



## UV light for clean air Safe disinfection for buildings with HVAC systems

Clean, fresh air is a vital requirement for people and animals. Air which is largely germ free is necessary not only in the industrial environment, but also in heavily-frequented areas such as airports, hospitals, doctor's surgeries, shopping centres, cinemas and theatres.

UV radiation ensures healthy air with a low germ content, and improves the hygiene and storage conditions in the pharmaceutical and food processing industries. Here the micro-organisms present in the air, such as viruses, bacteria, yeasts and moulds, can contaminate raw materials and spoil foodstuffs.

UV radiation reliably reduces the germ content in the air.

Short-wave UV radiation in particular has a high bactericide effect. The DNA of micro-organisms absorbs UV radiation which destroys the cell structure, thus inactivating the micro-organism.

For processing, packaging and storage areas and large production areas it is most efficient to disinfect germ contaminated air in the supply air ducts. The ozone-producing radiation (VUV) is filtered out by the special quartz glass of the lamp tube.

This process fulfills the hygiene requirements of RLT-systems (VDI 6022)

## UV light and its application areas

UV light at the wavelength range of 254 nm disinfects, destroying the DNA of organisms such as bacteria, viruses or moulds rendering them harmless. UV lamps from Heraeus Noblelight are used for air purification in:

- The food processing and pharmaceutical industries
- Hospitals, doctors' practices, laboratories, clean rooms and storage rooms, offices with and without airconditioning systems, heavily-frequented areas such as airports, cinemas, etc.
- Livestock stables
- HVAC systems, e.g. disinfection of cooling coils and filters in air ducts of air conditioning systems



Example of a system for the sterilization of a ventilation system

## The advantages of Heraeus UV lamps

- Safe, reliable disinfection of rooms
- Protection against germs and pathogens
- High-performance lamp technology: optimised yield of 254 nm UVC radiation (highly disinfectant)
- The small space requirement allows easy retrofitting into existing ventilation systems
- Easy handling
- Up to 16,000 operating hours
- Chemical-free and therefore environmentally friendly
- Computer-aided calculation of UVC dose possible

## Installation instructions for optimum design

Air cleaning requires individual UV treatment, since the type and degree of contamination vary from case to case. The design of the special UV lamps depends on the exhaust air volume and speed, the temperature and the type or utilisation level of the exhaust air duct.

Lamp name	Electrical power	Lamp length	Power density	Ambient temperature	Application	Diameter
NNI 120/86 XL	150 W	878 mm	~ 2 W/cm	20–40 °C	Air, Water, Surface	15 mm
NNI 201/107 XL	200 W	1145 mm	~ 2 W/cm	20–40 °C	Air, Water, Surface	19 mm
NNI 300/147 XL	300 W	1554 mm	~ 2 W/cm	20–40 °C	Air, Water, Surface	19 mm
NNI 400/147 XL	400 W	1555 mm	~ 3 W/cm	20–40 °C	Air, Water, Surface	32 mm
NNI 600/120 XL	600 W	1200 mm	~ 5 W/cm	20–40 °C	Air, Surface	38 mm
NNI 800/147 XL	800 W	1554 mm	~ 5 W/cm	20–40 °C	Air, Surface	38 mm

Heraeus Noblelight offers the perfect UV lamp for your special application.

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