

Best™ *Cyclotron Systems*

A TEAMBEST GLOBAL COMPANY

Turnkey solutions

for radioisotope production in nuclear medicine



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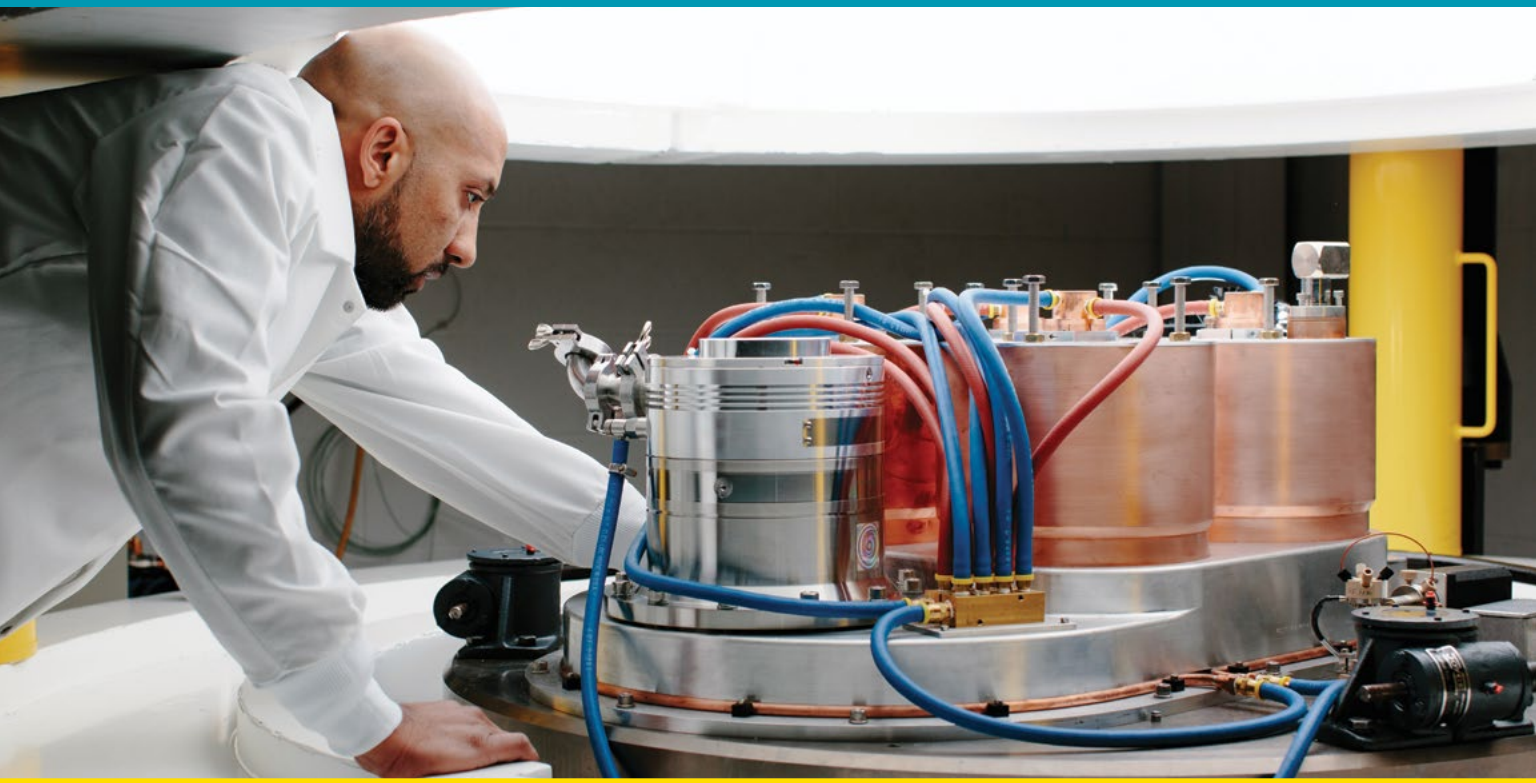
Welcome to TeamBest®

TeamBest®, through Best Cyclotron Systems, Inc. (BCS), offers radioisotopes and production capabilities for nuclear medicine and radiotherapy with its range of cyclotron systems. BCS's mission is to create technology to provide healthcare options for various needs around the world.

Our staff assists from the planning stage, detailed design, facility construction, daily production, maintenance and emergency repair through the TeamBest® network. We provide solutions for PET-CT and molecular imaging radiopharmaceuticals with the same

excellent customized care as demonstrated in our 40+ year history of radiotherapy support.

