

Multitom Rax

Move beyond traditional X-ray

siemens-healthineers.com/multitom-rax



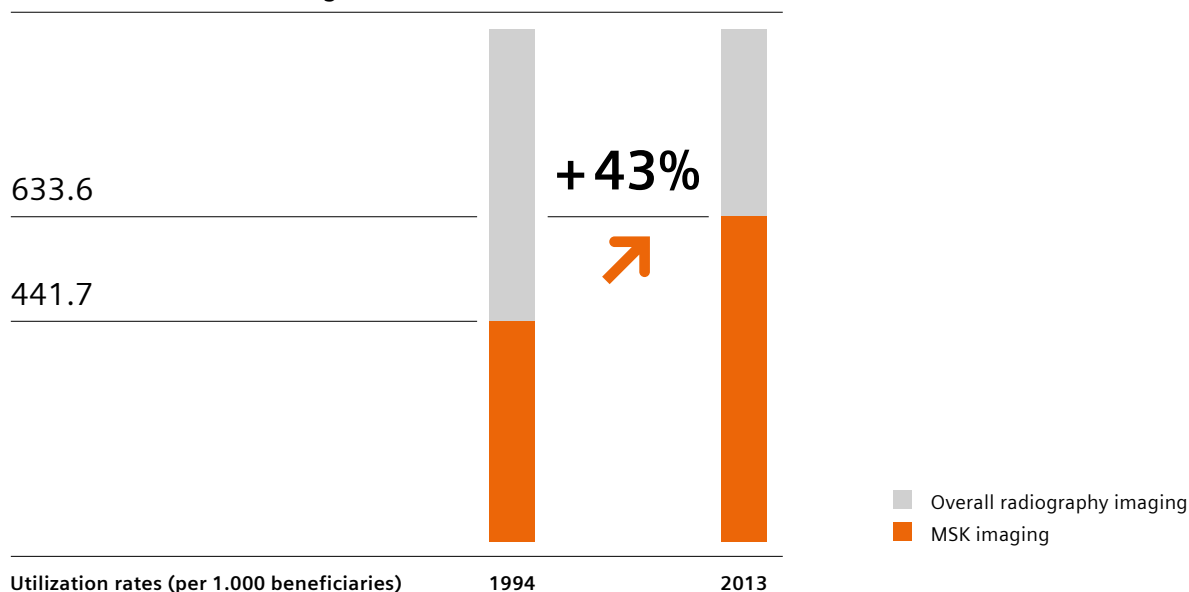
Study ID 5aab011



Radiography remains key

Around the world, musculoskeletal imaging (MSK) is of great importance. Radiologists in the United Kingdom report MSK as their main primary interest.¹ In Germany, MSK accounts for up to 70% of radiological examinations.² In the United States, radiography is the most commonly used MSK modality (63.4% in 2013), despite having shown only 43% growth from 1994 to 2013.³ And although the other MSK modalities (MRI, CT, and ultrasound) have grown more dramatically, X-ray remains essential.

Changing Musculoskeletal Extremity Imaging
Utilization from 1994 through 2013:



In the United States, radiography is the most commonly used MSK modality (63.4% in 2013), despite having shown only 43% growth from 1994 to 2013.³

¹ The Royal College of Radiologists. Clinical radiology UK workforce census 2018 report. London: The Royal College of Radiologists, 2019, p. 13.

² Deutsche Gesellschaft fuer Muskuloskelettale Radiologie e.V., Zukunftsperspektiven Muskuloskelettale Radiologie [Future Perspectives in Musculoskeletal Radiology], retrieved 21 October 2019, from <https://www.dgmsr.de/dokumente/workshop-msk/>

³ Gyftopoulos, S., Harkey, P., Hemingway, J., Hughes, D., Rosenkrantz, A. and Duszak, R. (2017). Changing Musculoskeletal Extremity Imaging Utilization From 1994 Through 2013: A Medicare Beneficiary Perspective. American Journal of Roentgenology, 209(5), p. 1104.



Expanding precision medicine with Multitom Rax

With traditional X-ray, complex radiographic examinations are often challenging or cumbersome, especially in musculoskeletal or trauma cases. Whether due to time-consuming manual work, less experienced staff, limited precision in system positioning, or difficult-to-move patients – such exams may result in unsatisfactory diagnostic outcomes.

