



Chronos[®]

**FASTER
SIMPLER
CLEANER**

For Seamless Ultrasound Probe
High Level Disinfection



**DESIGNED
FOR THE BEST**



Chronos®



**PROVEN
TO KILL HPV^{1,2}**

Chronos works by using ultraviolet light (UV-C) for high level disinfection that is fully automated and chemical free. The system is rigorously tested to improve patient safety by significantly reducing the risk of cross-infection. As a result, automated systems such as Chronos® are favoured over wipe solutions by many local guidelines.³



FASTER

Chronos 90 seconds HLD cycle time, streamlines clinical workflows to drastically reduce time and costs.



SIMPLER

Chronos simple "one button" process to activate HLD and digital traceability improves compliance and audit readiness.



CLEANER

Chronos is pioneering High Level Disinfection (HLD) as the only chemical free system. It is also the only automated system proven to kill native human papillomavirus (HPV) both in vitro and in clinical use.^{1,2}

WELL CONNECTED

Chronos traceability system electronically captures and stores data during each disinfection cycle.

By connecting the optional **thermal printer**, information of the disinfection cycle can be automatically printed out on up to 5 tickets.

Disinfection records can also be accessed via Ethernet using **GermiTrac**, Germitec's API to enable easy access via a web browser or to connect Chronos to the Hospital network.



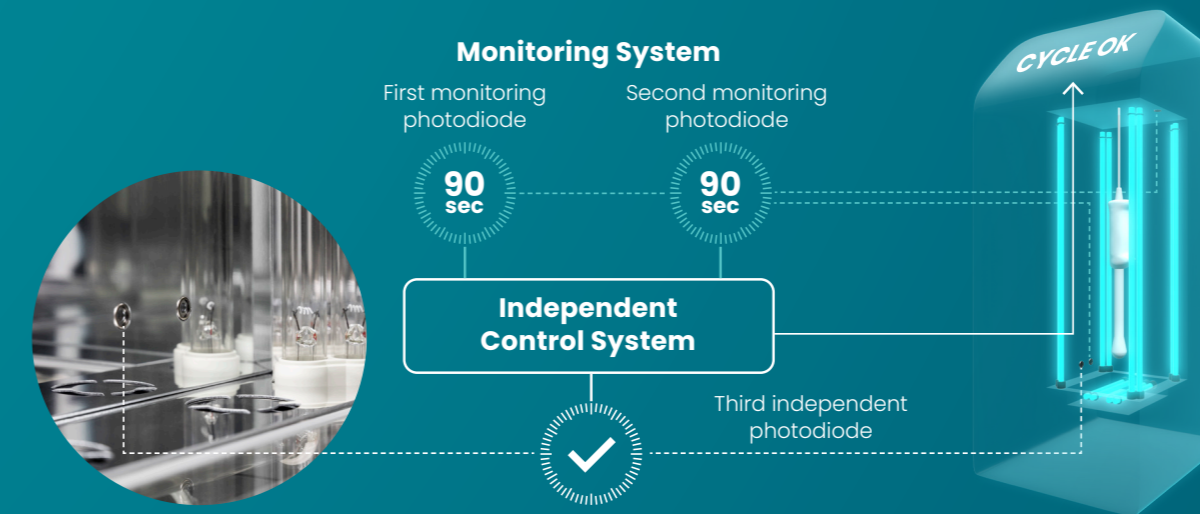
CHRONOS EUROPEAN STANDARDS MICROBIOLOGY EFFICACY RESULTS

Type of Test	Reference Standards*	Criteria of Reduction for HLD	Results
Bactericide	EN 14561	≥5-Log ₁₀	Passed
Virucide	ASTM E1053-11 / EN 14476	≥4-Log ₁₀	Passed
Fungicide	EN 14562	≥4-Log ₁₀	Passed
Mycobactericide	EN 14563	≥4-Log ₁₀	Passed
Sporicide	EN 14347	≥4-Log ₁₀	Passed

Note: Hypernova Chronos is compliant with EN14885 and Directive 93/42/EEC that apply to non-immersion disinfection test protocols. *Virus selection in line with the recommendations of the guide published in Eurosurveillance: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2021.26.3.2000708>

CHRONOS AUTOMATED VERIFICATION SYSTEM

Replaces the manual process of checking chemical indicators and test strips.



