

Two-Stage PEF Sterilization System WT-PEF-PV1

for juices, liquid foods and liquid creams:



Bacteria sterilization capability:

at 250l/h ~ 4-6 logs, at 500 l/h ~ 2-3 logs;

The system dimensions:

L=1100 mm, H=1300 mm; B=600 mm ;
on wheels with stoppers, weight ca. 80kg

Electrical connections: 1 phase 220VAC, 20A,
3kw, or optional 3 Phase 380 VAC, 10A, 5 kw;

PEF major parts as shown on the left:

#1: Analogue controls:

On-Off switch, LED status lights for rep. rate and pulse duration by a rotary switch, HV on-off switch, timer for pulsing, pulsing controlling LED lights, Emergency OFF-red push-button, BNC connectors for a scope, PC scope.

#2:- batch vessel for a treated juice,

#3: forwarding pump,

#4 and #5 treatment PEF chambers,

#6: juice cooler (tap or refrigerated water);

#7: valve systems to select between a flow-through and a batch circulation treatment;

PEF Parameters regulated from the control panel:

- El fields: **2-35kV/cm**
- Rep. Rates, Hz: 10, 100, 250, 500;
- Durations in μ s: 2.5, 5, 10, 20;

PEF Fixed parameters:

- Shape: positive rectangular, fronts of ca.1 μ s.
- Flatness: 2% at 5 μ s: 10% at 20 μ s.

PEF variable parameters during processing:

- Pulse current through a treated liquid depends on its conductivity, it varies from ca. 1A to ca.100 A/s;
- Max pulsed power output for each stage: 0,5-2 kw;
- Selectable time for pulsing: **3s-20h**;

Paid option:

#4 coax chamber can have different pulsing parameters than #5 coax chamber during same juices treatment.

Geometry of PEF chambers (#4 & #5):

coaxial, 200 mm long made from food grade polished stainless steel, other length is on request at no extra cost.

insulators: food grade Polyamide,

#4 can be replaced with the flat cylindrical chamber for dry foods with the working diameter from 100 to 200mm. During its work the chamber #5 will be deactivated from the front panel.

Maintenance:

Easy to flash the whole system,
major parts are sold on the open market.

Superior Performance
of two stage PEF system
PEF sterilization is **non-invasive**-
it does not change juice properties.

Practical cost-effective PEF system for juices, etc.