With Multitom Rax, we offer a high-performance system that excels in such examinations, helping you expand precision medicine. As a Twin Robotic X-ray system, it offers unparalleled positioning flexibility, unique automated workflows around the patient, and a multitude of diagnostic examinations and procedures.

Discover Multitom Rax

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¹ Option

Multitom Rax at a glance

Multitom Rax supports your technologists and radiologists in daily clinical routine and beyond. It is particularly suited for difficult examinations such as trauma or orthopedic cases. Benefit from precise insights, efficient workflows, as well as comprehensive diagnosis on a single system – and set new standards in advanced musculoskeletal and trauma imaging.



Precise insights through unique automation

With Multitom Rax, you can combine high precision and wide coverage. Accuracy is at your fingertips. Projections from nearly any angle and automated workflows enable you to meet referrers' demands, while dose is kept as low as possible.

Efficient workflows around your patients

Multitom Rax offers fast, robotic setup and barrier-free patient access. Automated alignment, trolley workflows, and projection flexibility reduce the need for patient repositioning. This helps you relieve staff workload and improve patient experience.

Comprehensive diagnosis with multiple procedures

Whether you have the need to perform functional diagnosis or administer injections into joint spaces, Multitom Rax enables a broad range of procedures: from radiography, fluoroscopy¹ and minor interventions¹, to unique 3D¹ bone imaging. Switch modalities, not rooms!

¹ Option



AI-Rad Companion¹

AI-Rad Companion is a family of vendor-neutral, multi-organ augmented reading solutions that automatically prepare clinical images to be interpreted by radiologists and/or clinicians.

Fleet Level Benefits

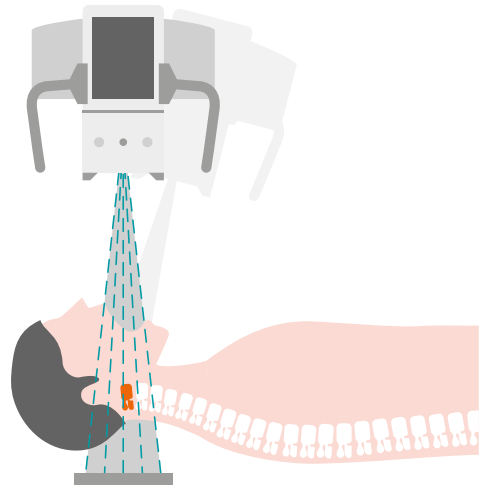
A systematic concept which helps you to reduce complexity. By standardizing you can achieve consistency for operational and clinical excellence. Analysis of your department's performance generates transparency for high availability and utilization. Securing your systems means having confidence in data and systems protection.

Precise insights through unique automation

To meet referrers' demands in advanced musculoskeletal imaging, wide anatomical coverage, a high degree of diagnostic accuracy, and low dose levels are needed.

Multitom Rax offers unparalleled precision and flexibility in positioning, allowing projections from nearly all angles and unique automated workflows that make musculoskeletal insights feasible in clinical routine.

And all that while saving dose.



Extended anatomical coverage²

Benefit from unique automation with enhanced RAXortho¹ acquisition modes built on the well-known SmartOrtho¹ tilting technique. Whether it's lateral imaging of the full spine, visualization of both shoulders in one view, or frequent long leg or full spine imaging: Multitom Rax is designed to suit you and your patients.

More precision²

Obtain accurate MSK insights through precise system and patient positioning – easily. Twin Robotic arms give you more flexibility through projections from nearly all angles. RAXalign always ensures the correct SID as well as orthogonal alignment of tube and detector, while RAXconfirm offers fluoroscopic guided positioning.

¹ Option

² Compared to previous software version.

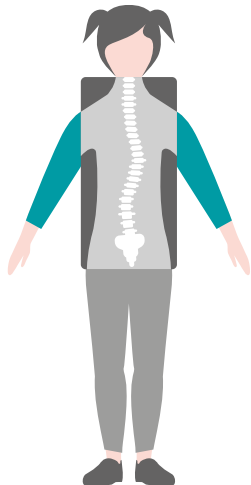
³ The statements by customers of Siemens Healthineers described herein are based on results that were achieved in the customer's unique setting. Because there is no „typical“ hospital and many variables exist (e.g., hospital size, case mix, Level of IT adoption) there can be no guarantee that other customers will achieve the same results.

