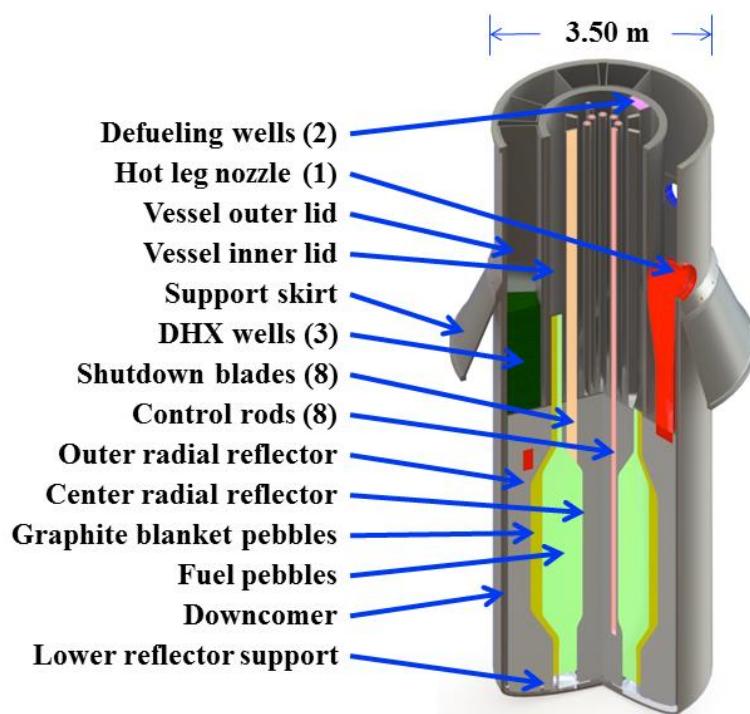


Mk1 Reactor Core

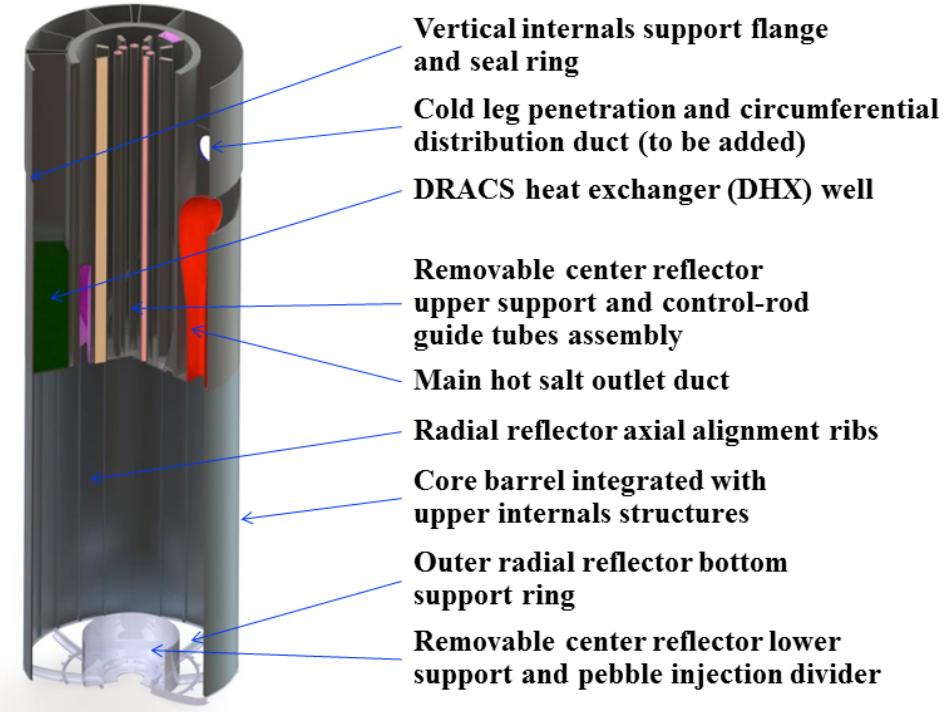
To enable near-term deployment, the Mk1 design uses a core barrel and other core internal structures fabricated from the same metallic material as the reactor vessel and main salt piping. The outer radial reflector blocks are aligned and held against the metallic core barrel using a system of axial alignment ribs and radial retaining rings quite similar to designs originally developed for the Molten Salt Breeder Reactor (MSBR) project. The use of metallic core internal structures, rather than advanced ceramic composites, simplifies fabrication and licensing for the Mk1 design.

Mk1 Reactor Cross Section



A cross section of the Mk1 reactor vessel, internals, and core. The Mk1 design uses an annular pebble core geometry.

The Mk1 core metallic internals are installed as a single module



The Mark-1 center reflector block geometry minimizes stresses induced by neutron irradiation