TeamBest® provides a system that fits the needs of every customer. We offer a turnkey solution—not only the cyclotron, but also targets, automated radiochemistry, infrastructure, operations and maintenance support. As consistent supplies of radioisotopes become more uncertain, particularly for reactor-supplied isotopes, the Best family of cyclotrons provides a Total Solution™ for the medical community with less dependence on unreliable sources.



Best™ Cyclotron Systems

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BG-95 Sub-Compact Self-Shielded Cyclotron

- Capable of producing: ^{18}F FDG, Na^{18}F , ^{18}F -MISO, ^{18}F FLT, ^{18}F -Choline, ^{18}F -DOPA, ^{18}F -PSMA, ^{13}N and ^{68}Ga
- Single or batch dose production
- Final dose delivery to syringe or vial
- Automated quality control testing
- Complete production lab in a 5 x 5 meter area

B6-15 MeV Compact High Current/ Variable Energy Proton Cyclotron

- 1–1000 μA extracted beam current
- Capable of producing the following isotopes:
 ^{18}F , ^{68}Ga , ^{89}Zr , $^{99\text{m}}\text{Tc}$, ^{11}C , ^{13}N , ^{15}O , ^{64}Cu , ^{67}Ga ,
 ^{111}In , ^{124}I , ^{225}Ac and ^{103}Pd
- Up to 5×10^{13} neutrons per second from external target
- 21 stripping foils at each stripping port for two minute rapid change

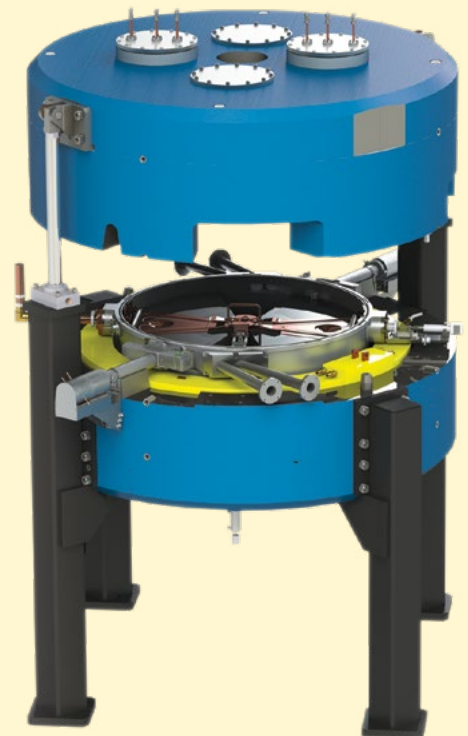


Isotope Production Capabilities | Best 15 Isotopes

PET	
Isotope	Application
Carbon-11	Broad Substitution
Nitrogen-13	Ammonia: blood flow
Oxygen-15	Blood flow, volume, oxygen utilization
Fluorine-18 aqueous	FDG mainly, many others
Fluorine-18 gas	Radiolabeling from gas phase
Copper-64	Integration through chelation chemistry
Iodine-124	Monoclonal antibodies

SPECT	
Isotope	Application
Gallium-67	Fe analog, inflammatory lesions
Technetium-99m	Many

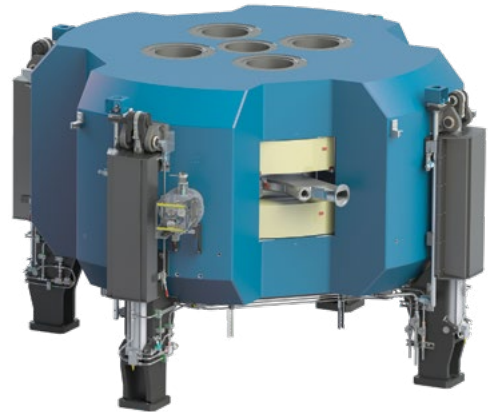
Therapeutic	
Isotope	Application
Palladium-103	Interstitial implants, brachytherapy



*Some products shown are under development and not currently available for sale.

B35adp Alpha/Deuteron/Proton Cyclotron for Medical Radioisotope Production and Other Applications

- **Proton Particle Beam:**
1000 μ A Beam Current up to 35 MeV Energy
- **Deuteron Particle Beam:**
500 μ A Beam Current up to 15 MeV Energy
- **Alpha Particle Beam:**
200 μ A Beam Current up to 35 MeV Energy



Isotope Production Capabilities | Best 25/28u/35 Isotopes

Isotope	Application
Iodine-123	Low dose imaging agent, replacing I ¹³¹
Indium-111	Blood cell labeling
Gallium-68 (generator)	Blood-brain barrier integrity, tumor localization
Thallium-201	Myocardium functional assessment
Krypton-81m (generator)	Gas for ventilation imaging or in solution for perfusion imaging
PLUS all the isotopes the Best 15 can produce	



PHOTO: Assembly of B35 MeV Cyclotron at the Best Theratronics facility in Ottawa, Ontario, Canada.



