

**Hanovia**

the power in UV technology



The next level of Pharma disinfection –  
guaranteed by Hanovia

**PharmaLine**

Performance  
Qualified  
Disinfection



## PharmaLine PQ - disinfection has evolved, and we can prove it

Designed by Hanovia - world leaders in UV technology - using the most advanced CFD computing. Tested to the limit. Validated and Performance Qualified - it's no wonder PharmaLine PQ is guaranteed to give you the ultimate process security.

This is Pharma process water disinfection taken to the next level: in fact, our most rigorously developed and tested products ever created for Pharma. And because PQ means 'Performance Qualified', you don't have to take our word for it.

We meet the standards that the best demand. Standards enforced/applied by external experts determined to ensure Pharma enjoys the most reliable, effective, complete disinfection. So, if they say you can rely on us, you really can be sure of total peace of mind.

## Unique UV sensor with transmittance compensation

With Hanovia, rigorous quality comes as standard. But Hanovia has always believed in developing newer, better solutions. PharmaLine PQ is no exception.

The system provides accurate dose delivery, without the need for an external UV transmittance input. Performance qualified to deliver the disinfection security you need – guaranteed.

## Patented Dry UV sensor housing

The factory-calibrated dry UV sensor is simply a cut above. It provides absolute UV intensity monitoring in real-time, and because it remains outside the water flow it can be removed and inspected without interrupting your processes. The patented design allows verification using a portable reference UV sensor with no risk of harmful UV exposure or need to wear safety equipment.

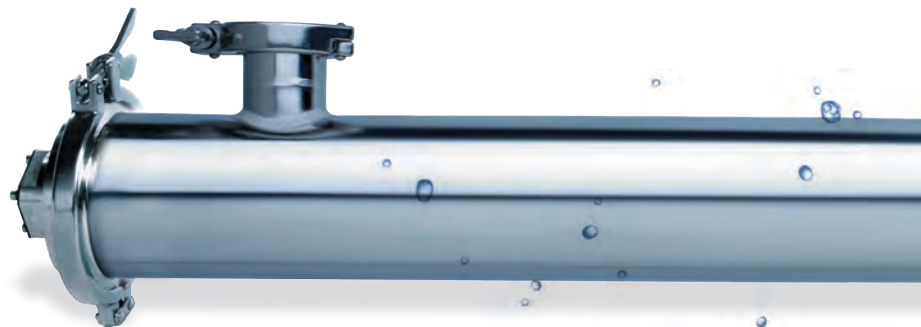
# PharmaLine PQ from Hanovia

## The ultimate disinfection barrier – proven to perform

## Performance Qualified by independent experts

In Pharma safety comes first. That's why PharmaLine PQ provides complete peace of mind.

- Hanovia Systems certificates and testing records.
- Material certificates for all wetted parts (FDA compliant materials).
- Company certificates.
- Statement from Carollo Engineers covering performance validation.
- Designed and manufactured with consideration to ASME BPE and cGMP requirements.
- Approved to international standards including UL, NSF61 and IEC.
- Certification of lamp output.



## Performance Qualified Disinfection

### PERFORMANCE QUALIFIED

- Disinfection performance Independently tested and validated.
- Complete peace of mind.
- Independently tested for CE compliance.
- Independently tested and materials approved to NSF61 for potable water.
- Independently tested materials and approved for UL compliance
- Factory calibrated, in field verifiable, absolute UV sensor.

### TOTAL TREATMENT CHAMBER

- Simple to replace UV lamps without draining chamber.
- Designed and manufactured with consideration to ASME BPE and cGMP requirements.
- High efficiency chamber design.

# How PharmaLine PQ works

Engineering excellence for Pharma

### SMART CONTROLS

- Continuous monitoring.
- Password protected control panel for security.
- Real-time data display with event logging.
- Continuous display of validated UV dose.
- Dose optimization.
- Modbus and Hard-Wired interface to SCADA systems.

### HANOVIA UVLUX LAMP TECHNOLOGY

- Latest electronic ballast for extended lamp life.
- Latest generation high efficiency, long life amalgam lamp technology.

