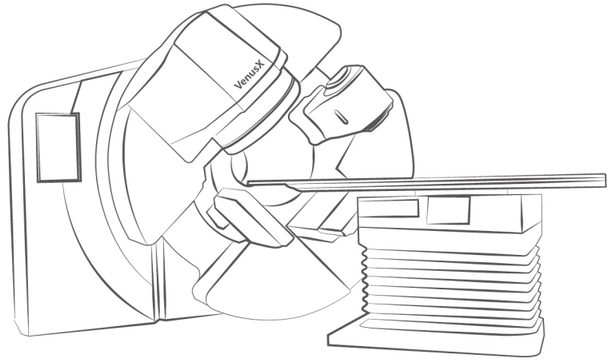
不断为放疗领域带来先进技术



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Specifications are subject to change without notice. Not all features and options listed in this document are available in all markets.

Summary of Intended Use

LinaTech linear accelerator is designed to provide precision radiation therapy to lesions, tumors and conditions anywhere in the body that require radiation therapy.

Important Safety Information

Radiation therapy can have different side effects depending on the part of the body being treated. The most common symptoms may include but are not limited to, irritation to the respiratory, digestive, urinary or reproductive systems, fatigue, nausea, skin irritation and hair loss. Symptoms can be severe in some specific patients. Radiation therapy is not suitable for all cancers.

LAD 10333

04/2022

LinaTech

VenusX

Specifications

VI.0

VenusX Performance Parameters

This document briefly summarizes the main performance parameters of VenusX. Unless otherwise specified, all units follow the IEC61217 standard.

Beam Specifications

Specifications	
Beam energy (MV)	6 FFF
Maximum dose rate (cGy/min)	1000
Maximum open field (cmxcm)	40×40
Maximum dose depth (cm)	1.4±0.1
Percentage depth dose at 10cm underwater	63.0±0.5%
Symmetry	≤2%
Effective beam half-opening angle	15°

Dosage Specifications

Specifications	
Output dose error	≤1% or 0.25MU
The stability of the output dose when the gantry rotates	≤1%
Dose Rate Stability	≤1%

Imaging Mode and Treatment Mode Specifications

Specifications	
Imaging technology	kV-kV，kV-MV，MV-MV，CBCT
Treatment techniques	2D/3DCRT、IMRT、VMAT、SRS/SBRT

Geometric Specifications

Specifications	
Gantry structure	Integrated ring gantry
Rotation angle of outer ring frame (degree)	±185
Rotation angle of inner ring frame (degree)	±40
Rotation accuracy of outer ring frame (degree)	≤0.1
Rotation accuracy of inner ring frame (degree)	≤0.1
Isocenter height (mm)	≤1350
Isocenter to treatment head clear space (mm)	470
Mechanical isocenter accuracy (mm)	≤0.5
Beam hit size (mm)	≤2

Environmental Specifications

Specifications	
Temperature range (°C)	15-35
Relative humidity range (%)	30-75
Atmospheric pressure (kPa)	70-110

Beam Device Specifications

Specifications	
Collimator installation method	Upper and lower double-layer orthogonal MLC installation
Collimator layers	2 (standard), 3 (optional)
Number of leaves	102 pairs (204 pieces), 153 pairs (306 pieces)
Leaf minimum physical thickness (mm)	1.63
Leaf maximum speed at isocenter (cm/sec)	7
Leaf thickness at isocenter (mm)	4
Maximum open field at isocenter(cmxcm)	40 × 40
Total thickness between leaves (cm)	14
Maximum distance over isocenter (cm)	15
leaves/end transmittance	≤0.1%
Leaves positioning accuracy (mm)	≤0.25

kV Imaging System Specifications

Specifications	
Beam type	Cone beam
Maximum FOV(cm)	≥35
CBCT reconstruction resolution (lp/cm)	≥12
Available scan thickness	0.5mm-10mm
Spatial resolution	2816×2816
Detector type	Amorphous Silicon X-ray Digital Flat Panel Detector
Dynamic image acquisition speed (fps)	≥25

Integrated Optical Body Surface Scanning Device Specifications

Specifications	
Camera resolution	1600×1200
Camera maximum frame rate (fps)	60
Projector resolution	1140×912
Projector maximum frame rate (fps)	120
Optical distance ruler accuracy (mm)	≤1
Light field accuracy (mm)	≤2
Automatic positioning accuracy (mm)	≤1
Dynamic monitoring (respiratory gating) accuracy (mm)	≤1