⁴ Values were achieved in a phantom study.

*"In particular, the fact that panoramic images can be taken, where, for example, both shoulder joints can be seen in one image under stress, is of immense advantage to us and important for traumatology in deciding whether there is a surgical indication. This is a big step forward."*³

Dr. med. Thomas Paffrath

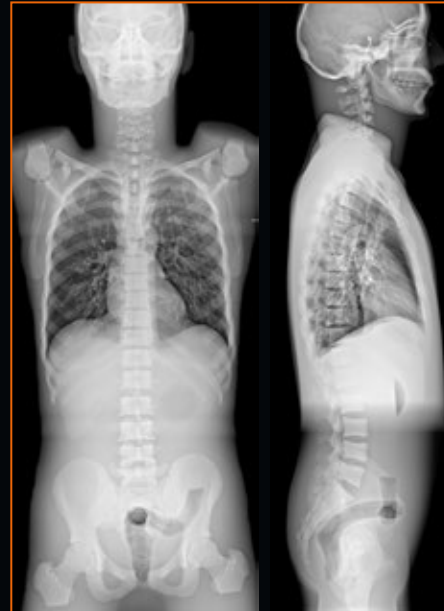
Chief physician of the section of trauma surgery,
Krankenhaus der Augustinerinnen, Cologne, Germany



Right dose

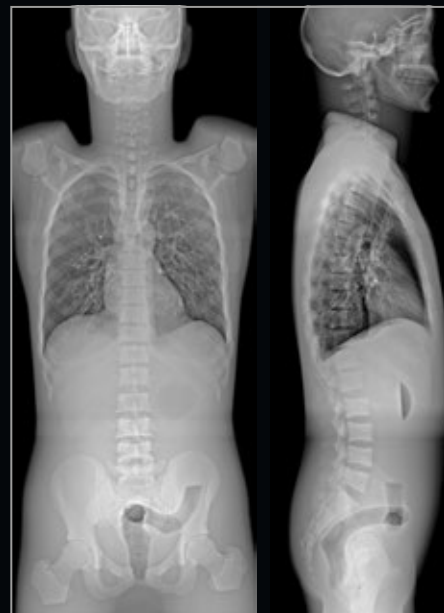
Use the right dose for every patient: Choose proven technology with dedicated low-dose and pediatric organ programs (OGPs) to help reduce necessary radiation, limit unnecessary radiation with CAREPROFILE/CAREPOSITION, and minimize the risk of over-exposure and overcollimation with automatic exposure control (AEC) and Automatic Cassette Size Sensing (ACSS).

Low-dose scoliosis SmartOrtho¹



Study ID: 5aaa558

SmartOrtho¹



Study ID: 5aaa558



Significant dose reduction
with our low-dose Scoliosis
SmartOrtho organ program
for follow-up examinations.⁴

Efficient workflows around your patients

Advanced musculoskeletal imaging requires exact patient and system positioning, complex manual workflow steps – and it may be painful for patients or physically demanding for staff. So, it is cumbersome to perform in clinical routine.

Multitom Rax precisely positions and aligns itself, reducing the need for unnatural patient positioning – even in challenging situations like trauma cases. It supports staff and offers barrier-free patient access, helping to optimize the diagnostic experience.

For fast, efficient, and productive workflows around your patients.



Faster¹, robotic exam setup in clinical routine

Let robotically standardized movements speed up your daily routine. Faster setup is made possible by one-touch workflows and virtually unlimited, customizable organ programs that meet your specific requirements.



Refined automated alignment of tube and detector

Reduce manual workflow steps and save valuable time. Thanks to RAXalign and RAXtrack, detector and tube align automatically and stay aligned when repositioning the system. The predictable and very compact virtual U-arm movement quickly shifts the system 90° around the patient – ideal for emergency departments.

¹ Compared to previous software version.

² The statements by customers of Siemens Healthineers described herein are based on results that were achieved in the customer's unique setting. Because there is no „typical“ hospital and many variables exist (e.g., hospital size, case mix, Level of IT adoption) there can be no guarantee that other customers will achieve the same results.

