

ADVANCED CANCER THERAPY

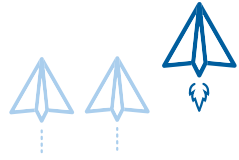
MULTI ION TREATMENT SYSTEMS



MEDAUSTRON
MULTI-ION 800



MedAustron^N
International



A MedAustron **multi-ion system** provides a wide range of applications for the **cancer therapy of today and tomorrow.**



WE

Our purpose is to cure cancer and prolong lives.

MedAustron International (MAI) is a **construction & project company** for the installation of high-end ion therapy centers. MAI is an international technology leader in the field of **ion therapy with multi-ion facilities** that can utilize both proton and carbon ions and - in the near future - helium ions.

With the extensive experience and know-how of our highly qualified staff, we can **support leading cancer centers worldwide** and provide **high-end installations** of new and advanced ion therapy equipment as well as support in staff training and operation.

YOU

Your goal is to offer advanced cancer therapy.



Your aim is to **treat patients** with a radiation therapy that has few side effects?



You are looking for a **future-proof, upgradeable** system?



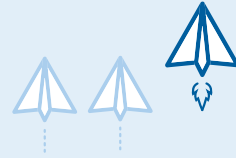
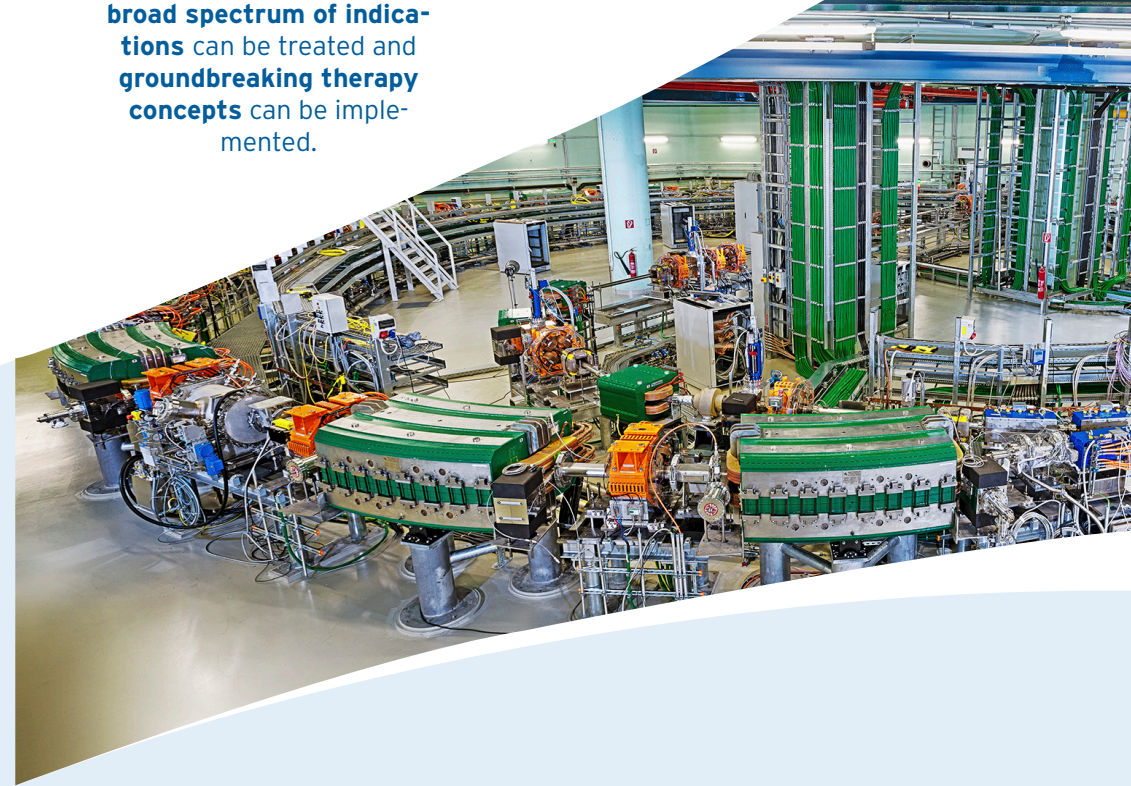
You want to be a vanguard center for ion therapy and contribute in **shaping its future?**

MEDAUSTRON MULTI-ION 800 TREATMENT SYSTEM

A synchrotron-based particle accelerator forms the heart of the system, which is designed according to your goals and requirements. The technology provides you not only with **flexibility in particle types**, but also with **energy ranges beyond clinical applications**. High-end in-room equipment enables flexible and safe

patient positioning and position verification. Also included: our knowledge of optimized processes in the interaction of technical components. Resulting from the operation of the MedAustron therapy center, it flows into the continuous improvement of the systems.

