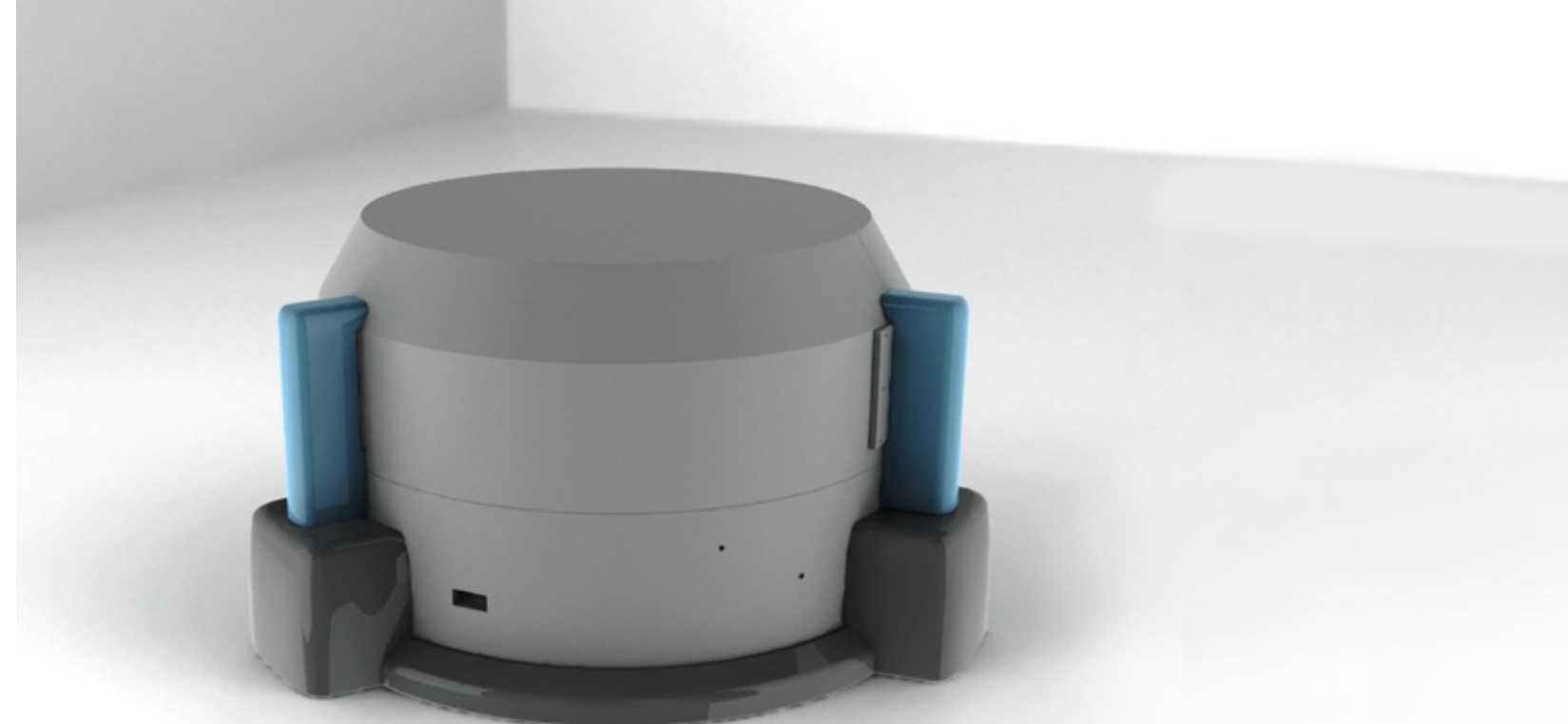
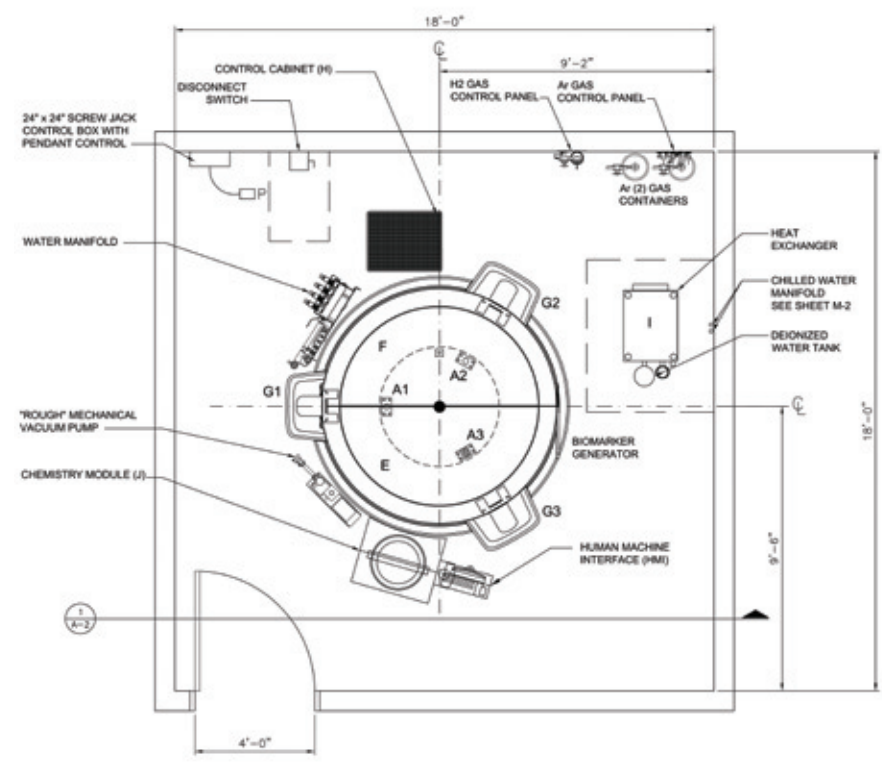