*"With the new version of the Multitom Rax we have noticed an improvement in speed, in the positioning of the patients, the workflows are smoother and the daily routine of the MTRA is much easier."*²

Alexandra Despineux

Chief Medical Assistant, Krankenhaus der Augustinerinnen, Cologne, Germany



Less patient repositioning for enhanced care

Let the robots move, not the patient. With Multitom Rax, exams are less cumbersome, less painful, and less risky for patients. The system moves around the patient, so the need for repositioning decreases. And flexible workflows for wheelchairs, trolleys, and stretchers mean that patients need not be transferred onto the system's table at all.



**Significantly faster
positioning performance¹**

Comprehensive diagnosis with multiple procedures

Advanced musculoskeletal imaging calls for more than just radiography. A patient may also require functional diagnosis, repositioning procedures, contrast and drug injections into joint spaces, or 3D bone imaging.

Thanks to its modular design, Multitom Rax can be quickly configured to suit your and your patients' demands. Starting with precision radiography, it also allows 3D bone imaging¹ as well as fluoroscopic¹ and interventional imaging¹ for functional assessment. This way, Multitom Rax helps optimize clinical operations and can provide the basis for treatment planning.

All in a single room on a single system.



More informed diagnosis and treatment planning

Acquire diagnostically relevant 3D bone imaging with our optimized Real 3D¹ for excellent image quality, more stable patient positioning, fewer artefacts, and streamlined, faster exams.² Get even higher spatial resolution for images of the hand, wrist, and elbow with the new Real 3D Hi-Res¹ functionality.



Expanded orthopedic³ capabilities

Perform fluoroscopy¹ and minor interventions¹ for functional diagnosis of joints, fractures, and luxation repositioning or needle guidance in musculoskeletal procedures such as contrast and drug injections into joint spaces, as well as catheter or tube placements.

¹ Option

² Compared to previous software version

³ Compared to radiography only systems

⁴ The statements by customers of Siemens Healthineers described herein are based on results that were achieved in the customer's unique setting. Because there is no „typical“ hospital and many variables exist (e.g., hospital size, case mix, Level of IT adoption) there can be no guarantee that other customers will achieve the same results.

*"Our trauma imaging for wrists and feet has been completely shifted to Multitom Rax. This frees up 5 to 6 slots a day on the multi-detector CT which can then be used for other types of imaging tasks."*⁴

Jan-Peter Grunz, MD
Assistant Physician,
University Hospital Wuerzburg, Germany



Enhanced flexibility³ and independence

Alleviate the growing pressure on other systems and rooms: Move minor interventions¹ and basic angiographies¹ into your radiology department. By offering 2D and 3D¹ imaging on a single system along with complementary imaging results from fluoroscopic examinations, Multitom Rax gives you more independence.

Real 3D¹ weight-bearing

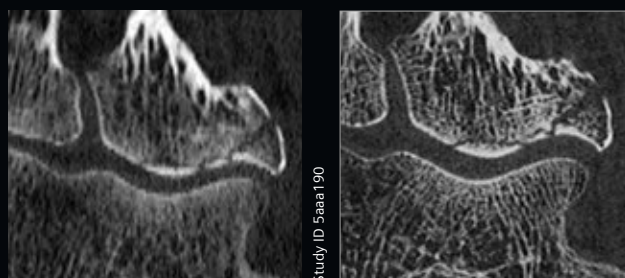
Enhanced diagnosis and surgical planning



Study ID 5aab015

Real 3D Hi-Res¹ upper extremities

High isotropic resolution without increase in dose



3rd Gen. MDCT
UHR Mode (Ur77)

Multitom Rax
Real 3D Hi-Res¹

Study ID 5aaa190

Study ID 5aaa186

Fluoroscopy¹ and interventions¹ for orthopedic specialists



Study ID 5aaa957

Arthrography of a knee joint

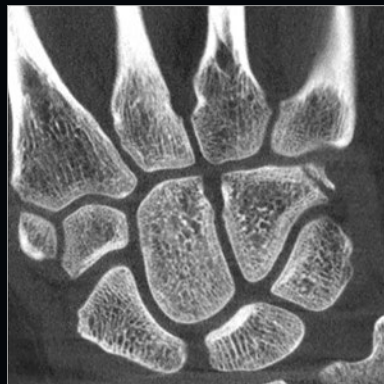
See anatomical details in clear image quality

To make fast and confident diagnostic decisions, you need high image quality. Multitom Rax offers you multiple advanced X-ray imaging technologies – and a large field of view.