Best 70 MeV Cyclotron Ideal for Sr-82/ Rb-82 Supply and Research

- 70-35 MeV variable energy H⁻ cyclotron
- 700 μ A extracted beam current (upgradable to 1000 μ A)
- 2 simultaneous extracted beams
- Multiple independent beam lines and target positions



Isotope Production Capabilities | Best 70 Isotopes

Isotope	Application
Rubidium-82 (generator)	Diagnosis of coronary artery disease, coronary stenosis, myocardial infarction imaging, viability, collateral function and cardiomyopathy
Iodine-123	Low dose imaging agent, replacing I ¹³¹
Copper-67	Used in radiotherapy by accumulation in tumor tissue using monoclonal antibodies
Krypton-81m (generator)	Used either in gaseous form for ventilation imaging or in solution for perfusion imaging
<i>Research: Physics, chemistry, radioactive ion beam, activation energy, etc.</i>	

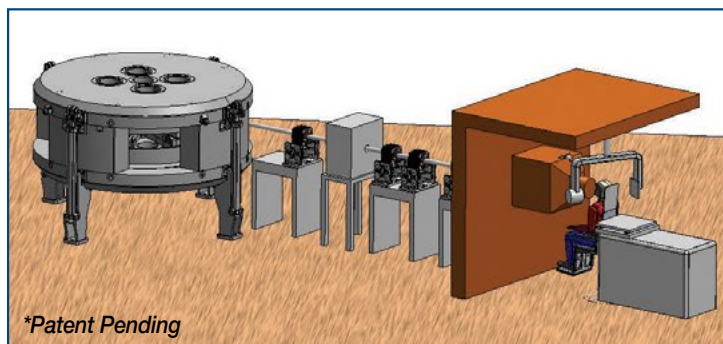


PHOTO: Installation of Best 70 MeV Cyclotron at INFN, Legnaro, Italy.



Best Model 200p Cyclotron for Proton Therapy*

- From 70 MeV up to 200 MeV
- Dedicated for Proton Therapy with two beam lines and two treatment rooms
- For all Medical Treatments including: Benign and Malignant Tumors, Neurological, Eye, Head/Neck, Pediatric, Lung Cancers, Vascular/ Cardiac/Stenosis/Ablation, etc.



Best Cyclotrons of Varying Energies

B100 Cyclotron	7.5 MeV	<ul style="list-style-type: none"> • Capable of producing: ^{18}FFDG and Na^{18}F • Integrated self-shielded cyclotron chemistry module and FDG QC module • Complete production lab in 5 x 5 meter area • Single or batch dose production
BG-95 Cyclotron	1-9.5 MeV	Low energy, self-shielded compact system capable of producing: ^{18}F FDG, Na^{18}F , ^{18}F -MISO, ^{18}F FLT, ^{18}F -Choline, ^{18}F -DOPA, ^{18}F -PSMA, ^{13}N and ^{68}Ga
Best Cyclotrons	1-3 MeV	Deuterons for materials analysis*
	70-200 MeV	For Proton Therapy*
	3-90 MeV	High current proton beams for neutron production and delivery*
B6-15 Cyclotron	1-15 MeV	Proton only, capable of high current up to 1000 Micro Amps, for medical radioisotopes
B25 Cyclotron	20, 15-25 MeV	Proton only, capable of high current up to 1000 Micro Amps, for medical radioisotopes
B25u-35adp Cyclotron	25-35 MeV	Proton or alpha/deuteron/proton, capable of high current up to 1000 Micro Amps, for medical radioisotopes
B35 Cyclotron	35 MeV	Proton only system for medical radioisotopes
B70/70adp Cyclotron	35-70 MeV	Proton or alpha/deuteron/proton, capable of high current up to 1000 Micro Amps, for medical radioisotopes
B200p Cyclotron	From 70 MeV up to 200 MeV	For all Medical Treatments including Benign and Malignant Tumors, Neurological, Eye, Head/Neck, Pediatric, Lung Cancers, Vascular/ Cardiac/Stenosis/Ablation, etc.*

*Patent Pending

Best Particle Therapy 400 MeV ion Rapid Cycling Medical Synchrotron (iRCMS) for Proton-to-Carbon, Variable Energy Heavy Ion Therapy, with or without Gantries – Single and Multi-Room Solutions

Rapid Cycling Technology:

- Intrinsically small beams facilitating beam delivery with precision
- Small beam sizes – small magnets, light gantries – smaller footprint
- Highly efficient single turn extraction
- Flexibility – heavy ion beam therapy (protons and/or carbon), future beam delivery modalities

Best Radiation Therapy and Diagnostic Center

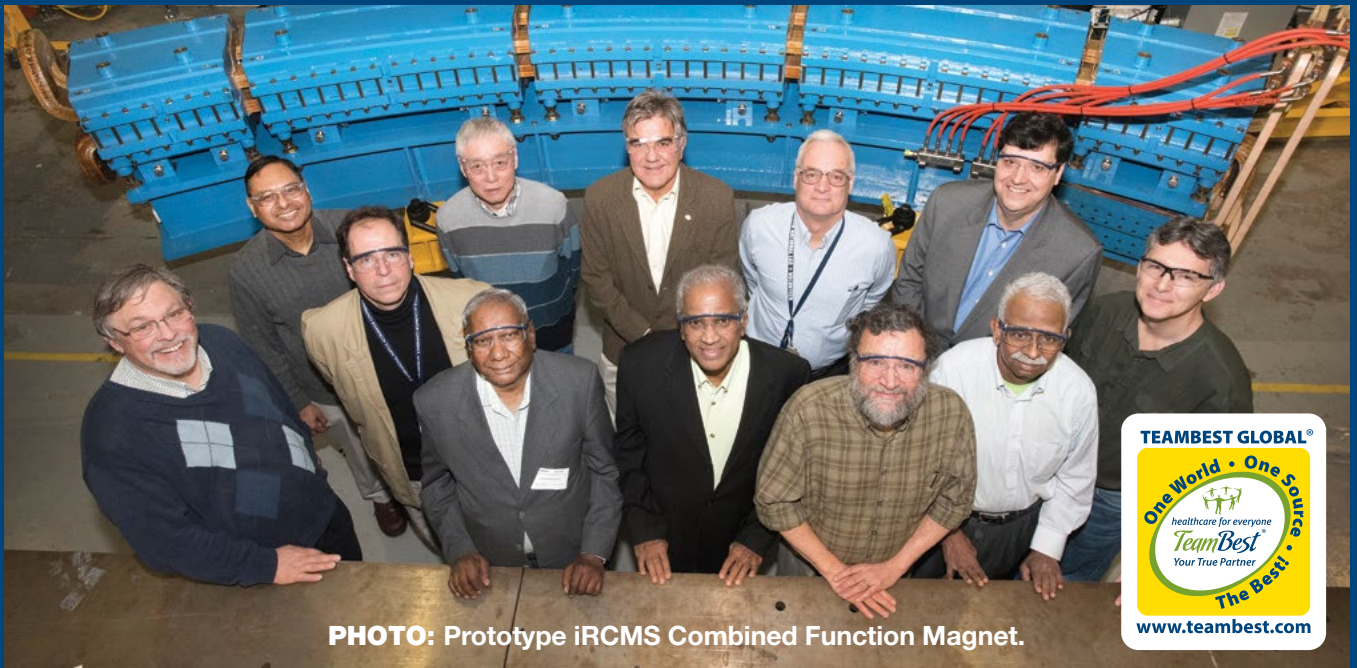
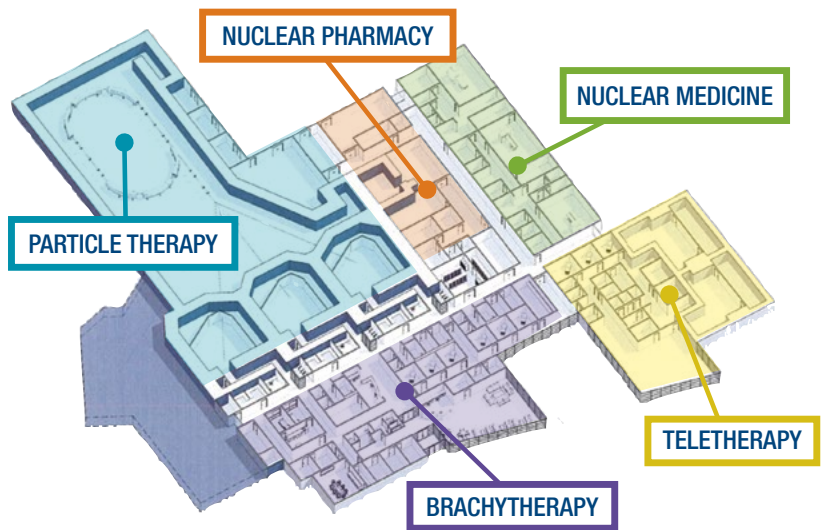


PHOTO: Prototype iRCMS Combined Function Magnet.