“DOSE ON DEMAND”

Technical Specifications	
Facility Requirements	
Room vertical height	2.45 m
Room width and height	5.50 m
Power Requirements	
Electrical Requirements	240 v Single Phase, 70 Amps
Chilled Water System	
	6 Kw at 16° C



Biomarker Generator

A HISTORY OF EXPERTISE

The company was started in 2006 and is located in Knoxville, Tennessee, very close to where clinical PET was developed over the past 25 years at CTI Molecular Imaging. Ronald Nutt, Chairman of the Board and Lynda Nutt started ABT Molecular Imaging with the mission of providing technologies that produce PET biomarkers, C-11 and F-18, economically, on-demand and efficiently to the biotechnology and clinical fields, without the need of radiochemistry or PET accelerator expertise. The new “Dose-on-Demand” Biomarker Generator provides an ultra-compact micro-accelerator, with integrated micro-chemistry and automated quality control modules, for one-step production of patient doses.



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Simplicity

PET Biomarkers at the Push of a Button

ABT's Biomarker Generator integrates a radioisotope generator, kit based micro-radiochemistry, and automated quality control to provide PET Biomarkers at the user's fingertips.

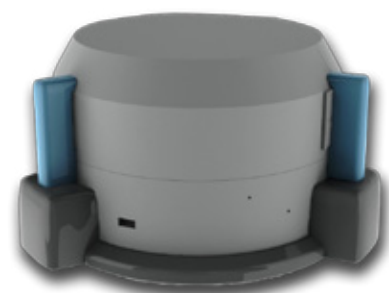
- Simple GUI interface navigates the user through the production process
- Embedded production and quality control processes minimizes the need for highly specialized staff
- Existing technical staff can operate the system to produce PET Biomarkers

Small Size

Simple Facility Installation

ABT's Biomarker Generator's self-shielding, small size and low power requirements allow for a simple installation with minimal facility modifications

- A complete PET Biomarker Lab in a 30 square meter room
- Self-shielded accelerator and chemistry produces a low radiation burden
- Minimal modifications to the facility for a quick and low cost installation



Self-shielded Biomarker Generator

Efficiency

Economic, Rapid Production

Scaled for a single user, the Biomarker Generator is a cost effective solution to introduce or expand the use of PET in your facility

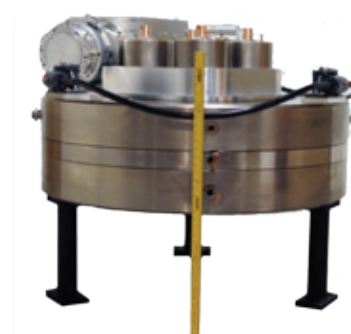
- Single dose production scaled for a single user
- Consumable reagent kits and dose synthesis cards
- Low infrastructure requirements dramatically reduce operating costs

Flexibility

Biomarkers for Clinical and Research Use

ABT's Biomarker Generator produces the critical PET Biomarker, FDG, for today's clinical needs and is easily adaptable for future radioisotope and PET biomarkers of tomorrow.

- Single dose production of an FDG dose every 30 minutes
- F-18 available with C-11 production in development
- Advanced F-18 biomarker capability



7.5 MeV Positive ion cyclotron

Technical Specifications	
Low energy, positive ion radioisotope generator	
Beam Characteristics:	
Particle	Proton
Internal Beam Energy	7.5 MeV
Internal Beam Current	<5 uAmps for F-18
Internal Target Ports	3 (non-simultaneous)
Physical Design:	
Pole Diameter	74.8 mm
Extraction Radius	35 cm
Dee System	4
Dee Operating Voltage	16 kV max
Frequency	72 MHz
Magnetic Field	1.2 Tesla average 1.8 Tesla max
Physical Dimensions:	
Magnet Mass	3.5 tons
Cyclotron Height	0.37 m
Cyclotron Diameter	1.25 m

Micro-Chemistry
with single use Dose
Synthesis Card



Self-Shielding for generator and chemistry minimizes exposure, eliminates the need for additional lead enclosures, and reduces facility modifications.

Generator Shields	
Material Casing	1/4" Steel
Shielding Material	Dense Concrete & Boronated Polyethylene
Diameter	2.39 m
Height	1.63 m
Weight	21 tons

Chemistry Platform	
Dimensions	81.3 x 68.6 x 101.6 cm
Weight	.5 tons
Radiation Field Room Boundary	< 1 mR/hour

Multiple target ports and simple F-18 target design maximizes uptime and reduces user exposure

Target volume	< 300 ul
Target current	<5 uAmps
Target material	Stainless steel
F-18 Specification	1 mCi per min of bombardment time

FDG production on demand with consumable kits, cards and embedded controls minimizes technical production staff.

FDG synthesis time	< 30 minutes
Final radioactivity yield	10 – 13 mCi's
Final product volume	2.0 ml
Control system	HMI with embedded control
Consumables	Reagent kits with dose synthesis cards

The ABT Biomarker Generator and its component systems including targets and automated chemistry and quality control systems are delivered as laboratory equipment for the production and testing of PET radioisotopes and biomarkers. It is the exclusive responsibility of the user to comply with local and federal regulations for the production of PET radioisotopes and biomarkers and for the administration of the products made with the Biomarker Generator for human use. ABT disclaims all responsibility in this respect. All specifications are subject to change.

*Patent # 7,476,883