Real 3D¹ – bone imaging with high spatial resolution and bone contrast



StudyID: 5aab016



StudyID: 5aaa479



StudyID: 5aab335

Enhanced contrast and a high level of detail visibility with DiamondView MAX



Without DiamondView MAX²



With DiamondView MAX²



Without DiamondView MAX³



With DiamondView MAX³

¹ Option

² Courtesy of Spital Zofingen AG, Zofingen, Switzerland

³ Courtesy of Kardinal Schwarzenberg Klinikum, Schwarzach im Pongau, Austria

Benefit from innovative services

Increasing value by partnering throughout the entire lifetime of your equipment



Continuously adding value and caring for your equipment, your workforce, and your entire institution.

Equipment Maintenance & Monitoring

Reliably servicing your Multitom Rax allows you to identify deviations from current norms to maximize equipment availability.

Education Management

Personalized education and training improves your staff's expertise as well as your equipment efficiency.

Fleet Management

A transparent overview of your fleet allows you to manage the performance and maintenance of your Siemens Healthineers equipment, 24/7.

Performance Management

An intelligible overview of your radiography performance data helps you make prompt and well-informed decisions.

Asset Management & Planning

Access to innovative medical technology and equipment throughout the entire contract life-time allows you to maximize focus on patient care.

Accessory Solutions

Products from our partner companies complement your use of our equipment in your daily workflow.

Business Modelling & Financing

Customized business and financial models address your budgetary and enterprise needs enabling you to remain more competitive.

Departmental Layout Optimization

3D-Visualization and digital twin analysis create more efficient workflows and a more enjoyable working environment.

Technical specifications



StudyID: 5aaa582



StudyID: 5aaa938

RAXortho¹

- For extended anatomical coverage²
- Cross-table SmartOrtho¹ lateral for lateral spine examinations of patient in supine position
- Transversal SmartOrtho¹ panorama standing for standing orthopedic examinations along the transversal body axis

Real 3D¹

For more insight improving diagnostic confidence



Fluoroscopy¹

For extended MSK imaging tasks with multifunctional wireless footswitch¹



Max detectors¹

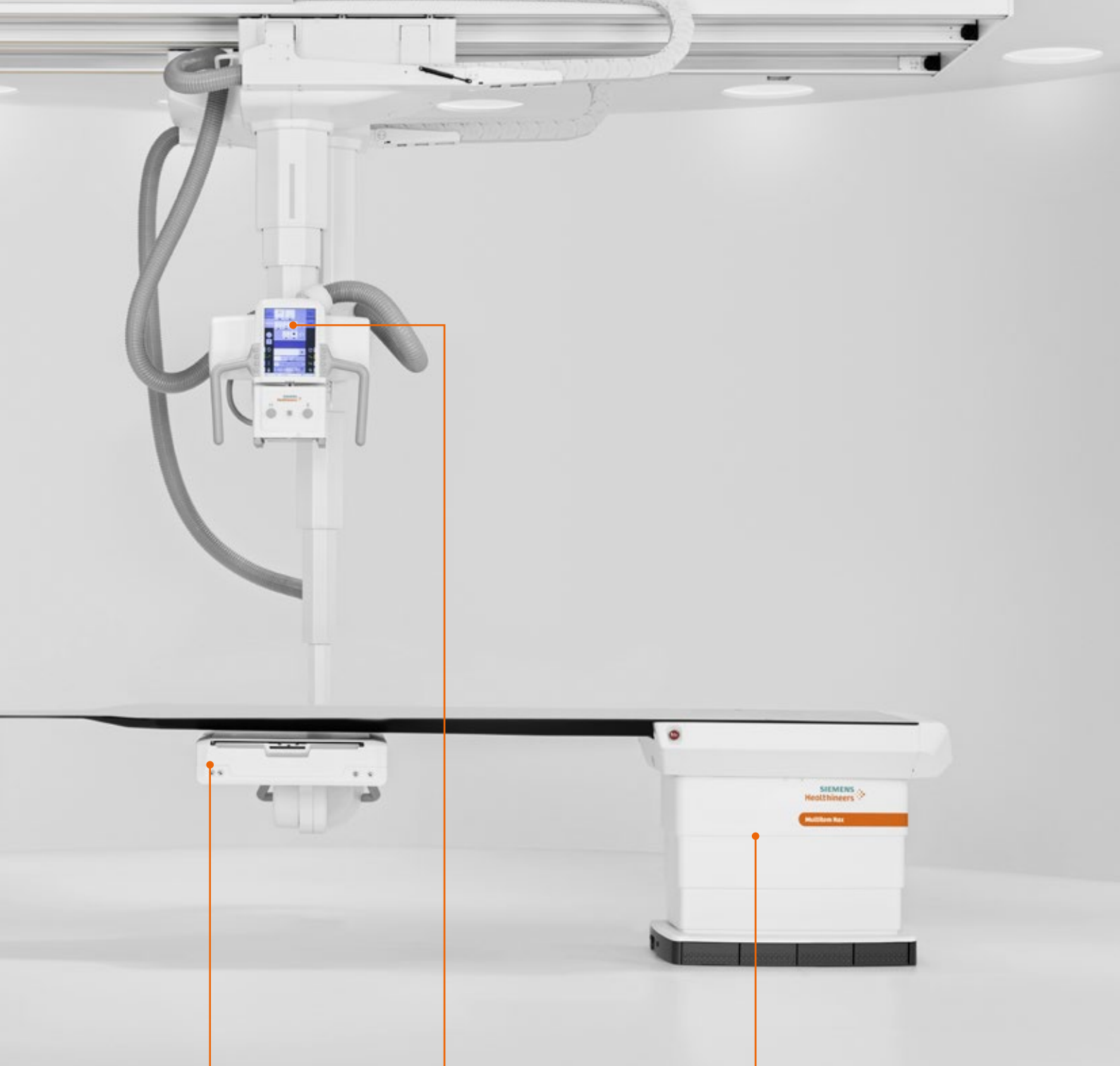
- MAX wi-D detector: 35 cm x 43 cm
Weight capacity: max. 300 kg
- MAX mini detector: 24 cm x 30 cm

