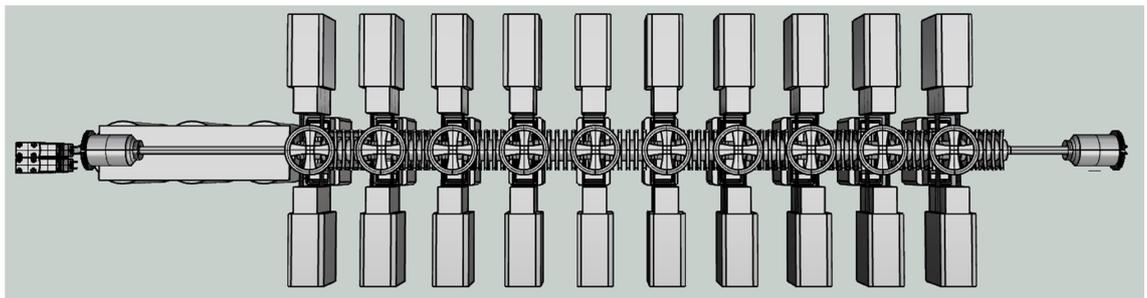


Elena-56P20 LINER kind Thermonuclear Fusion reactor

It is an experimental thermonuclear fusion reactor designed to reach ignition that consists on generating more energy that injected in the machine. This reactor is designed to generate up to 3.6MW

Elena is a multistage stage reactor that inject ions at a record energy 500KeV again the target

This scientific instrument is easy to upgrade and modify to adapt to different operation modes and it is remotely operated



Applications

This product operation upgrades an institution to first level in the investigation of following fields:

- Ion injection fusion that is the most modern fusion system
- High efficiency electrostatic plasma heating
- Thermonuclear Fusion Physics
- High Energy
- Energy Generation
- Plasma thrusters from 600 newtons
- Fusion reactions physics

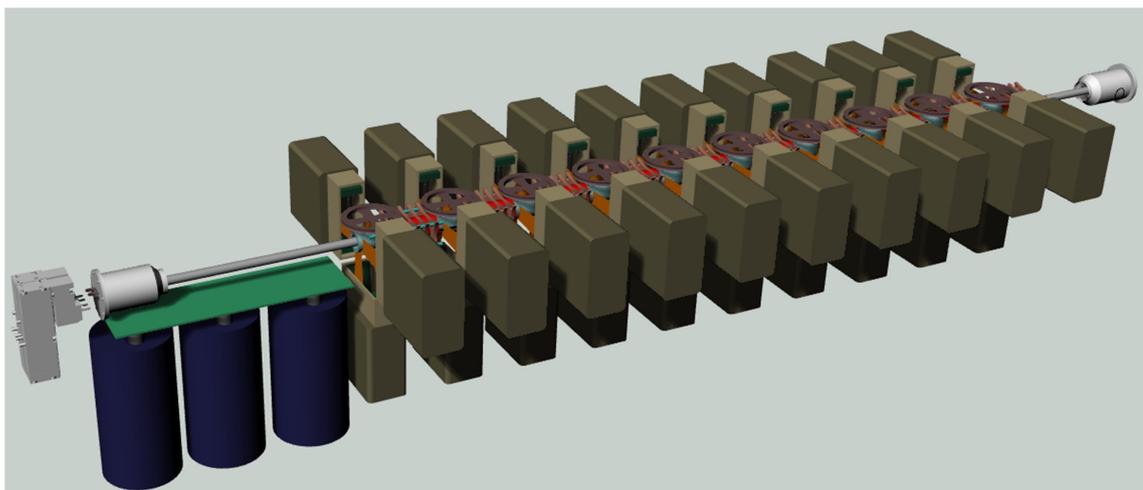
Features

- 11 Stages
- Acceleration power up to 25 Gigawatts
- Designed to reach ignition conditions that generates more energy released than injected with adequate configuration and design of the power sequences
- Low temperature electrons to allow high efficiency and high density
- High density fuel to yield high density fusion energy generation
- Rated to clean fusion using aneutronic reactions: H-Li6, H-Be9 and H-B11
- Installation at 50-500kV operation needs X rays protection during operation

- Neutron generating reactions under installation under the responsibility of the user. Could be used to make D-D fusion by using deuterium ions hitting DLi7 as long as deuterium density in DLi7 is greater than pure deuterium solid.
- Investigators can design with their own software different discharge times to optimize operation

Design data:

Particle energy	eV	5.00E+05	5.00E+05
Element		H	D
Atomic mass	amu	1	2
Particle weight	Kg	1.66E-27	3.32E-27
Particles speed	m/s	9.82E+06	6.95E+06
Kg of accelerated particles	kg	2.85E-11	5.70E-11
Number of accelerated particles		1.72E+16	1.72E+16
Acceleration time	s	142.53E-9	201.57E-9
Acceleration power	W	9.65E+9	6.82E+9



Includes

- Primary High Energy Pulse AC capacitors energy storage up to 6 Kilojoules
- Capacitor bank charger
- Vacuum grade reactor main chamber with coils support
- The Plasma chamber walls material is non-magnetic or low magnetic with low degassing
- Anti-return coils support
- Vacuum pump station
- Hydrogen/Deuterium generation and injection system
- Hardware and software to control the reactor
- Sensors
- Configuration Application of coils and main parameters
- 1 year support

Operation

- Remote safe operation
- Safe working installation with all capacitors discharged
- User can modify coils configuration and firing time to increase system efficiency
- Reactor HV parts in an electric isolated box for safe usability filled using dielectric oil

Dimensions, weigh and external supply requirements

- Dimensions 1200x500x300mm without vacuum pump and injection unit
- Approximate freight weight 40kg without vacuum pump
- 220V/110Vac 50/60Hz <5KW

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These are PRELIMINARY SPECIFICATIONS: Drawings and specifications can be modified without notifying

It is an experimental reactor oriented to experienced users to allow them mounts their device. User is responsible of maintenance, safe operation and needed certifications when assembled.

Additional parts

- Fusion to electric power electromagnetic converter
- Sensors
- Oscilloscope
- Simulator and tools to design or adapt the reactor

The reactor simulator generates an output excel readable giving the electrostatic field map and outputs mains operational parameters. Also gives the magnetic confinement fields to be used and needed magnets to confine the ions.

In the following image an output of the reactor with needed magnetic confinement fields (in red), well under 0.2 teslas averaged that is easily generated, also and electrostatic potential of plasma (in blue) reaching up to 550keV

