Conceptual Fusion Reactor Concepts  
  
[Aneutronic Fusion Spacecraft Architecture - NASA](https://www.nasa.gov/general/aneutronic-fusion-spacecraft-architecture/)  
Aneutronic Fusion Spacecraft Architecture — A NIAC-NASA study on the use of “neutronless” nuclear fusion as a power and propulsion source for future spacecraft engines.  
  
[[1409.3540] ARC: A compact, high-field, fusion nuclear science facility and demonstration power plant with demountable magnets](https://arxiv.org/abs/1409.3540)  
ARC: A compact, high-field, fusion nuclear science facility … — Conceptual design of a small tokamak reactor (ARC) as a demonstration plant for fusion power generation.  
  
[Conceptual design of fusion experimental reactor (FER)](https://inis.iaea.org/records/xfeyw-2vm75)  
Conceptual design of fusion experimental reactor (FER) — Experimental design of a tokamak fusion reactor in Japan.  
  
summary:  
Fusion reactor concepts aim to harness nuclear fusion (merging light atomic nuclei) to generate large power outputs, with fewer radioactive byproducts than fission reactors. Some designs involve **aneutronic fusion** (fusion without/negligible neutrons) for cleaner operation.

Examples:

* **ARC**: compact, high-field tokamak with high magnetic field superconducting coils, designed as fusion science facility and pilot power plant, with concept for easier maintenance via demountable vessels.
* **FER (Fusion Experimental Reactor)**: Japanese concept to test D-T fusion, engineering of plasma confinement, first wall, blanket systems, etc.   
    
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