THE NEXT CHAPTER OF PROTON THERAPY

MEDAUSTRON COMPACT 220

TecAustron

A MedAustron Group Company

WE

Our purpose is to cure cancer and prolong lives.

TecAustron is a **construction & project company** for the installation of high-end ion therapy centers. TecAustron 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.

From concept to operational support, we are your **one-stop shop and long-term partner** for 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.

OUR SERVICES FOR YOUR PARTICLE THERAPY PROJECT

- Concept & Planning
- Hard- & Software
- Maintenance & Service
- Commissioning & Operation
- Certification
- Training
- Radiation Protection

The MedAustron Ion Therapy Center has a synchrotron-based multi-ion therapy system and has been treating cancer patients of all ages since 2016. Its accelerator system was developed by in-house experts in cooperation with CERN and is operated, serviced and further developed by the local team. Regular exchange between the clinical and technical teams enables continuous process and system optimization, which we as TecAustron incorporate into new projects.

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 **compact** system, ready to use without a rebuild or new construction?

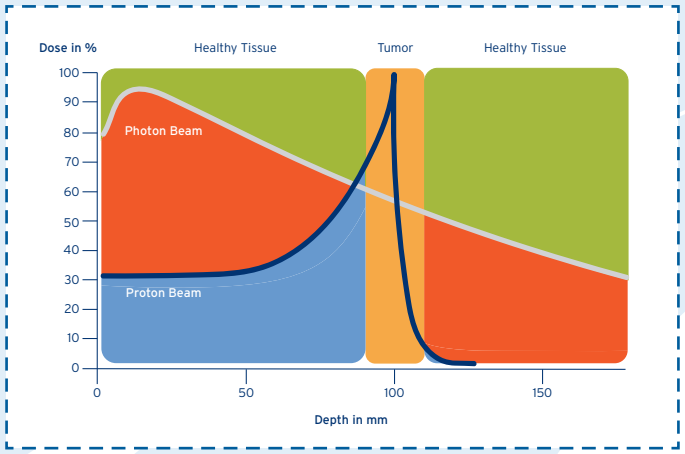
You want to establish an additional radiotherapy method **quickly** and **cost-effectively?**

PROTONS
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.

Currently, **protons** are predominantly used in particle therapy and are already used as standard for many indications.



Schematic representation of the Bragg Peak of proton beams compared to the dose profile of photon beams.

MEDAUSTRON
COMPACT 220
TREATMENT SYSTEM

The Compact 220 is a medical device for intensity-modulated **proton radiotherapy**. A synchrotron-based proton particle accelerator forms the core of the system, which is scalable thanks to its modular design: from a **compact single room** - small enough to be **retrofitted into existing treatment rooms** in a clinic - to a **multi-room solution**. Various in-room patient positioning system configurations (rotating chair, couch, gantry) are supported.

The system consists of a particle accelerator, a state-of-the-art beam delivery system, patient positioning and position verification systems and saftey and treatment control systems. It meets highest quality standards (ISO13485, ISO14971, IEC62304, as well as IEC60601-2-64 and ISO27001).

The Compact 220 is **easy to operate without a large team** and supports full-featured remote access for TecAustron experts.

TECHNICAL DETAILS

Field Size: 30 x 30 cm

Beam Energy:
Protons up to 220 MeV

Multi-energy extraction

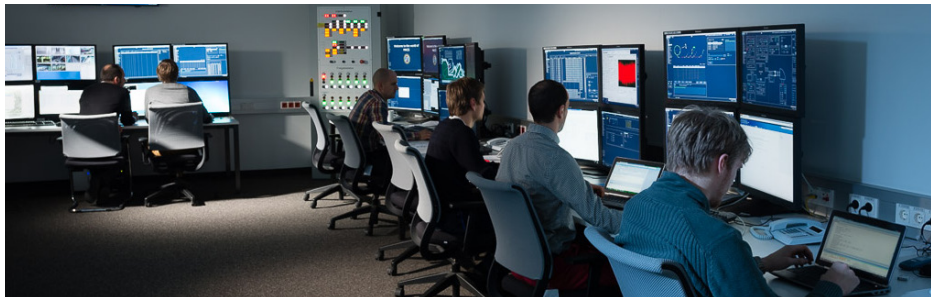
Synchrotron Circumference: 17.5 meters

Spot Size: Lowest distance between nozzle and patient for lowest scattering effects

Ready for **ARC Therapy**[1]

Ready for **FLASH Therapy**[2]

[1] possible with according PPS, [2] technically possible, clinically not available



MEDAUSTRON
COMPACT 220
TREATMENT SYSTEM

FEATURES AT A GLANCE

Small enough to be retro-fitted into **existing LINAC rooms**

Installed on a **turnkey** basis

Simple to operate without a large team

Reduced energy costs through energy-recuperating power system

Simplified spare part management and service activities

Minimal investemt for **expansion up to 3** treatment rooms

Flexible in-room equipment: Rotating chair for treatments in sitting position or 360 degree **gantry**

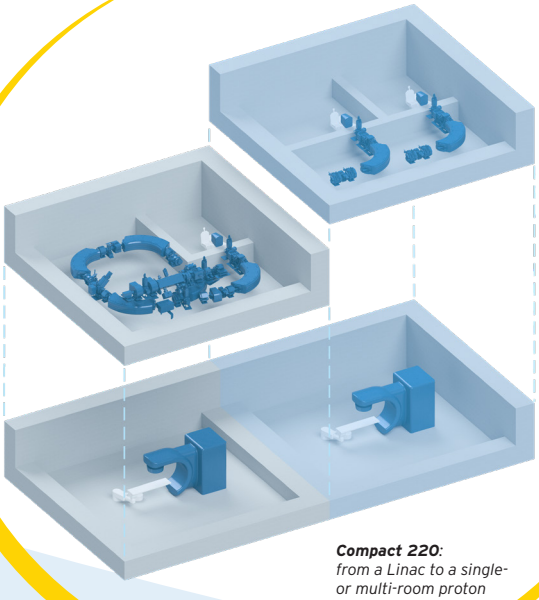
Cost-effective solution

Low ambient radiation dose levels

Interfaces for **respiratory gating** or **eye treatments** available

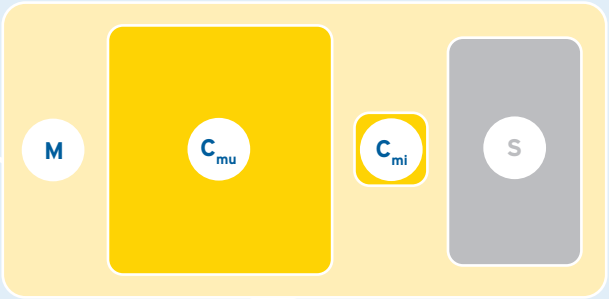
***Compact 220**: Single Room Solution Layout*

A MedAustron **compact ion system** provides you with a cost-effective addition of **modern cancer therapy.**



***Compact 220**: from a Linac to a single- or multi-room proton treatment system*

FOOTPRINT COMPARISON



MULTI-ION SYSTEM
M
MedAustron Multi-Ion 800: high-end solution for treatment and research (synchrotron-based)

COMPACT SYSTEMS
C_{mi} **MedAustron Compact 220 Mini:** single-room solution with chair
C_{mu} **MedAustron Compact 220 Multi:** 3-room solution with chair and two gantries

STANDARD PROTON SYSTEM
S
Not in portfolio: Cyclotron-based machine for treatment

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