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## A new cryogenic test facility for large superconducting devices at CERN

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To expand CERN testing capability to superconducting devices that cannot be installed in existing test facilities because of their size and/or mass, CERN is building a new cryogenic test facility for large and heavy devices. The first devices to be tested in the facility will be the S-FRS superconducting magnets for the FAIR project that is currently under construction at the GSI Research Center in Darmstadt, Germany. The facility will include a renovated cold box with 1.2 kW at 4.5 K equivalent power with its compression system, two independent 15 kW liquid nitrogen precooling and warmup units, as well as a dedicated cryogenic distribution system providing cooling power to three independent test benches. The article presents the main input parameters and constraints used to define the cryogenic system and its infrastructure. The chosen layout and configuration of the facility is presented and the characteristics of the main components are described.

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