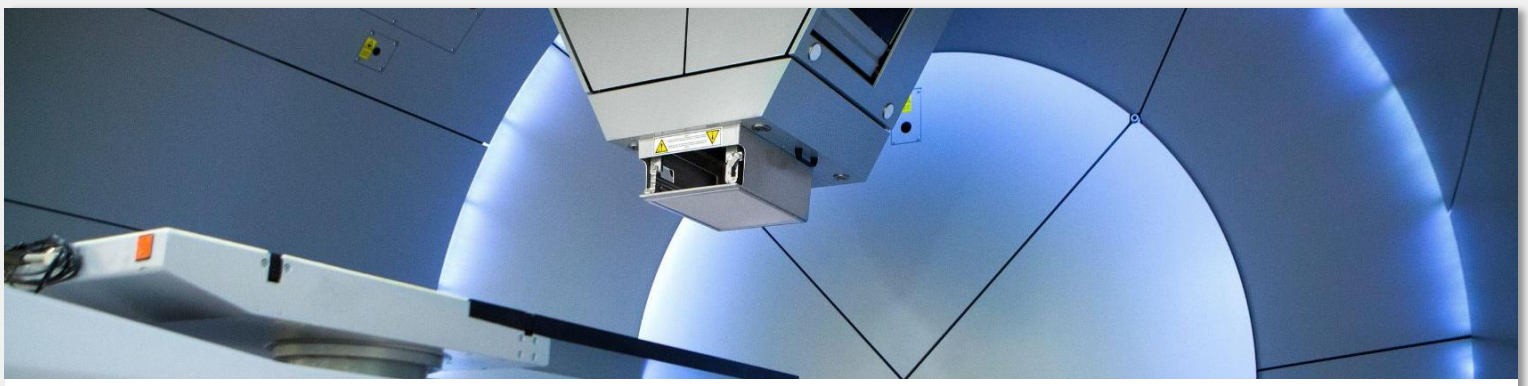
# High Precision Instruments for Proton Therapy

nb technologies
consulting engineers



We are specialists in the manufacture of precision instruments for medical accelerators in the field of proton therapy (PT). We have years of experience in the production of RF energy couplers, beam production components and beam monitors. Our parts are field-proven and in daily use in numerous PT rooms worldwide. Furthermore, we support R&D with customized, innovative hardware solutions. E. g., we provide dose and beam position monitors for novel clinical FLASH therapy studies with proton beams.

Our beam monitors are based on gold-coated polyimide foils. They remain resistant to radiation and oxidation and are, therefore, reliable, low-maintenance. We produce custom ionization chamber assemblies within the following specifications:

- High electric field strength: <600 V/mm (at lowest dark currents in pA range)
- Detection electrodes: gold-coated polyimide foils (>25 µm polyimide foil thickness, <1 µm gold coating)
- Optional structuring of the coating: strips for beam position measurement (>0.8 mm strip width, >1.0 mm periodicity)
- Sensitive area: <450 mm x 550 mm

October 2025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