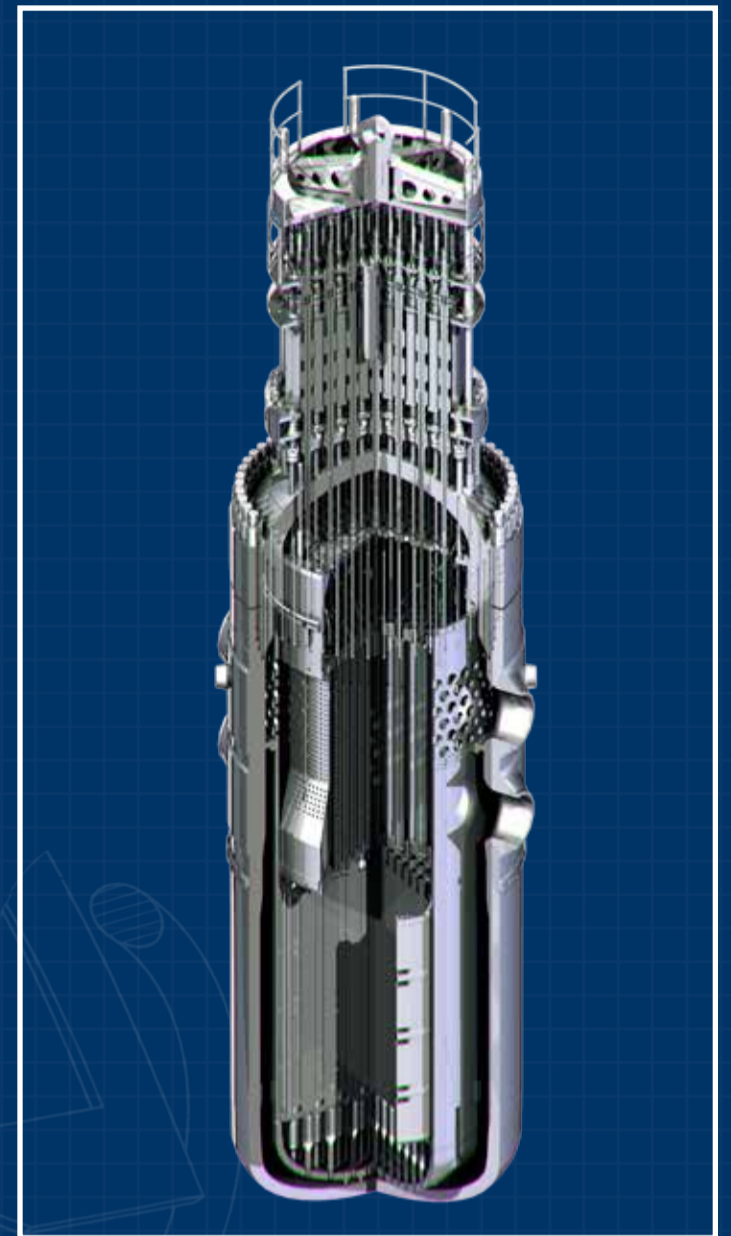


VVR-1200 Reactor

VVR is one of the most wide spread reactors in the world using water as heat-transfer and retarder agent*. Invite to look inside the installation and explore some of many elements that the reactor consists.

* Water, relevant to the wet chemistry regime.



Top block

Is designed for sealing the reactor's shell, system of control and protection placement and conclusion sensors of internal control.

Mass — **137 tons**
High — **8225 mm**
The greatest diameter — **4580 mm**



Protective tubes block

Provides fixation of fuel assemblies heads, protection of regulators and internal control channels.

Mass — **70 tons**
High — **7464 mm**
The greatest diameter — **3490 mm**



Baffle

Is designed for core forming and to reducing of neutrons stem on the reactor wall.

High — **4450 mm**
Mass — **38 tons**



Core barrel

Provides project accommodation of fuel assemblies, sharing of coolant consumption at the entrance to the core and at the exit of reactor.

High — **10 870 mm**
Mass — **76 tons**



Reactor Pressure Vessel

Is a vertical cylindrical vessel with bottom and branch pipes and designed for arrangement elements of internal units and core..

High — **11 185 mm**
Mass (without coolant) — **331 tons**

Reactor

The lifetime of irreplaceable during exploitation elements is **60 years**

High — **19 410 mm**
Mass (without coolant) — **876 tons**

Fuel assembly (FA)

A head

A beam of FE (fuel element) and GFE (gadolinium fuel element)

A bottom nozzle

An assembly fuel elements unit of nuclear power reactor Provides generation of heat energy and transmission to coolant.

The number of FA in a core is **163 pc.**
High of FA — **4570 mm**
High of fuel in FA — **3730 mm**
Mass of fuel in FA — **534,1 kg**
A gap between FE and a head is **about 50 mm**

Fuel Element (FE)

Upper cap

Cladding

Spring Fixator

Fuel pills

Bottom cap

Assembly unit contains nuclear material, in which take place controlled chain nuclear reaction.

A number in FA is **312 pc.**
Outer cladding diameter — **9,1 mm**
Outer diameter of fuel pill — **7,6 mm**
Diameter of pill central opening — **1,2 mm**
Fuel mass in FE — **1,712 kg**

