

Planmed XFI[®]

Full-body weight-bearing CT with a low dose



Full-body weight-bearing cone-beam CT

Planmed XFI® is a unique cone-beam computed tomography (CBCT) system that provides comprehensive imaging in both standing (weight-bearing) and supine positions. With Planmed XFI, you can significantly enhance your orthopedic imaging capabilities.



High-quality 3D images

Planmed XFI offers an extensive field of view (FOV), enabling precise imaging of the entire body without exposing the patient to excess radiation.

The Planmed XFI CBCT scanner features a wide 85 cm opening and a broad field of view for imaging patients in both supine and weight-bearing positions. Its large flat-panel detector and high-power X-ray source rotate 360 degrees around the target, rapidly capturing detailed 3D views of the anatomy. The system delivers ultra-high resolution 3D images up to 75 microns, ensuring exceptional clarity and precision.

Low dose imaging with optimal image quality

As 3D imaging technology evolves, it is essential to balance its diagnostic benefits against the risks of radiation exposure, particularly for children who are more vulnerable. The ALADA principle (As Low As Diagnostically Acceptable) emphasizes minimizing radiation exposure while preserving diagnostic image quality.

The intelligent CBCT and image optimization technologies utilized in the Planmed XFI® scanner enable low effective patient doses without compromising image quality.

Benefits of 3D weight-bearing imaging



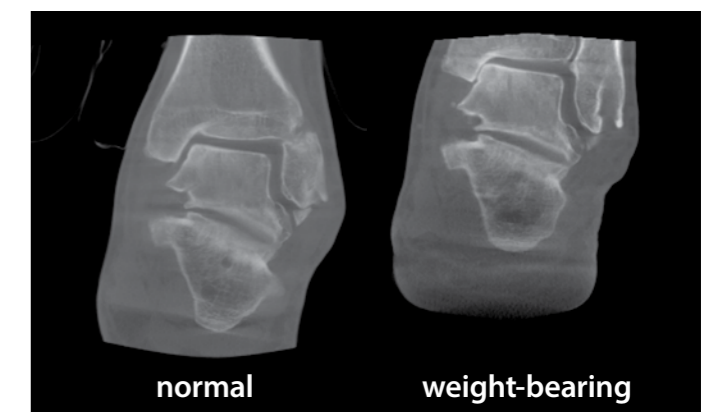
Weight-bearing imaging plays a vital role in assessing musculoskeletal conditions, particularly in the lower back and pelvis, by revealing pathologies that may not be visible when the body is at rest. This imaging technique allows surgeons to evaluate several key areas:

- 1. Spinal alignment:** Identifies discrepancies in vertebral alignment with clarity.
- 2. Pelvic orientation:** Clarifies pelvic positioning, which affects overall spinal and lower extremity alignment—crucial for surgical planning.
- 3. Joint interactions:** Demonstrates joint behavior under normal weight-bearing conditions, providing insight into potential issues such as osteoarthritis.
- 4. Implant positioning:** Assesses previously placed implants under load, helping anticipate complications.
- 5. Functional assessment:** Enhances understanding of biomechanical function, supporting effective treatment planning.

Overall, integrating weight-bearing imaging into pre-surgical evaluations enhances surgical decision-making, reduces the risk of future complications, and leads to improved treatment outcomes.

3D weight-bearing imaging overcomes the challenges of projection differences and overlapping structures, providing a more accurate representation of anatomy in its natural, functional position. This technology offers clearer insights into joint space narrowing and other conditions that might be missed with conventional diagnostic methods.

Planmed XFI is a cutting-edge orthopedic imaging system designed for detailed, full-body weight-bearing assessments.



Technical specifications

General

- Full-body weight-bearing CT
- Motorized patient table
- Laser-guided positioning

Control station

- Remote control
- AWS

Connectivity

- DICOM 3.0 compatibility
- RIS and PACS integration

Detector

- Large FPD 43 × 43 cm
- Up to 75 µm resolution
- SID 108 cm
- Isotropic resolution

- 360-degree rotation

X-ray tube and generator

- 80–140 kV
- 5–100 mA
- Automatic Exposure Control (AEC)

Electrical requirements

- Line voltage 180-240 V / 50 Hz
- Line current 16 A

Dimensions

- Bore 85 cm, FOV up to 23 x 44cm
- L x H x W: 248 × 176 × 162 cm (97.6 × 69.3 × 63.8 in)
- Weight approx. 550 kg



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Planmed Oy Planmed XFI is FDA 510(k) cleared (K293318), pending CE mark approval
Planmed XFI is not cleared for imaging the head in the US