With a multi-ion system, a **broad spectrum of indications** can be treated and **groundbreaking therapy concepts** can be implemented.



TECHNICAL DETAILS

Beam Energy:

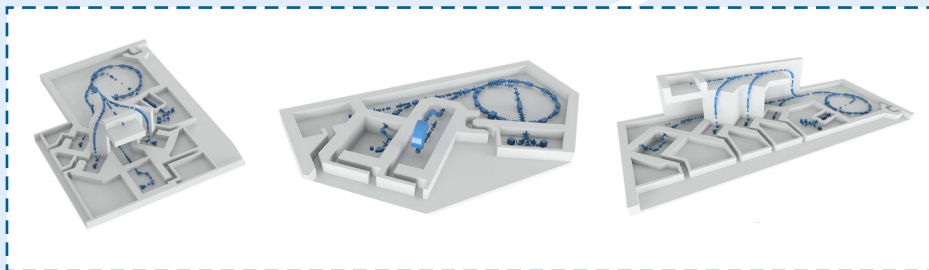
Protons up to 1.200 MeV
(clinically up to 250 MeV)
Carbon Ions up to 430 MeV/u

Field Size:

20 x 22 cm
(ongoing development)

Spot Size:

Lowest distance between
nozzle and patient for lowest
scattering effects



FEATURES

Certified for **protons and carbon ions**, ready for **helium ions**

Reduction of air gap between nozzle and target volume

Optimized **quality assurance** procedures saving beam time

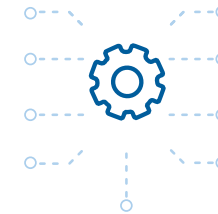
Highest **quality standards** (EN ISO 13485, IEC 60601-2-64, MDR)

Treatment for **ocular tumors** in supine position

Multi-ion treatment possibilities

Helium ready and **oxygen** preparation

Chair & cradle solution available soon



FLASH suitable

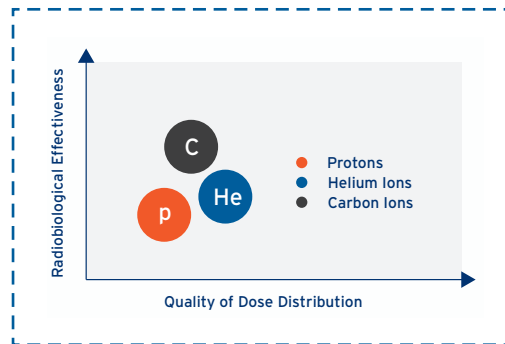
PARTICLES IN CANCER TREATMENT

Radiotherapy with charged particles allows better sparing of healthy tissue around the tumor compared to conventional radiotherapy. This is possible due to the physical attributes of these particles and the effect of the Bragg Peak. As a result, such therapy carries a **lower risk of side effects and late effects**. This ensures a better quality of life for those affected and can thus reduce the costs in the health system in the long term.

While currently **protons** are predominantly used in particle therapy, irradiation with heavy ions opens up additional possibilities.

Carbon ions, for example, produce dense ionization at the end of their track, which causes clustered DNA damage. The strong effects of carbon ion beams offer **greater tumor control** benefits for radiation resistant cancers and locally advanced or large tumors. Furthermore, carbon ion beams offer the possibility of **hypofractionation** due to less lateral scattering.

Helium ions are a promising candidate for further optimization of radiotherapy due to their physical and radiobiological properties.



The quality of the dose distribution and the radiobiological effectiveness (RBE) of the particles in comparison: the higher the radiobiological effectiveness of the particles, the higher the probability of tumor cell destruction. The better the quality of the dose distribution, the better healthy tissue can be spared.

SERVICES FOR YOUR PARTICLE THERAPY PROJECT



Concept & Planning



Hard- & Software



Maintenance & Service



Commissioning & Operation



Certification



Training



Radiation Protection

From concept to operational support, we are your one-stop shop for multi-ion treatment systems for cancer therapy. You benefit from our many years of experience as a manufacturer and user and gain a partner for your research & development endeavors.



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