Treatment Couch Specifications

Specifications	
Maximum load (kg)	250
Positioning accuracy	≤0.5mm，≤0.3°
Motion Dimension	4（standard）、6（optional）
Lateral travel range (cm)	±25
Vertical travel range (cm)	53.5
Longitudinal travel range (cm)	130
Couch adjustable minimum height (cm)	≤85
Rotational (yaw) about isocenter (degrees)	±95
Rotational (pitch) about isocenter (degrees)	±1.5
Rotational (roll) about isocenter (degrees)	±1.5
An exposure range with a single long target	65cmX40cm
The max. exposure range of a single plan	160cmX40cm

MV Imaging System Specifications

Specifications	
Robotic arm repeatability (mm)	0.5
Effective image sensing area (cm)	40×40
Spatial resolution	2816×2816
Detector type	Cesium iodide
Dynamic image acquisition speed (fps)	25
Coincidence of image center and beam center (mm)	±1
Minimum exposure dose (MU)	≤0.5
Support quality control mode	Daily inspection, weekly inspection, monthly inspection, quarterly inspection, annual inspection

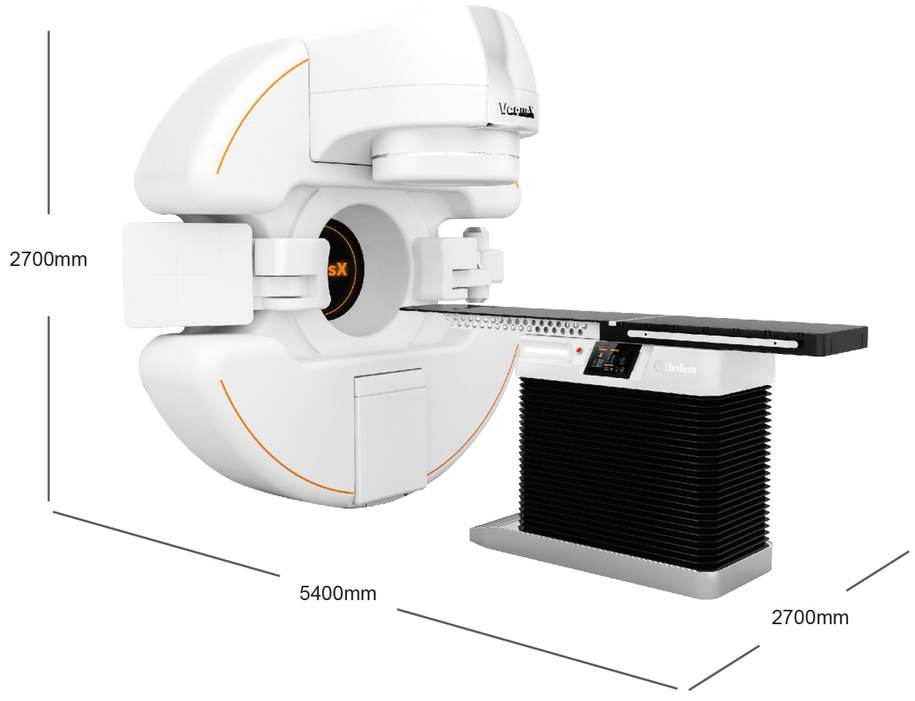
Power Supply Configuration Standard

Specifications	
Three-phase AC input voltage	380 V±10%：50HZ±3%
Maximum power	120 kVA

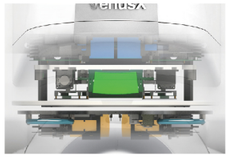
LINAC Use Minimum Size Criteria

Specifications	
Height (m)	2.7
Width (m)	2.7
Length (m)	5.4

VenusX Size



Stereotactic Radiotherapy System ("D2SRS" add-on accessories)



- 51 pairs 2mm thickness leaves
- The aperture of the cone ranges from 5mm-30mm, with total of 9
- The maximum radiation field of the isocenter is 10cmx10cm
- Suitable for SRS/SBRT

Intensity Modulated Radiation Therapy Planning System TiGRT TPS

Technical Description

Specifications
DICOM 3.0/ RT import and export modules
CT/MRI/PET/SPECT and other patient image fusion modules
Patient organ and target area contour module: supports automated AI contour of more than 70 organs such as skin, whole brain, lung, spinal cord, and eyes
Plan design module
External irradiation plan design module
3D Forward Conformal Planning Module
3D dose calculation module
Dose calculation module based on Monte Carlo algorithm
Inverse IMRT plan module: support orthogonal dual (or triple) static IMRT, dynamic IMRT, VMAT, SRS/SBRT
Program Evaluation and Other Modules
QA function module
Patient and Machine Data Management Module

Monte Carlo Algorithm **Doctor Work Station** **Multimodal Image Fusion** **Data Modeling**