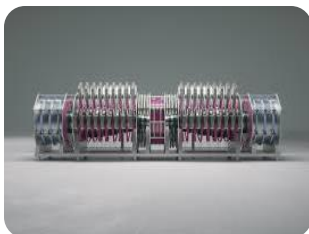


THE *FUSION* REPORT

THE SPECTRUM OF FUSION ENERGY SOLUTIONS

Helion USA



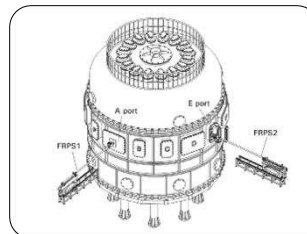
Inertial (Magnetic) Confinement;
Deuterium-Helium3
Energy Output: 50MW
Size: 19 meters length
Weight: Not disclosed,
but hundreds of tons
Plasma Volume: Not disclosed
Notes: Polaris expected to achieve
>100M C in 1 second pulses

CFS USA



Mag Confinement Tokamak;
Deuterium-Tritium
Energy Output: 50-100MW
Size: 3-meter diameter
Weight: Not disclosed
Plasma Volume: 20 cubic meters
Notes: Expected $Q > 10$

EAST China



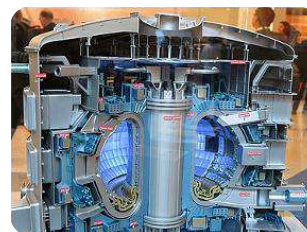
Mag Confinement Tokamak;
Deuterium-Tritium
Energy Output: Not available
Size: 1.9m major; 0.9m minor radius
Weight: 400 metric tons
Plasma Volume: 17 cubic meters
Notes: Plasma temperature of
 120×10^6 Kelvin for 1056 seconds

JT-60SA-II Japan



Mag Confinement
D-Tokamak; Deuterium
Energy Output: ~41 MW
Size: 2.97m major radius;
1.18m minor radius
Weight: 2,400 metric tons
Plasma Volume: 90 cubic meters
Notes: Achieved $Q > 1.05$ (1996)

ITER Int'l



Mag Confinement Tokamak;
Deuterium-Tritium
Energy Output: 500MW for
400-600 seconds#
Size: 12-meter diameter
Weight: 23,000 metric tons
Plasma Volume: 840 cubic meters
Notes: ITER's first "plasma phase"
will be in 2034; fusion in 2039

NIF USA



Inertial (Laser) Confinement;
Deuterium-Tritium
Energy Output: 3.15 MJ single-shot (2022)
Size: 33-meter sphere
Weight: 130 metric tons
Plasma Volume: Not disclosed
Notes: Achieved $Q > 1.5$
128 lasers (2.05 MJ laser power input)

Castle Bravo 1954



Fission-Fusion Bomb; Solid
Lithium-Deuteride
Energy Output: 15 MT of TNT (seconds)
Size: 15 ft x 4.5 ft
Weight: 10.7 metric tons
Plasma Volume: 4.5 mile radius fireball
Notes: First solid-fuel
thermonuclear weapon