Fast, robotic exam setup

- High speed, safe positioning with robotic precision
- Tube and detector move around the patient on up to 10 axes simultaneously
- Automated detector/tube alignment thanks to RAXalign, RAXtrack and Virtual U-arm

¹ Option

² Compared to previous software version.



RAXdetector

Ceiling-mounted built-in 43 cm x 43 cm detector for static, dynamic¹, and 3D¹ imaging

Large color touchscreen (10")

User-friendly interface offers access to key image parameters with MAXtouch

Table¹

- Motorized height-adjustable table with minimum table height of 50 cm
- Foot kick-switches for table height adjustment
- Weight capacity: 240 kg

Fleet Level Benefits

Unlock your potential – and increase the efficiency across your imaging fleet

As healthcare provider you are forced to do more with less, you have to run your radiology department more efficiently. A high level of complexity makes it challenging for you to reach the desired efficiency. Siemens Healthineers offers specific solutions across the entire X-ray portfolio

that let you standardize, analyze, and secure your fleet. Experience consistency, transparency, and confidence as valuable Fleet Level Benefits and improve outcomes, increase efficiency – and achieve greater staff and patient satisfaction.

Standardize
for consistency



Analyze
for transparency

Secure
for confidence



Standardize for consistency

- Systems with highly intuitive user interfaces and common workflows
- Staff with consistent knowledge level
- Unified image quality and same image impression



Analyze for transparency

- Consolidated data in one place
- Analyzed and evaluated data turned into valuable information



Secure for confidence

- Protect large IT network and imaging fleet with one cybersecurity philosophy
- Same maintenance cycles and update strategies for the whole fleet



Why Siemens Healthineers

At Siemens Healthineers, our purpose is to enable healthcare providers to increase value by empowering them on their journey towards expanding precision medicine, transforming care delivery, and improving patient experience, all enabled by digitalizing healthcare. An estimated five million patients worldwide everyday benefit from our innovative technologies and services in

the areas of diagnostic and therapeutic imaging, laboratory diagnostics and molecular medicine, as well as digital health and enterprise services. We're a leading medical technology company with over 120 years of experience and 18,500 patents globally. With about 50,000 dedicated colleagues in over 70 countries, we'll continue to innovate and shape the future of healthcare.

Multitom Rax is not yet commercially available in all countries. Its future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

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