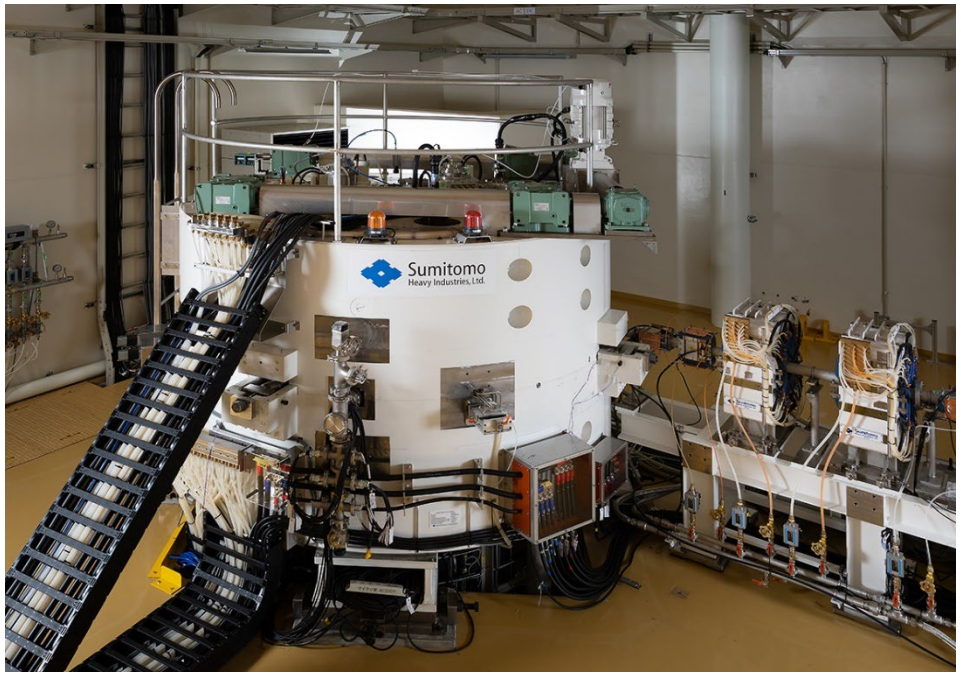
For Proton Therapy Systems

Superconducting Cyclotron SC230

R&D | FS/Demo | **Product/ Service**

Technology Research Center and Medical & Quantum Solutions SBU

- In proton therapy, to irradiate protons at cancer located deep within the body, an accelerator is needed to accelerate the protons to approximately 70% of the speed of light.
- Our superconducting cyclotron accelerator **uses a superconducting coil as the main coil that generates the main magnetic field. This allows for a reduction in electricity consumption by approximately 40% compared to a cyclotron accelerator with conventional normal-conducting coils**.
- For technologies that cool coils to maintain the superconducting state, **the conduction cooling method using a cryocooler has been adopted. This eliminates the need for liquid helium,** and replenishment is unnecessary if liquid helium is lost due to evaporation or other reasons.



Carbon Neutral Contribution points

- ✓ **Reducing electricity consumption by approximately 40%**
- ✓ **Adopting the conduction cooling method using a cryocooler eliminates the need for liquid helium**
- ✓ **Space efficiency has been achieved**

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