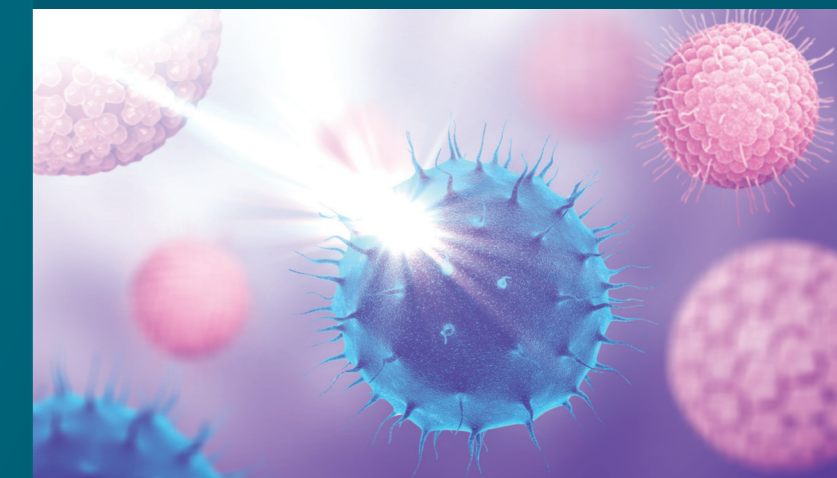
HOW UV-C HLD WORKS

UVC HLD works by UV-C light penetrating the cell walls of microorganisms (Bacteria, Fungi, Viruses, Mycobacteria & Spores) disintegrating proteins such as DNA and RNA, leaving them unable to perform cellular functions and replication therefore destroying them.

Chronos' disinfection chamber is especially designed to assure the emitted UV-C light is reflected sufficiently to avoid surface shadowing and to provide adequate illumination and efficient exposure on the probe surfaces.

UVC disinfection is widely used for healthcare applications such as:

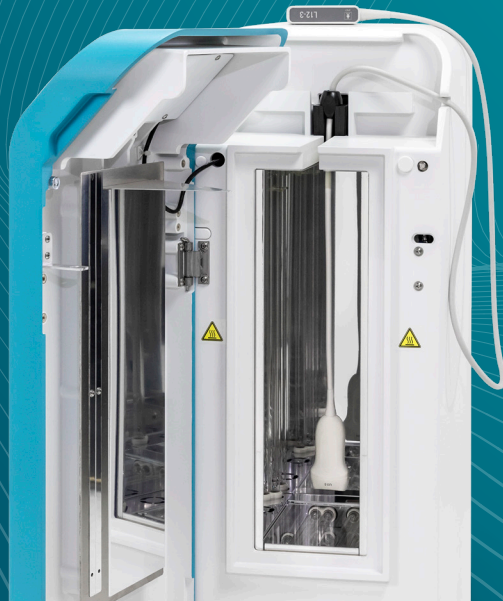
- Disinfection of water (e.g. Legionella)
- Disinfection of air (operation rooms)
- Disinfection of surfaces
- Disinfection of hearing aids



Chronos[®]

ULTRASOUND PROBE COMPATIBILITY

Chronos has over 1,000 probes from all major manufacturers that are rigorously tested, approved and endorsed. With ongoing probe compatibility of the latest probe models, it's good to know **Chronos has you covered!**



TECHNICAL SPECIFICATIONS

Disinfection cycle time:	Approximately 90 seconds (high-level disinfection)
Dimensions:	102(H) x 38(W) x 43(D) cm
Weight:	36kg
Supply voltage:	120-240 VAC
Power:	495 Watt
Intensity:	4.5-2.5A
Frequency:	50/60 Hz
Functioning temperature:	+ 15°C ; + 50°C
Maximum of functioning humidity:	75%

Mark: CE Mark. According to the 93/42/EEC directive for medical devices, Chronos belongs to class 2B for CE and Class II for other countries.

The Chronos complies with the following norms:

- EN 61326 Electromagnetic compatibility
- EN 61010-1 & EN61010-2-40 Electrical safety
- EN ISO 14971 Risk vmanagement

Germitec meets ISO 13485 Standard

References: **1.** Meyers C, et al. (2017) UVC radiation as an effective disinfectant method to inactivate human papillomaviruses PLoS ONE 12 (10): e0187377. **2.** Pichon M, et al. (2019) Decontamination of Intravaginal Probes Infected by Human Papillomavirus (HPV) Using UV-C Decontamination System. J. Clin. Med, 8, 1776; doi:10.3390/jcm8111776. **3.** HSE Guidance for Decontamination of Semi-critical Ultrasound Probes

For further information email contact@germitec.com or visit www.germitec.com



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