLE **UNITS / SYSTEME**

LED-UV UNITS AND SYSTEMS

LED Powerline series: high-performance arrays for printing and bonding applications

LED Powerline Focus: focused UV irradiation

jetCURE LED: for curing inks and varnishes at inkjet printing, for curing adhesives & sealants

bluepoint LED eco: point source with up to four LED-heads

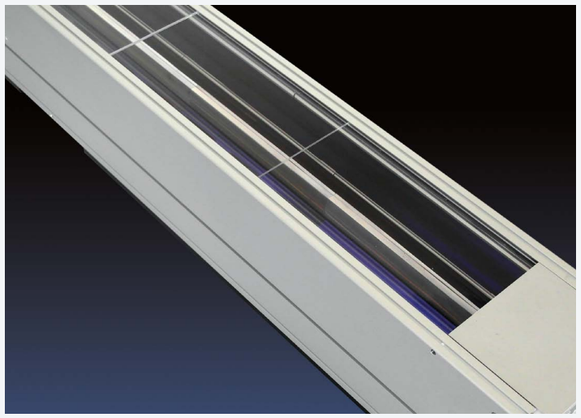
LED Power Pen 2.0: handy point source

LED Spot 40 IC / 100 (HP) IC / 200 HP IC:
UV flood unit (40 x 40 / 100 x 100 / 200 x 50 mm)

LED Spot W: water-cooled, compact, clean room compatible

UVAHAND LED: LED-UV hand lamp

LEDLINE 500: mobile line arrayLEDLINE 500: mobile line array



UV PLANTS / UV SYSTEMS / UV UNITS

UVAPRINT: product series for UV printing and UV coating

pureUV: prevents direct irradiation on the substrate

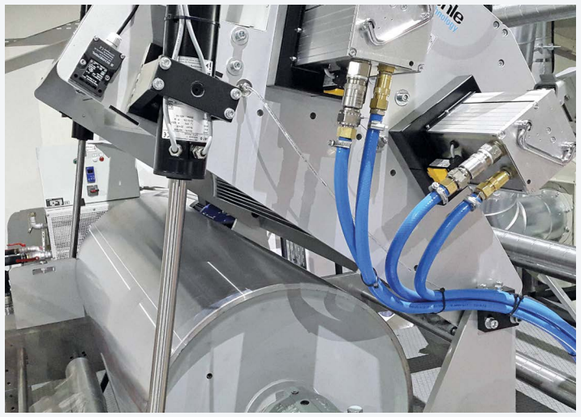
jetCURE UV: especially for large-format inkjet printing

bluepoint: UV point source for curing adhesives and sealants

UVACUBE: UV irradiation chamber, especially for lab use

UVASPOT: UV flood unit with modular design for variable use

UVAHAND: mobile hand lamp, for a variety of applications



INERT UV SYSTEMS

A wide range of inert UV chambers:

Hoenle has got years of experience in the field of inertization. We use this know-how when it comes to optimizing an inert system according to our customers' demands.
This results in excellent product quality at optimized investment and operating costs.

Our tried and tested product series for UV curing work – according to the application – with different arc lengths.
They offer a continuously adjustable power control and can be supplied with all standard as well as customized spectra.

UV DISINFECTION SYSTEMS

Surface disinfection with UVC irradiation – a reliable and eco-friendly alternative to chemical processes.

The disinfection unit UVATEC with CAD-optimized reflector geometrics allows highest possible UV intensities.
This guarantees a very safe effectiveness of microorganism destruction. Even highly resistant microorganisms can be destroyed within a split second.

A compact, slim design and an extremely high power output make it possible to adapt UVATEC to different requirements.

IR & IR / HOTAIR UNITS

jetCURE IR is an air-cooled IR module for drying water-based inks and coatings. According to the application, it can be operated as a pure IR dryer or an IR/ hotair dryer.

The module can be equipped with short or medium wave IR lamps, a combination of different wavelengths, including NIR, is possible. Thus, jetCURE IR can be flexibly applied for various drying tasks.

Unique about jetCURE IR is the possibility to change it – fast and easily – from a pure IR to an IR / hotair dryer.

