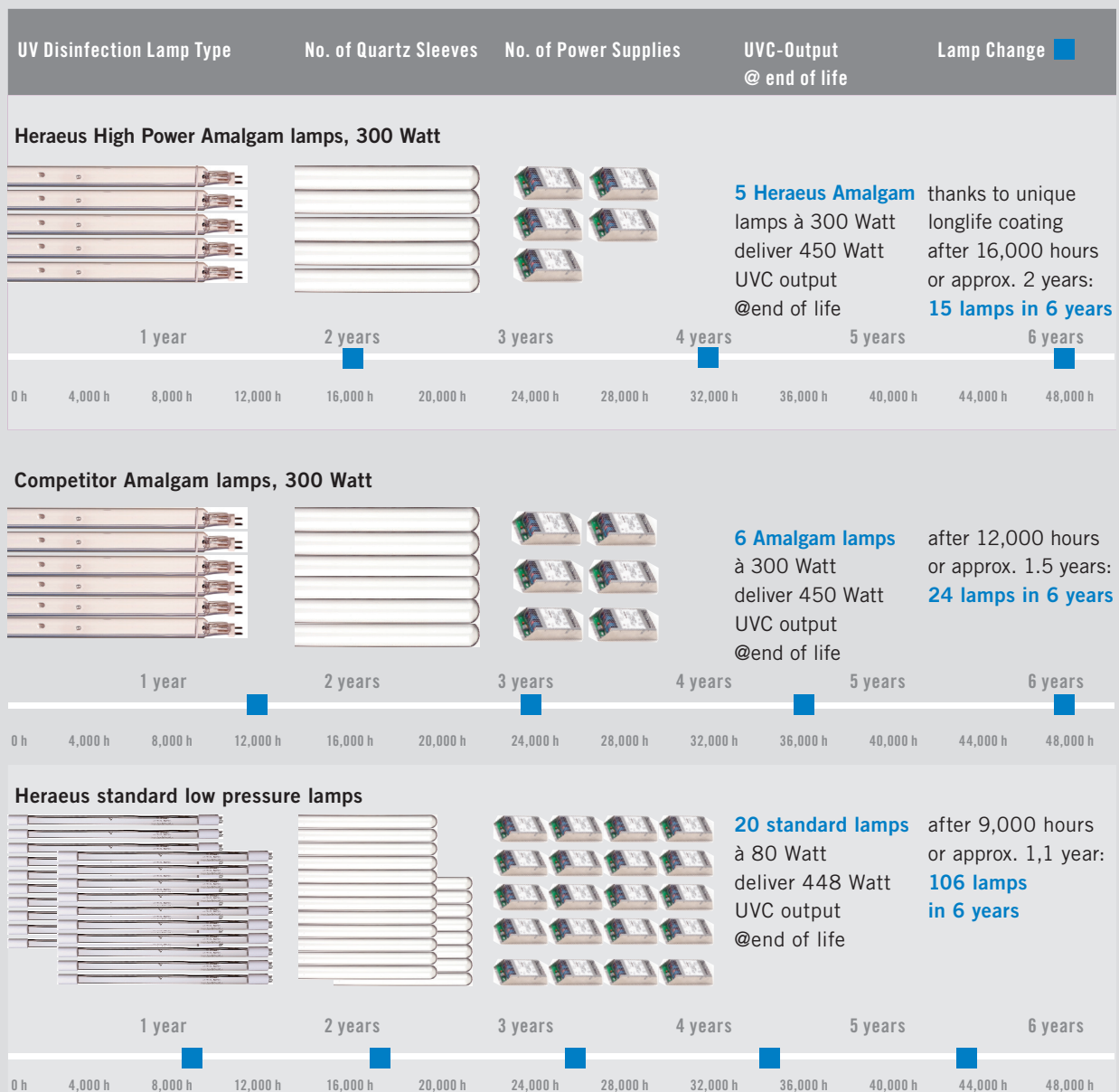


Design for economic efficiency with superior Heraeus Amalgam Lamps

Heraeus Amalgam lamps offer great potential for savings in number of lamps, system components, energy consumption and service intervals - while significantly reducing the operating costs of disinfection systems.