# 3rd Party Validation

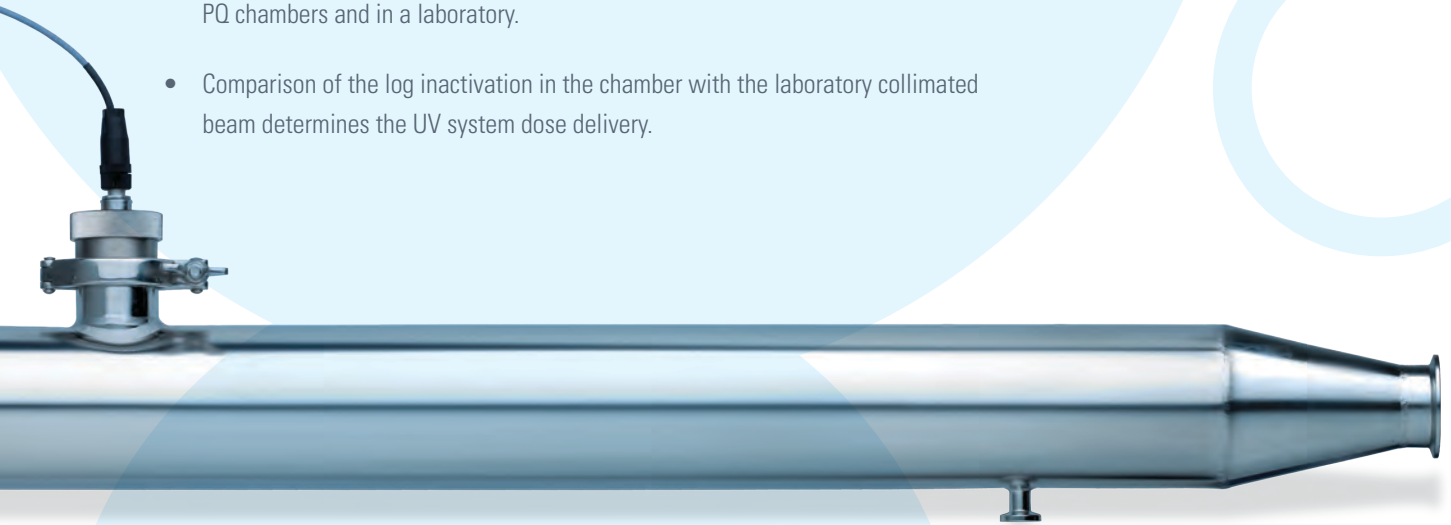
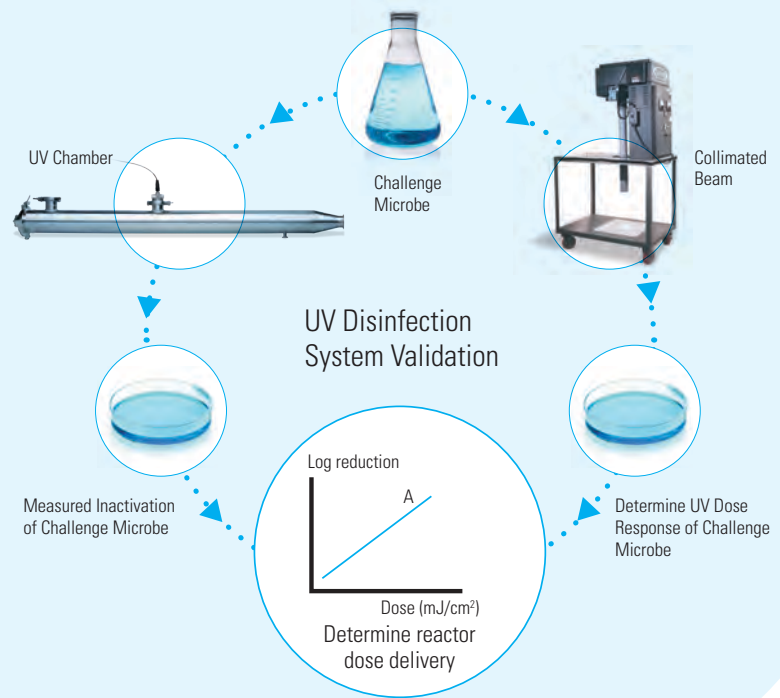
Proven, complete disinfection -  
for every Pharma need

With a product as powerful as PharmaLine PQ, we don't expect you to take our word for it.

## Guaranteed Disinfection Performance

Not only has the PLPQ been designed to the exacting industry standards using the latest design techniques to maximise performance, the disinfection performance has also been independently tested and validated by Carollo Engineers to the exacting 2006 USEPA protocol following the UV Disinfection Guidance Manual (UVDGM) guidelines.