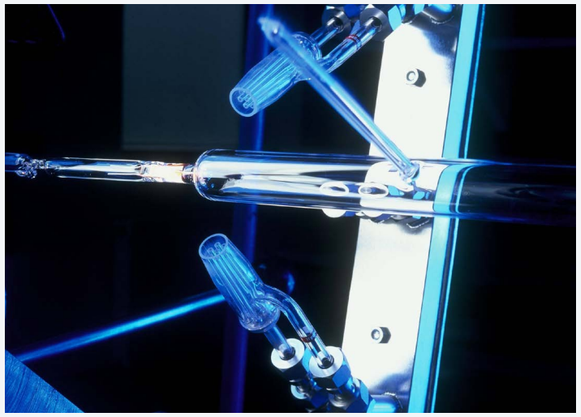
UV MEASURING TECHNOLOGY

The Hoenle UV-Meter with application-optimized sensors measures exact data that is traceable to the German standard PTB (Physikalisch Technische Bundesanstalt). Different

sensors cover wavelengths from 230 nm to 550 nm – UVC, UVB, UVA and VIS. Special LED sensors have been developed for LED-UV systems.

According to its wide range of interchangeable sensors UV-Meter is suitable for different manufacturing processes. Its compact surface sensors are only 14 mm high. Also for point sources special sensors are available.

HOENLE **UNITS / SYSTEME**



UV LAMPS / IR LAMPS

Our UV lamps have got an excellent power output and an improved endurance. In addition to lamps with all standard spectra, we also offer customized spectra which makes it possible to develop new or to optimize conventional processes.

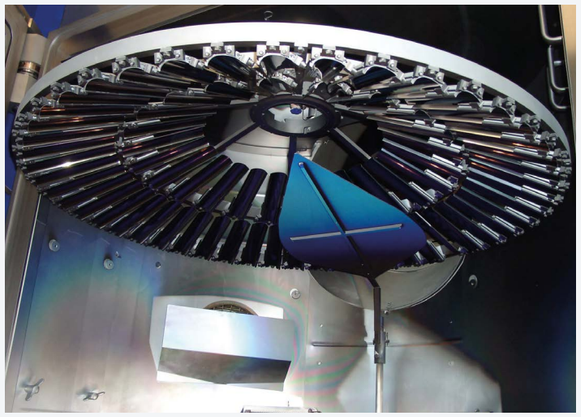
Infrared lamps (IR lamps): We develop and manufacture IR lamps in different versions and wavelengths for industrial drying and heating processes. Apart from standard designs, we also offer customized versions in varying designs.

ELECTRONIC POWER SUPPLIES

We offer a series of compact electronic power supplies for UV discharge lamps with a maximum power of up to 40 kW. In addition to UV lamps, electronic power supplies are counted among the main key components of an UV system. Our EPSA are available in different versions to cover a wide range of applications.

The EPSA are supplied with an integrated continuously variable power control.

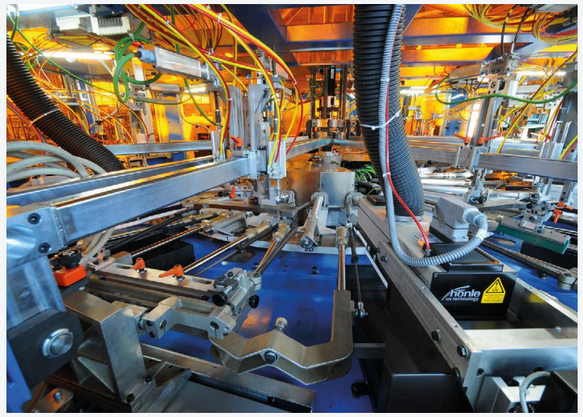
Installation effort maintenance are minimized by using pluggable connections.



REFLECTORS

The deeper secret of many UV systems lies in the usage of their reflectors. Depending on lamp position and reflector geometrics, the reflected UV irradiation can be spread widely or can be concentrated.

Special reflectors are necessary when it comes to temperature-sensitive substrates: Dichroitic reflectors (cold mirror) are designed for highly intensive UV irradiation with a simultaneous reduction of infrared radiation. This guarantees an excellent curing at a low temperature load.

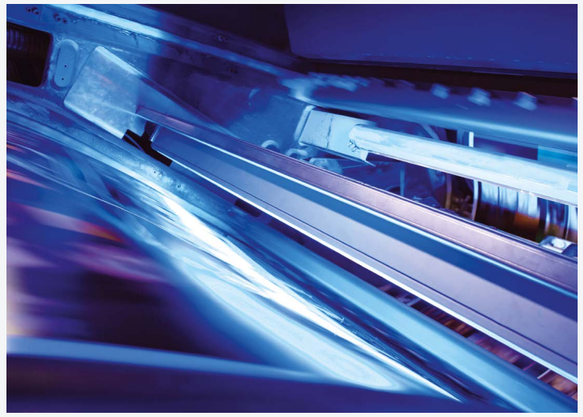


3-D PRINTING

A speciality within the printing industry is printing on 3-D objects or 3 -D components. This process results in individual and high-end products, especially when it comes to inkjet printing.

