

RF System of the Prague Medical Synchrotron,
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“Oncology 2000” Foundation, Prague - Conceptual design
of the RF-system for a medical proton synchrotron is
presented in this report. This synchrotron named as a
Prague Medical Synchrotron (PRAMES), will be used as a
kernel of an accelerator complex of a Prague Oncological
Hospital (Czech Republik). The synchrotron will be able to
accelerate high-intensity proton beam of 6.25×10^{10}
protons per pulse till the energy of 60 to 220 MeV with the
1 Hz repetition rate. The RF-system of the synchrotron
consists of a RF-cavity with a magnetic material, a power
amplifier, a tuning control system and a beam control
system. The design of the RF-cavity is determined by the
peak gap voltage and the operating frequency range. The
cavity design defines a configuration of the RF-system.