

R&D System WT_1-40T/p-R&D BT for Intense Pulsed Magnetic Fields

for material sciences, bio-medical, food
staffs and technical applications:



Work Principle:

Our proprietary pulsed forming network feeds the stored electrical energy into our low inductance solenoid to generate a uniform magnetic field up to 40 Tesla in a single pulse.

This single pulse EM system provides same high magnetic fields at a fraction of costs of re-
-rates systems of the same kind.

Penetration of magnetic files into bio objects, meats and various food staffs is more uniform and deep, then that of Pulsed electrical Fields.

It is not affected by treated media non-uniformities. By contrast, PEF can cause local discharges on uniformities such as small solid enclosures and air bubbles.

Magnetic chamber:

- low inductance rectangular solenoid 10x10cm, 20 cm long from a thick glass (or quartz). It is located behind the front door. The door is locked each time automatically when HV is put on. The system is magnetically sealed and safe to use.

Other types of solenoid chambers and custom designed EM systems can be made on request

Main features:

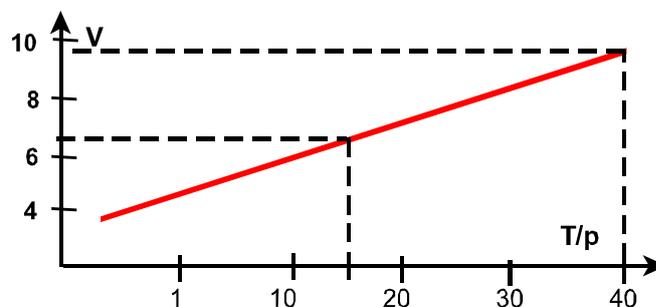
- uniform pulsed magnetic fields **up to 40 Tesla** / pulse as a function of a dialed voltage (Chart).
- pulsed currents range **up to a few 10's kA** as a function of a capacitor charging voltage,
- the first half-pulse period is ca. **10-20 μ s (10^{-5} s)** releases up to 80% of a stored electrical energy into the low inductance solenoid chamber for samples,

The system operations:

a. After HV is on, to press the green button for charging the storage capacitor to a voltage as per the chart below to get a desired strength of magnetic field in Tesla. Then press the red button to produce a single pulse. Max. manual rate: 5 pulses per sec.

b. Optional: pulsing at 0.5-1 Hz for selected time on a digital timer for selected T/p magnetic fields.

Voltmeter chart V > Tesla/pulse:



EI connection:

208-240 VAC, one phase, 50-60 Hz, 300 w during capacitor charging.

Size, Weight, Enclosure Material:

60 cm wide x 40 cm high x 53 cm deep,
polished stainless-steel, weight 42 kg,



This R&D system uses our established HV platform for 1000J/p Pulsed Light systems.

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