The partially irregular surfaces of the substrate make it essential to distribute the high UV irradiation, which is needed for a reliable curing, uniformly and independently of the distance to the substrate.

Common printing applications for 3-D printing are: inkjet printing, offset printing, screen printing and pad printing.



PRINTING

As diverse as the printing applications, as diverse and individual are the LED-UV curing systems and IR drying systems offered by Hoenle.

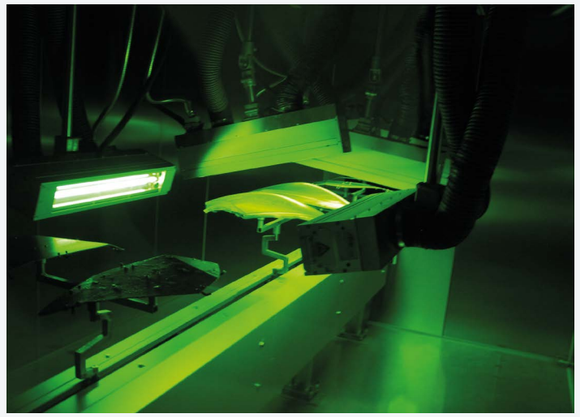
As a system provider with a high vertical range of manufacture, which includes the production of all key components, we offer curing and drying systems for all printing applications, e.g. sheetfed printing, web printing, inkjet printing, flexo printing, tin printing, pad printing or screen printing.

COATING / FINISHING

The characteristics of UV-reactive coatings, namely scratch resistance, abrasion resistance and chemical resistance, in combination with different, even temperature-sensitive substrates allow a multitude of – often challenging – applications. It is possible to coat foils, substrates of diverse materials and printed surfaces..

We always supply the perfect UV curing system for each coating or finishing application. Prerequisite is an individual, applications-oriented advice which usually leads to a customized solution.

HOENLE **UNITS / SYSTEME**



3-D COATING

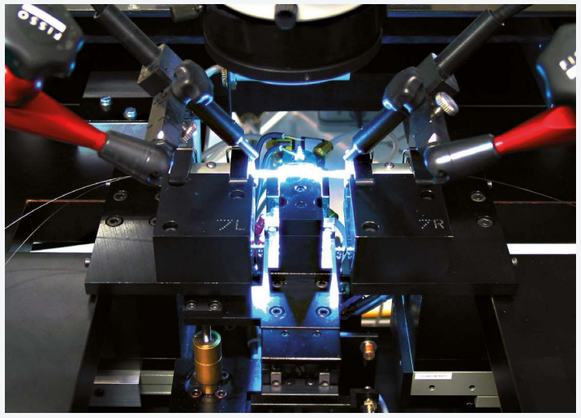
Dipping, flowing, spraying, doctor-knifing, rolling – all these are conventional coating applications for 3-D objects where our UV curing systems are used.
On the picture: UV-coating of car headlamps.

The coating, which for example is used as a protective layer for three-dimensional objects, has got a high degree of cross-linking when cured with UV irradiation. Thus, it offers an excellent mechanical and chemical resistance.

UVC DISINFECTION

UV discharge lamps have got a comparatively high content of short-waved UV irradiation (UVC) which makes them perfectly apt for germ reduction. The DNA of the germ is damaged which prevents their spreading. The disinfection rate is > 99,9%. This disinfection process enhances the shelf life of food significantly.

UVC disinfection is mainly applied in the packaging industry, especially in the segments dairy and beverage.



BONDING / POTTING / SEALING

The UV technology offers many possibilities to reliably join components or protect them from environmental influences (e.g. dirt, humidity).

Electronics, optics / opto-electronics, glass, medical engineering, plastics and automotive – these are only few markets where UV technology is successfully applied.

UV / LED-UV curing systems by Hoenle and the adhesives by Panacol are perfectly matched to each other. Combined they are strong and high-tech bonding systems which lead to fast and reliable bonding results.

CONVERTING

UV-reactive substances like protective and embossing lacquers, release silicones or PSA adhesives are applied using a wide variety of processes.

Flexo printing, offset printing, curtain coating, spray, inkjet and screen printing are used.

The UV curing process is coordinated by the choice of a suitable lamp spectrum and the UV energy (intensity/dose).

UV SCAN MACS

The UV Scan MACS measurement system provides accurate and reproducible UV dose measurement for laboratories and industrial applications. Its patented technology combines photophysics and optics, ensuring maximum reliability and user-friendly operation.

The use of the UV Scan MACS guarantees process reliability and product quality, significantly reducing material waste.

