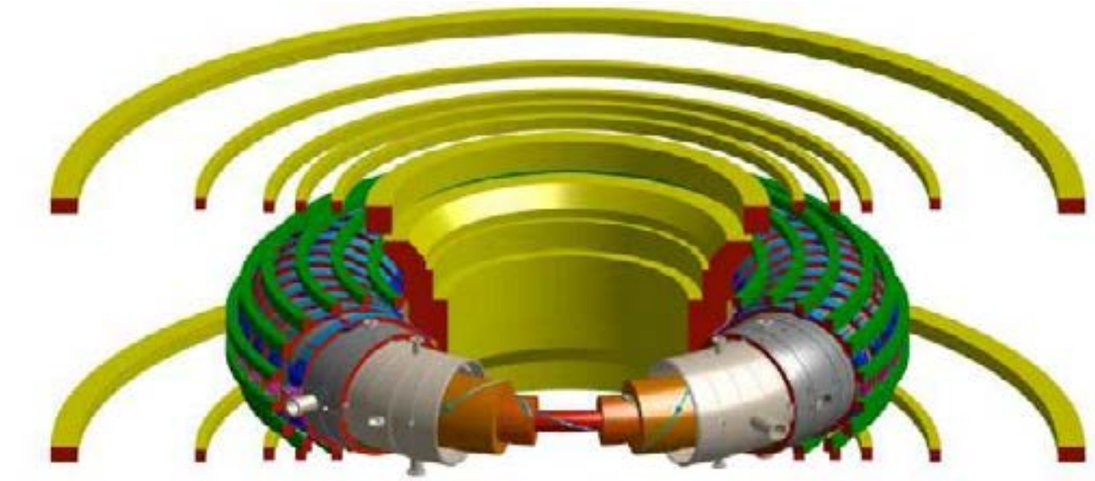
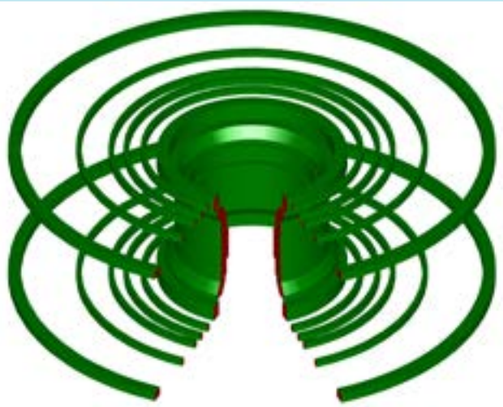
RFX-mod2 and its magnetic configuration

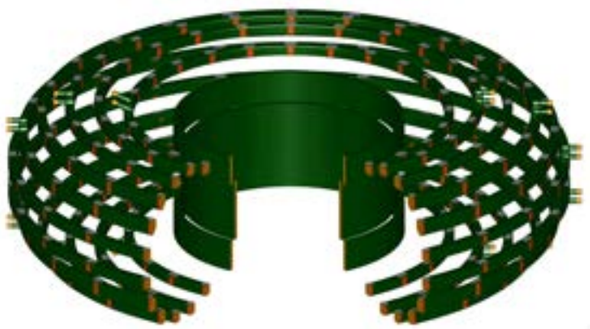
The magnetic confinement approach is based on the idea that ions and electrons are constrained to follow magnetic field lines.
Different types of magnets have been used to induce this magnetic field in the RFX-mod2 experiment.



The magnetic system of RFX-mod is highlights in the drawing: in yellow the magnetizing winding, in green the filed shaping coils and in blue the toroidal field circuit have been marked.

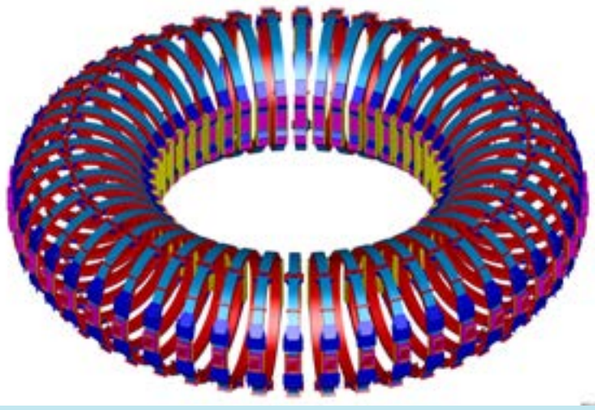
Magnetizing winding
The magnetizing winding poloidal field and induced plasma current.

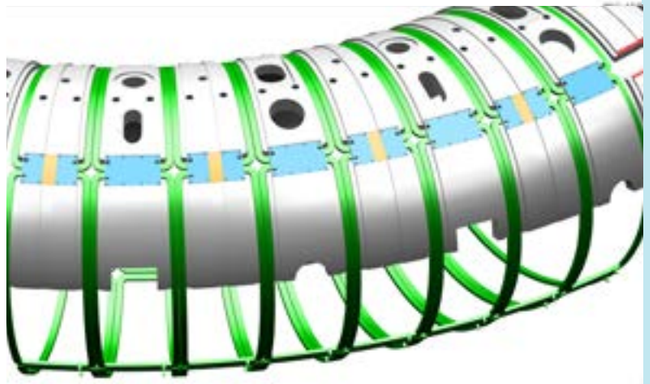




Field shaping (FS) winding
The FS winding (often referred to as primary winding), together with the stabilizing shell, controls the plasma equilibrium.

Toroidal winding
The toroidal winding provides the toroidal component of the magnetic field.





The active coils system
RFX-mod has been equipped with an advanced system for the feedback control of MHD. The system is based on 192 saddle coils, which cover the whole plasma boundary. The coils are arranged in 48 toroidal locations, with 4 poloidal coils each. Coils are independently driven by individual power supplies and can produce a radial magnetic field up to 50 mT dc and 3.5 mT at 100 Hz.