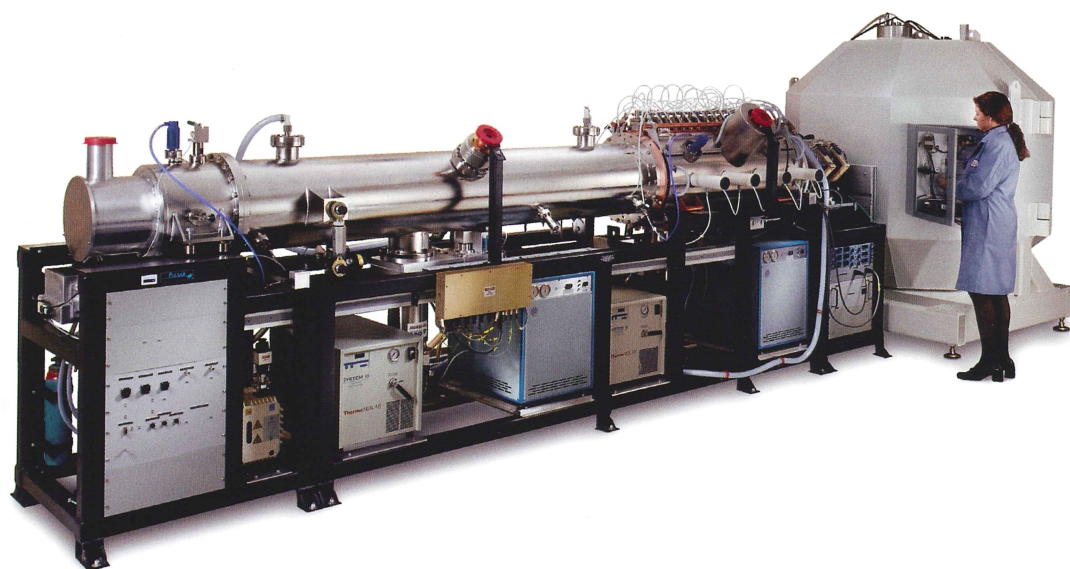


PULSAR™

PULSAR™ 7 PET Isotope Production System



The PULSAR™ 7 system represents the next generation in reliable, cost-effective positron isotope and tracer production. It is a rugged, reliable, high performance system that assures unparalleled operational and upgrade flexibility at the lowest available life-cycle cost. The PULSAR™ 7 takes advantage of the rf proton linac system's compactness, light weight, ruggedness and simplicity of operation to deliver highly reliable ^{18}F -FDG production at the lowest possible cost.

The proton energy of 7.0 MeV chosen for the PULSAR™ 7 is the optimum energy for the production of useful quantities (i. e. up to 1000 mCi) of ^{18}F using the modest beam current available and a bombardment time of 1 hour for ^{18}F . Higher energies require much larger, heavier, more complex and costlier accelerators for comparable performance, with only a small decrease in current needed.



PULSAR™ 7 PET Isotope Production System

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3.5 MeV RFQ linac
3.5 Drift Tube Linac
Ion Injector system
2 425 MHz Amplifiers
Target ladder with ¹⁸F targets
Target Shield
Automatic control system
FDG synthesizer

Hot Laboratory (optional)

Laminar flow hood
Fume hood
Mini-cell for synthesizer
TLC and GC systems
LAL reader system
Dose calibrator
Incubator
De-pyrogenation oven
Complete FDG production laboratory can be supplied

AC ELECTRICAL REQUIREMENT

- 208 Volt, 3 phase, 60 Hz, 40 A, 5% regulation
- No auxiliary standby supply is required

Single phase electric utility outlets should be provided in all rooms.

AC POWER CONSUMPTION

- 25 kW maximum load at full power
- 5 kW continuous load for vacuum system

LINAC

Particle	H ⁺
Energy	7.0 MeV
Current	> 150 μA
Size (L x W x H)	14.5' x 2.5' x 5.5'
Weight	6,100 lbs
Input Power	25 kW
Cooling Water	20 gpm

SHIELD

Size	78" x 74" x 90"
Weight	20,000 lbs

ELECTRONIC CABINETS

Size (LxWxH)	42" x 86" x 32" (x2)
Weight	1800 lb (x2)
Size (LxWxH)	24" x 27" x 86"
Weight	500 lb



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