For more information about our complete product range, please see the regarding product flyers on www.hoenle.com.

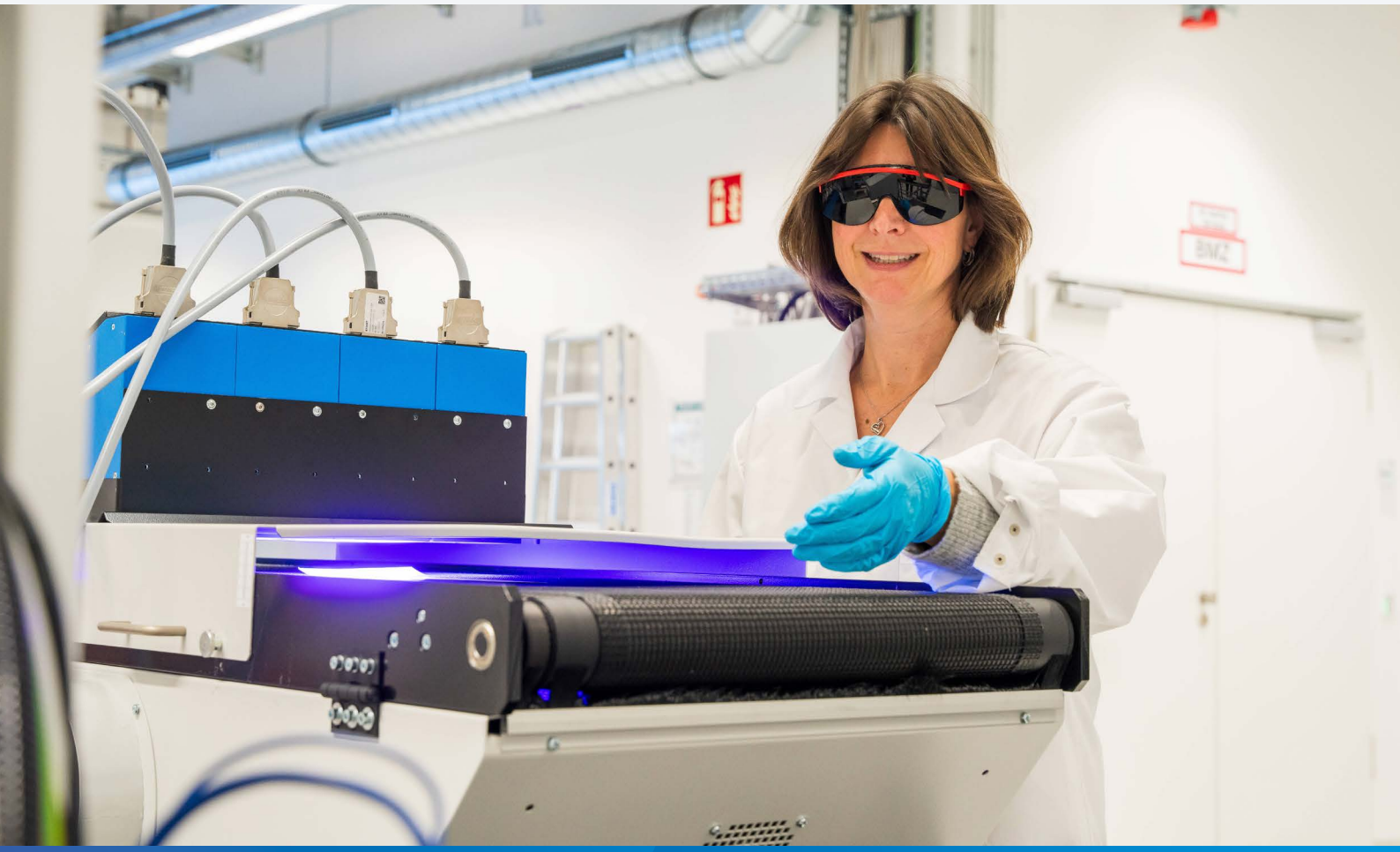
APPLICATION LABORATORY / CONSULTING

FROM CONCEPT TO IMPLEMENTATION AND FAR BEYOND.

We listen because each application and process presents unique challenges. We understand our customers and translate their needs into top-notch products and adhesives, thanks to our high competence and expertise.

We develop and manufacture the best solution, also due to our unique depth of production. For our key components of our drying systems, this means: From UV lamps and reflectors to our own LED assembly, from electronic power supply units to control cabinets, we manufacture everything in-house, and that differentiates us from others. This provides our customers with maximum flexibility and the highest quality standard.

We create innovation and value — for your application, your process, people, and the environment.



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