- Actual microbes are used and their inactivation measured in both the PharmaLine PQ chambers and in a laboratory.
- Comparison of the log inactivation in the chamber with the laboratory collimated beam determines the UV system dose delivery.



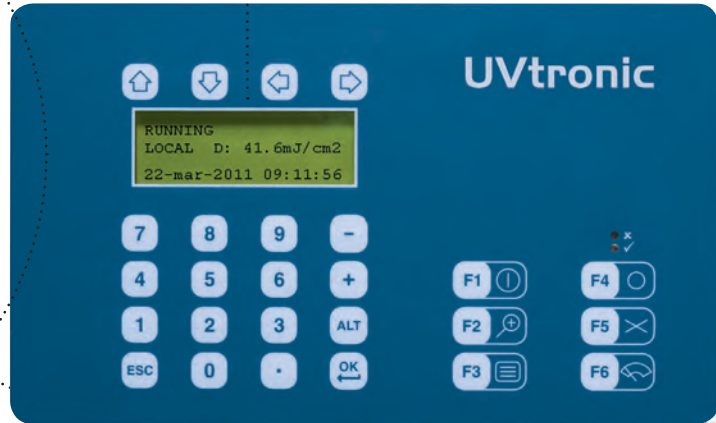
**Performance  
Qualified  
Disinfection**

PharmaLine PQ certified by WQA  
to NSF/ANSI 61 for materials safety only,  
as verified and substantiated by test data



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The PharmaLine  
PQ display panel  
(UVtronic)



PharmaLine  
PQ Absolute  
monitoring  
and intelligent  
display

PharmaLine  
PQ precision  
dry UV sensor



Patented UV light protection shutter:  
the dry UV sensor can be removed  
without system shutdown for field verification.  
The automatic shutter protects operators  
from harmful UV exposure during removal  
of the UV sensor.



## Eight decades of continuous development has put Hanovia at the forefront of UV science and technology.

Working with the biggest names in food, beverage, electronics, pharmaceutical, aquaculture, pools and leisure, and many other industries, we have gained valuable insights into our customers' requirements and this enables us to offer you not only the finest UV systems, but a full UV solution for your industrial or leisure water treatment problems – all backed by first class technical and service support, available wherever you are around the World.



PHARMACEUTICALS



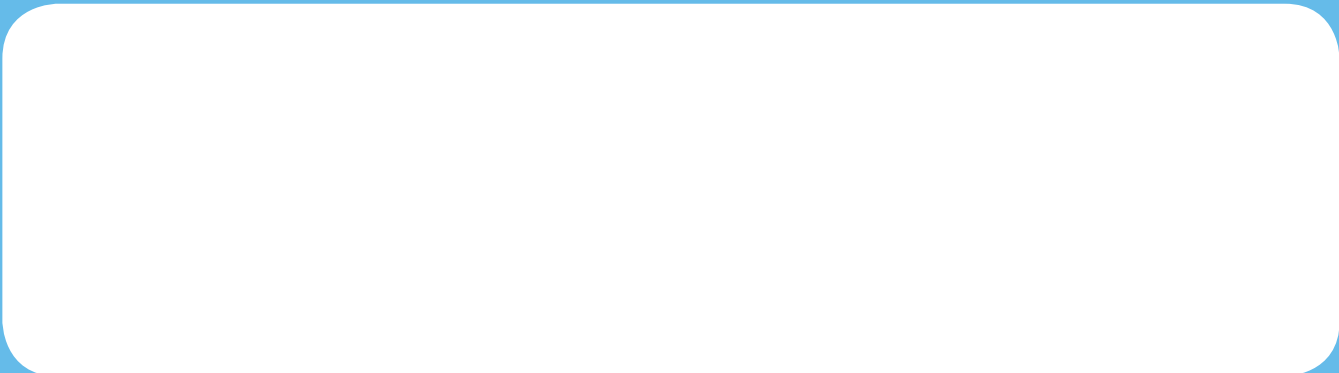
COSMETICS+TOILETRIES



MEDICAL+OPHTHALMIC



NUTRACEUTICALS



t: +44 (0) 1753 515 300 f: +44 (0) 1753 515301 e: [sales@hanovia.com](mailto:sales@hanovia.com)  
Hanovia Ltd, 780 Buckingham Avenue, Slough, Berkshire, SL1 4LA United Kingdom

Visit our website for further information at [www.hanovia.com](http://www.hanovia.com)

