# NeuroLF® System
# Technical Specifications

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## System Overview

| Device specifications | |
|---|---|
| Weight scanner unit | ca. 400 kg / 880 lbs |
| Weight patient seat | ca. 130 kg / 290 lbs |
| Total NeuroLF weight | ca. 535 kg / 1.180 lbs |
| Dimension (H × L × W) | 161 × 214 × 70 cm<br>5.4 × 7.0 × 2.4 ft |
| Cooling | Air cooled |
| Seat capacity | 200 kg / 440 lbs |

## System Hardware

| System Hardware Standard | |
|---|---|
| Scanner diameter | 260 mm |
| Detector ring diameter | 271 mm |
| Axial field of view | 163 mm |
| Detector material | LYSO |
| Crystal size | 3.19 × 3.19 × (10, 15, 20) mm |
| Crystals per module | 1536 |
| SiPMs per module | 384 |
| SiPM coverage of crystal arrays | 38 % |
| Crystal elements total | 12288 |
| SiPMs total | 3072 |

## Environmental Requirements

| Scanner Room Environment | |
|---|---|
| Temperature range | 18 – 26 °C |
| Temperature should not vary more than | ±1.5°C / 2.7°F per hour |
| Relative air humidity | 20 – 70 % |
| Power requirements | 110/240 V, 1 kW |
| Recommended room size | 2.7 × 4 m / 9 × 13 ft |

| Operator's Room Environment | |
|---|---|
| No constraints on temperature or humidity (just standard computer) | |
| Recommended room size | 2 × 4 m / 7 × 13 ft |

## System Software

| Acquisition Parameters | |
|---|---|
| Coincidence window | 3.5 ns |
| Energy window | 400 – 650 keV |
| Acquisition mode | One time frame |
| Acquisition start / stop | Time based, coincidence counter, manual |
| Acquisition types | Patient, phantom, daily routine source, calibration source |

| Reconstruction Parameters | |
|---|---|
| Imaging matrix | 95 x 165 x 165 voxels |
| Voxel size | 1.66 × 1.66 × 1.66 $mm^3$ |
| Attenuation Correction | CT-template co-registration |
| Reconstruction Time | Approx. 15 min |

## NEMA NU-2 2018 Performance

| 10mm Crystals | |
|---|---|
| Spatial resolution at 1cm (average FBP) | 2.5 mm |
| Spatial resolution at 10 cm (average FBP) | 3.6 mm |
| Sensitivity at center of FOV | 5.9 cps/kBq / 28.3 cps/kBq * |
| Sensitivity at the edge of FOV | 8.1 cps/kBq / 39.1 cps/kBq * |

* First value is according to NEMA NU-2 2018 standard, the second one is adjusted to reflect the shorter axial FOV compared to whole-body PET scanners.

sagittal transverse coronal

- Hoffman phantom acquired with NeuroLF system
- Acquisition: activity 33MBq, 15 minutes acquisition time
- Reconstruction: random, attenuation and scatter correction; 3 × 3 × 3 median filter, reconstruction time less than 15 minutes

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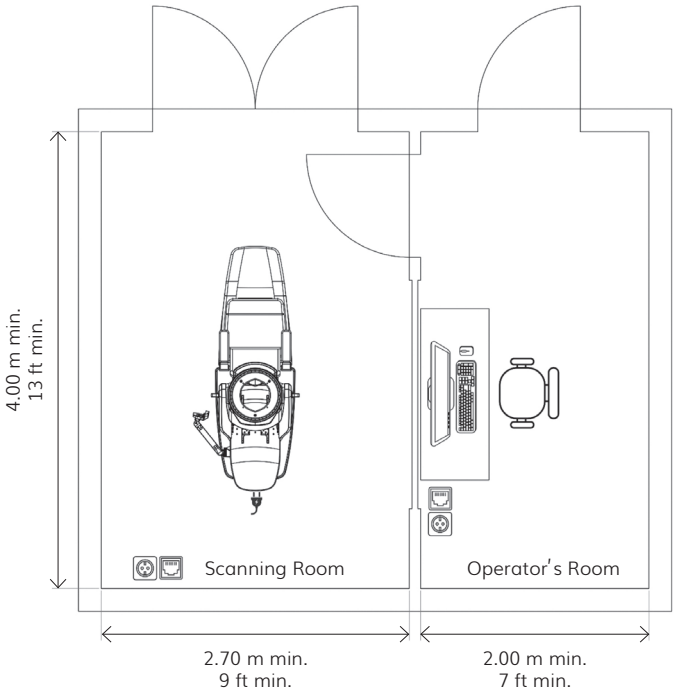
## Example Room Layout




Note: This layout is for reference purposes only.
The system layout varies by site.

## NeuroLF with Dimensions


## DISCLAIMER

Positrigo AG reserves the right to modify the design and specifications contained herein without prior notice. Please contact your local sales representative for the most current information. Some options and functionality will not be available immediately on product release. Where certain options and functionality are not available on delivery, these will be delivered as part of subsequent software or hardware releases. Please confirm availability and timing with your representative.



The NeuroLF System is commercially available in the European Union and in the USA.

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