

NuPET Bio 66 Data Sheet

Cubresa's Small Animal PET scanner and animal handling system specifically designed for high containment labs

The NuPET Bio 66 stand-alone system consists of a scanner, a docking station, a workstation with software packages installed, quality control and calibration phantoms, and animal handling accessories designed for BSL labs. Building on the NuPET 66 core unit, the NuPET Bio 66 has the *BSL-3 compatibility kit*:

Envelope of robust, non-porous plastic covering the outer and inner exposed parts of the PET unit. This allows the system to be decontaminated effectively per institutional cleaning protocols and protects sensitive PET electronics.



The small animal NuPET Bio, built for mouse and rat imaging, has the following animal handling:

Reusable, fully enclosed rodent handling tube made of a robust, non-porous material that fully encases the animal and prevents the release of airborne pathogens. The tube has customized ports to allow the user to connect the rodent to their unique ventilation/anaesthesia equipment. The tube will ensure that each animal is oriented in the same way during the scan, to allow for image registration.

Performance Features and Specifications

Parameter	Value
Axial Field of View	67 mm
Trans-axial Field of View	59 mm
NEMA NU-4 2008 Spatial Resolution Filtered Backprojection	1.3mm
Spatial Resolution – PSF (2it8ss)	0.9mm
NEMA NU-4 2008 Sensitivity	> 5.5 %
Reconstruction Speed	Filtered Back Projection – 3 minutes OSMAPOSL (8 iterations, 8ss) – 5 minutes PSF (3 iterations, 8 subsets) – 5 minutes

Scanner

Voltage	30 VDC supplied from Docking Station
Outer Diameter	120 mm
Inner Diameter	75 mm
Weight	15 pounds
Connection to Docking Station	Copper Cable

Docking Station

Voltage	120 VAC and 240 VAC
Power	340 Watts
Breaker or Fuse	Fuse
Dimensions	56cm (22.1") W x 87cm (34.1") H x 67cm (26.4") D
Connection to NuPET Workstation	Multi-mode fiber

Standard Operating Conditions

Operating Temperature	20—35 °C are normal temperatures for the PET Scanner. Temperatures of 35—50 °C will be reached in those cases when the animal being imaged is being heated with 35—50 °C hot air.
RoHS	Yes
Humidity	For an operational system, the ambient relative humidity ranges from 10% to 80% with 29°C (84.2°F) maximum dew point.

Phantoms

Calibration Phantom	Fillable annulus
Quality Control Phantom	Fillable cylinder

Available Options

Image Analysis	Invicro VivoQuant packages are available
Respiratory Gating	Respiratory gating is connected to the SAI 3050 system or equivalent