



Pulsotron 500K-MAG Thermonuclear Fusion reactor Ignition Grade

Contains an experimental thermonuclear fusion reactor, vacuum pump, and hydrogen supply needed to configure and operate it. It is designed to allow investigators to reach Ignition Conditions that consists on generating more energy that injected in the machine.

500K-MAG is an one stage reactor kit designed to heat magnetically 400 Joules of plasma to a record energy 500KeV using up to 22 Megawatts high power system used to confine and ignite high density plasma.

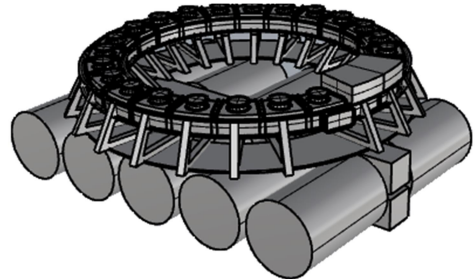
This scientific instrument is easy to upgrade and modify to adapt to different operation modes and it is remotely operated

- PRELIMINARY SPECIFICATIONS -

Applications

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

- High efficiency magnetic plasma heating
- Thermonuclear Fusion Physics
- High Energy
- Energy Generation
- Plasma tests
- Plasma diagnostics

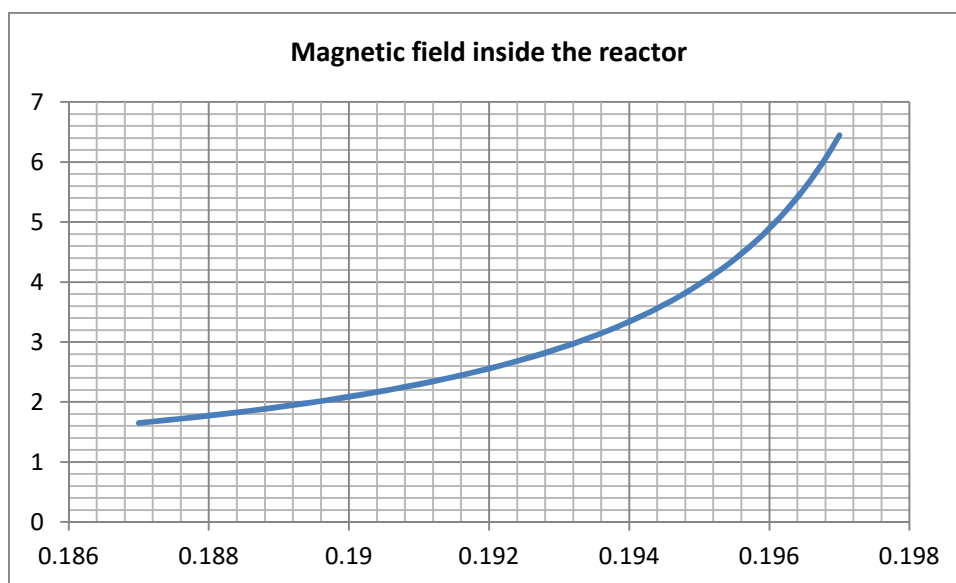


Features

- Designed to reach ignition conditions that generates more energy released than injected*
- 1 Stage multiturn high efficiency magnetics acceleration of Hydrogen or Deuterium ions to 500KeV
- Magnetic field 1-6 teslas to confine high speed plasma and prevents reactor walls damage
- Low temperature electrons to allow high efficiency and high density
- High density fusion to increase output power
- Anti-return magnetic coils
- Rated to aneutronic fusion using reactions: H-Li6 and H-Be9
- Could be used with H-B11 by using solid Boron or compound under client design
- Installation under 10kV for easy regulations

- 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
- Magnetic acceleration
- The reactor includes a license to operate it. The license terms allows to generate client own technology that could be commercialized by paying a low cost license fee that guarantee global patent protections and commercialization support
- Technical support 1 year
- Network cooperation with other colleges that uses the same installation

*Combustion chamber can be damaged if full ignition is reached



Includes

- 6 pulse generators that can be paralleled to generate peaks up to 9 kiloamps at 1200V giving 10 Megawatt
- 2 pulse generators that allows peak discharges up to 5kA 1200V every one to generate pulses up to 12 Megawatts
- Magnetic acceleration system of 400Joule plasma to 500KeV in 20 milliseconds
- Energy Pulse AC capacitors energy storage up to 4 Kilojoules
- Capacitor bank charger and discharger
- Vacuum grade reactor main chamber 0.2m diameter and coils support
- The Plasma chamber walls material is non-magnetic or low magnetic with low degassing
- Anti-return coils support
- 2 stage pump rated to 0.25Pa
- Hydrogen/Deuterium generation and injection system
- GPIO card used to control the reactor
- Magnetic sensor

- Configuration Application of coils and main parameters
- Included wires, screws, sealing, pipes
- 1 year support

Operation

- Remote safe operation
- Safe working installation with all capacitors discharged
- User can modify coils parallel/serial configuration and parallel capacitors in order to modify test parameters

Dimensions, weigh and external supply requirements

- Dimensions 500x500x300mm without vacuum pump and injection unit
- Approximate freight weight 33kg pump included
- 220V/110Vac 50/60Hz 3KW

Licensing, Terms and uses

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

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

Customers are automatic joined to the consortium to allow integrate the different generated technologies, sharing the IP property accordingly its usefulness to easily integrate in production lines

Main Fusion design parameters