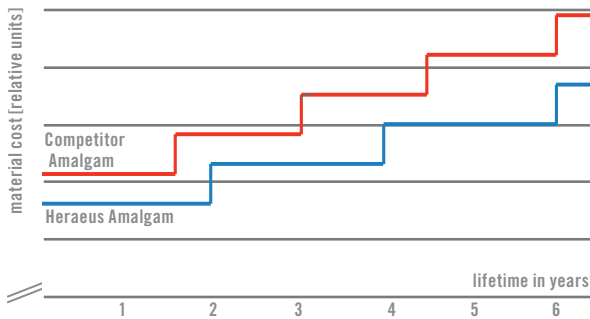
The comparison shows different lamp types and their consumption over six years. Based on the same demand for UVC output, different numbers of lamps and accessory parts are needed.



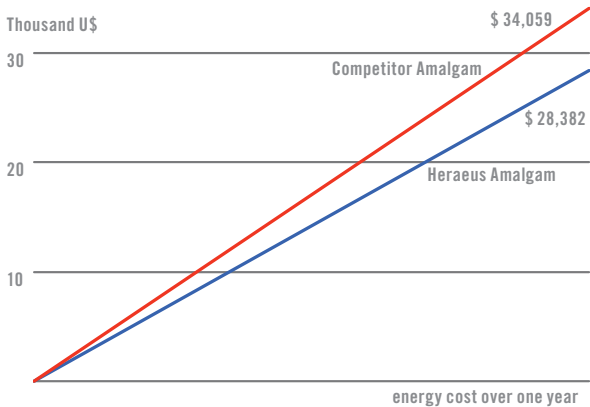
Data for Comparisons

Lamp Type	Heraeus Amalgam Lamp	Competitor Amalgam Lamp	Heraeus Standard LP Lamp
Lamp change after	16,000 hours	12,000 hours	9,000 hours
Initial UVC efficiency	35 %	31 %	40 %
UVC efficiency @ end of life	30 %	25 %	28 %

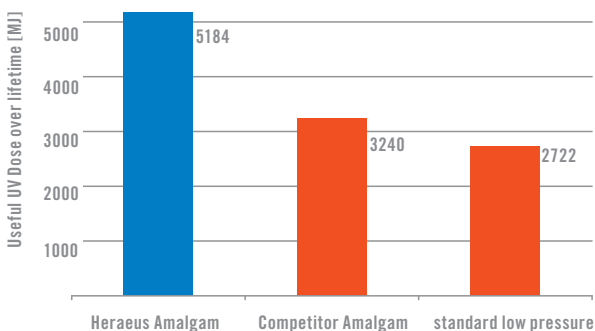
Material Cost Comparison (incl. reactor)



Energy Cost Comparison



Useful UV dose over lifetime



Material cost can be reduced by significant savings in the numbers of lamps used over the lifecycle of the reactor system. Thanks to the high efficiency of Heraeus Amalgam lamps, especially at the end of life, great savings in number of lamps can be realized. Consequently fewer system components like sleeves, ballasts and wipers as well as less stainless steel, due to more compact reactor designs, are required.

With their unique longlife coating these Heraeus lamps can be used up to 16,000 hours and only three lamp changes are necessary in six years of operation.

Energy saving can be realized by using Heraeus Amalgam lamps. Reactor systems can be designed with reduced number of lamps thanks to the higher efficiency of Heraeus lamps:

- 180 Heraeus lamps à 300 Watt with 35 % efficiency; efficiency @ end of lamplife: 30 %
- 216 competitor lamps à 300 Watt with 31 % efficiency; efficiency @ end of lamplife: 25 %

The energy cost comparison is based on 0.06 U\$ per kWh and 8,760 operation hours/year. Thus 5,676 U\$ energy costs can be saved per year.

The **useful UV dose** is defined as the UVC-output at end of lifetime multiplied by time to lamp change. The calculation is based on a 300 Watt lamp using the above mentioned lifetime and efficiency values.

Heraeus Noblelight GmbH

Heraeusstraße 12-14
63450 Hanau, Germany
Phone +49 6181 35-8492
Telefax +49 6181 35-9926
hng-disinfection@heraeus.com
www.heraeus-noblelight.com/disinfection

Technical data are subject to change.

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