



Vacuum UV lamps for treating exhaust air from kitchens Low pressure lamps from Heraeus Noblelight

The use of fats and oils, particularly in large kitchens, leads to unpleasant odours and deposits in canopies and ductworks. Grease filter remove only up to 95% of the fat carried along in the exhaust air flow. The remaining fat is deposited inside the hood or exhaust duct, creating a high fire risk.

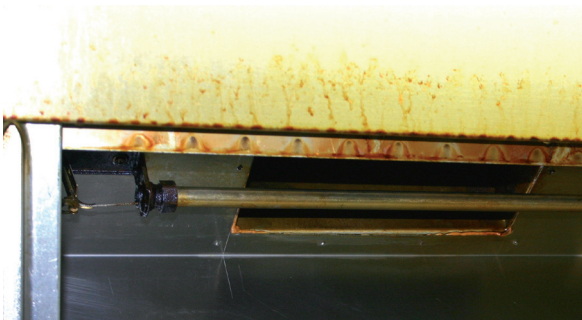
Heraeus Noblelight, a manufacturer of special light sources, offers vacuum UV emitters (VUV emitters) for the secondary treatment of aerosols and aerosolates in kitchen exhaust hoods. Heraeus vacuum UV lamps in the wavelength range of 185 nm photolyse, neutralise and destroy the molecules of fats and odours.

At the same time, the vacuum UV radiation produces ozone from the oxygen in the air of the lamp. This subsequently decays into excited oxygen, which has a sustained oxidising effect in the ductwork, and keeps the duct clean, thereby minimising cleaning and service costs. High-performance VUV lamps from Heraeus Noblelight remain extremely effective even at ambient temperatures of up to 80 °C. Their long service life of up to 10,000 operating hours* minimises the service intervals. Instead of a cassette with 4-6 low-pressure emitters, only one single vacuum UV lamp from Heraeus Noblelight is now required.

* 80% of the original UV output measured under laboratory conditions

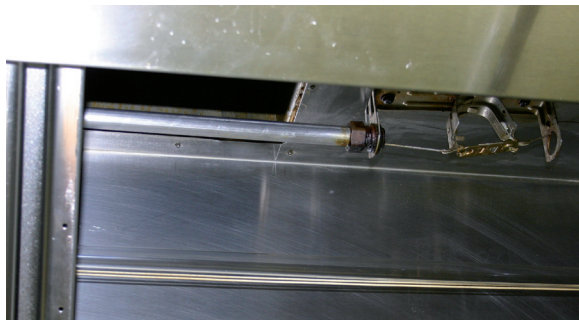
Variety of Heraeus UV lamps

Lamp type	Ambient temperature	Total length
NAQ 170 / 90 XL	20° – 40° C	900 mm
NIQ 170 / 90 XL	40° – 80° C	900 mm
NAQ 200/120XL	20° – 40° C	1200 mm
NIQ 200 / 120 XL	40° – 80° C	1200 mm
NAQ 290 / 155 XL	20° – 40° C	1554 mm
NIQ 290 / 155 XL	40° – 80° C	1554 mm



Advantages of the VUV emitters from Heraeus Noblelight

- **Space-saving:** 1 lamp instead of the common UV lamp cassette with 4–6 low pressure lamps
- **Service life:** up to 10,000 h thanks to the new Longlife coating
- **Ambient temperature:** can be up to 80°C
- **Simple handling:** just 1 power supply and 2 spring clamps per lamp are required
- **Safety:** fire hazard reduced
- **Cleaning:** lamp could easily wiped down with a damp cloth



Kitchen hood exhaust air duct at Heraeus: before (left) and 3,000 h after (right) the installation of a Heraeus UV lamp

Comparison between vacuum UV lamp and common lamp cassette

	Heraeus VUV lamp	Common UV lamp cassette	Heraeus VUV lamp	Common UV lamp cassette
Flowrate	1500 m ³ / h = 885 cfm	1500 m ³ / h = 885 cfm	2200 m ³ / h = 1300 cfm	2200 m ³ / h = 1300 cfm
Number of lamps	1	4	1	4
Lamp length	ca. 900 mm	ca. 900 mm	ca. 1550 mm	ca. 1600 mm
Electrical power	160 W	156 W (jewels 39 W)	290 W	316 W (jewels 79 W)
VUV radiation generated	14,4 W (9 %)	9,3 W (6 %)	27,0 W (9 %)	18,9 W (6 %)
Service life	10.000 h	5.000 h	10.000 h	5.000 h
Ambient temperature	20° – 80° C	20° – 45° C	20° – 80° C	20° – 45° C

Information supplied without guarantee

General and safety-related notes

UV lamps should be installed only by qualified specialist personnel.

The number of UV lamps depends on exhaust air volumes, the type of cuisine (vegetable/animal, cooking/grilling) and the level of use of the kitchen (fat load/fat type). Canopies or grease filters fitted with UV lamps must be specially marked. Warning sign W 09 „Beware of optical rays“ in accordance with BGV A8 must be attached.

Please read our installation instructions!

Standard DIN 18869-7, Annex A, regulates the operation of UV systems for aerosol and aerosolate treatment in kitchens and in the food-processing industry. Annex A 6.4 with notes about protection against UV radiation must be particularly heeded and observed.



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