



INTENSE PULSED UV SYSTEM XeMaticA-2LFA 2 flashlamps, fully automated:

ideal R&D tool for food, bio-medical and pharmaceutical applications.

Touch-Screen Selection of:

- 180° or 360° product exposure by operating one or both lamps + side reflectors,
- pulse energies 100 J to 500 J,
- pulse repetition rates 1-5 Hz,
- number of pulses in a burst: 1-100.

El. power: 2000 w max.

El connection: 180-240 VAC, 1 phase 50/60 Hz,

Size, weight:

60 cm wide x 56 cm high x 45 cm deep, med-grade stainless-steel housing, weight 42 kg.

UV chamber:

- 24 cm wide x 24 cm high x 24 cm deep,
- lined with Aluminum 99.8% side reflectors,
- UV flux is largely uniform between lamps.

Flash lamp type and spectra:

- Xe gas filled (NO Mercury) water-cooled flash lamps,
- 19 cm active length, or up to 25 J per cm lamp length,
- adjustable UVC, UVB and UVA outputs,
- no IR (heat) from lamps on samples (heat control):

Ozone - free and heat (IR) free!

UV fluxes on a product: up to 1.0 J/cm²/pulse.

Sterilization Efficiency for bacteria: 3-6 logs /pulse, for spores: 2-3 logs /pulse.

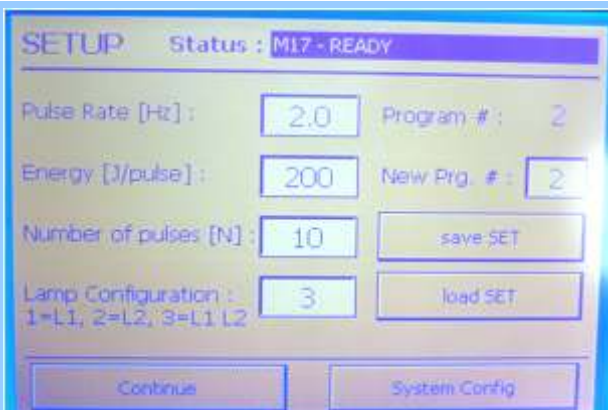
Changeable positions between lamps and a shelf:

- distance between lamps is adjustable with 2 cm steps,
- UVC transparent shelf between lamp modules.
- 3 pairs of changeable reflectors with footprints 5x20 cm, 10x20 cm and 20x20 cm to vary UV fluxes for various product sizes.

Safety: during the system operational cycle the chamber door is automatically locked: no UV or EM fields leak out.



Two horizontal water cooled PUV modules and UVC transparent shelf between.



5.7" LCD display to select:

- pulse energy E(p) from 100 J to 500 J,
- pulsing for the lamp on the top, or on the bottom or one lamp after another,
- repetition rate n= 1 - 5 Hz,
- number of pulses per "burst" : 1 to 100.
- auto-rejection of pulse parameters when:

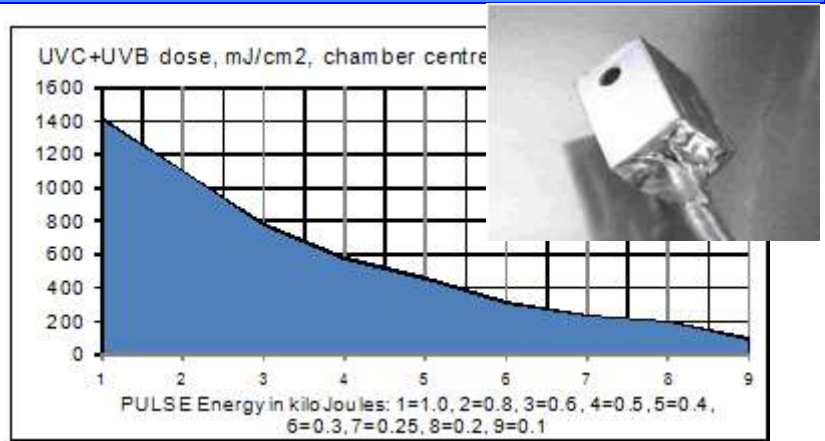
Pulse Energy in J x Rep. Rate in Hz > El. Power Limit
(for each selected energy is different).

UV control:

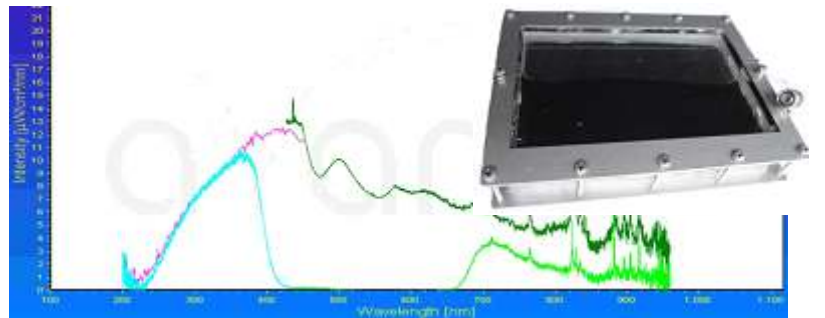
- full spectra for pulse energies w. 100 J step are in the manual,
- a free positioned UV sensor,
- calibrated in V/J/cm² (as relative data),
- signal output on PC Scope,
- ability to measure a relative UV (or UVC) transparency of plastic foils, packs, etc.

UVC+UVB doses:

- at 0.5 kJ = 0.6 J/cm²/pulse,
- at 1,0 kJ = 1.4 J/cm²/pulse.

**UVC or UVB water filled filters**

block 90-95%
of the visible +
IR light -

**PUV sub-system**

to sterilize dark liquids or juices:

- 2x40 cm long UV chambers, 100 ml each,
- product flow is regulated 1 to 4 l/min,
- #1 chamber has a 40 cm long PUV lamp, connected to the main PUV system. It comes with a build in water cooler for the flash lamp,
- #2 chamber has a 40 cm long continuous 40 w UVC lamp (254 nm) for collecting comparative data,
- T°C controls for the T° of the flow in, T° of the flow out and T° for cooling water,
- operation as a flow-through or with a 1 -3 litres batch (re-circulation).

**NEW APPLICATIONS for PUV:**

- vitamin D2 synthesis in mushrooms,
- food items, open or wrapped in UV transparent foils,
- sterilization of juices.

Our PUV systems are in use worldwide

KNOWN APPLICATIONS for PUV:

- improving shelf life of food stuffs,
- pharmaceutical solutions, if sufficiently UV transparent,
- medical devices (depending on its geometry),
- sanitization (up to 6 logs) of various open surfaces.

and have been successfully tested in leading EU labs.

