Complete Clinical Capability

160 slice Ultra Helical CT
Complete clinical capability
Assisted by AI technology
Expand your clinical capability
Enhance your productivity
Capitalize on your investment

Built with innovative AI-assisted technologies migrated straight from our most premium systems, Aquilion Prime SP is the CT solution of choice for all your imaging needs. Whether you’re looking to streamline your workflow or enhance your clinical confidence with improved diagnostic capabilities, you will find everything you need in this one, intelligent solution. Even challenging cases, from pediatric to bariatric and beyond will benefit from world-class images reconstructed at speed with our latest Deep Learning innovation.
Expand your clinical capability

From complex to routine, Aquilion Prime SP is designed to keep pace with your work list, with optimized image quality provided at the optimized dose for every patient.

An expansive suite of protocol integrated application solutions enables the seamless and rapid adoption of advanced CT procedures into your clinical practice. Aquilion Prime SP can automate complex exams while delivering high-quality data.
Welcome to the age of AI-assisted CT

Advanced intelligent Clear-IQ Engine (AiCE) – Deep Learning Reconstruction

AiCE is an innovative approach to CT reconstruction that uses Deep Learning technology to match the spatial resolution and low-noise properties of advanced model-based iterative reconstructions.

Trained using vast amounts of high-quality image data, reconstructed with an advanced model-based iterative reconstruction (MBIR) algorithm, AiCE distinguishes true signal from noise to deliver exceptional images without compromising on dose.

Furthermore, the technology has been streamlined to 160 slices, and has been integrated into existing Prime SP hardware as AiCE-integrated (AiCE-i), so you can make the most of improved image quality in a smart, cost-efficient way.

AiCE-i has potential to aid in fast and confident clinical results by providing:

- Low Noise
- Natural Image Texture*
- Sharp High Contrast Resolution
- Clear Low Contrast Detectability

*Compared to MBIR
Low-quality Input Data

Using high-quality images AI CE learns to differentiate between signal and noise in low-quality images

High-quality Input Data

Using the intelligence from the Training Phase, AI CE has the potential to aid in fast and confident clinical results by providing high-quality images.

Low-dose Input

Boost / Enhance Signal

Reduce / Remove Noise

High-quality AI CE Output
Reduced noise, sharper images*

AiCE has been trained to reduce noise, boost signal to deliver sharp, clear and distinct images across many body regions.
Cardiac

Body

Bone

*RCompared to hybrid IR*
The right balance between image quality and dose for every patient, from the youngest to the largest

Our PUREViSION Optics solution provides significantly improved imaging efficiency from photon generation to detection. An optimized beam spectrum combined with a more efficient detector result in a better balance between image quality and dose.

PUREViSION Optics transforms routine CT imaging to new levels of image detail and low contrast resolution.
Patient specific beam shaping filters provide an optimized X-ray spectrum and more homogenous distribution, improving low contrast detectability and lower overall dose requirements.
Wouldn’t you like to ensure high-quality diagnostic results no matter the complexity of the examination or the patient’s clinical condition?

Adaptive Diagnostics is our patient centric suite of unique imaging solutions, simplifying complex protocols and provide consistent quality results. These solutions improve workflow and decrease scanning complexity for the technical team.

**Subtraction CTA**

Excellent visualization in CTA with true subtraction of bone and calcification.

**Iodine Mapping**

Clearly defined iodine distribution with color blood flow maps as a result of advanced registration and subtraction.

**SURE Cardio**

SURE Cardio Prospective helical acquisition can adapt to your patients’ heart rate automatically even overcoming unexpected arrhythmia.
Adaptive Diagnostics Clinical Solutions
Solving Your Clinical Challenges

vHP 3 phase
(Variable Helical Pitch 3 phase)*

Easily combined gated and non-gated acquisition to assist with fast and low-dose TAVR exams.

SEMAR
(Single Energy Metal Artifact Reduction)

Improved visualization of bone and soft tissue - single energy raw data based metal artifact reduction.

Dual Energy Tissue Visualization*

Tissue visualization with easy-to-use Dual Energy scanning.

*Option
Clinical capabilities you can rely on

Optimized dose for every patient for confident diagnostic image quality with every examination defines CT imaging on the Aquilion Prime SP.

**AIDR* 3D Enhanced**

Optimized dose for a confident diagnosis

The protocol integration of exposure controls and AIDR 3D Enhanced iterative reconstruction solution, automatically ensure excellent image detail at significant dose savings for the patient.

*Adaptive Iterative Dose Reduction

**SURE kV**

Kidney-friendly examinations

Aquilion Prime SP allows for automated kV selection based on the patient’s size and the clinical task selected. As part of our SURE Exposure technology, this function can help optimize the use of iodine contrast, decreasing cost and patient risk.
Dose-neutral SEMAR utilizes a sophisticated reconstruction technique to reduce artifacts caused by metal and thus improves visualization of the implant, supporting bone and adjacent soft tissues for clearer and more confident diagnoses.
Robust cardiac CT examinations – automated, adaptive and easy

Cardiac CT imaging has never been more robust than with the Aquilion Prime SP. The intelligent SURE Cardiio* engine is coded with the experience of thousands of cardiac examinations, ensuring scan and exposure parameters adapt exactly to your patients in real time.

Prospectively gated ultra helical cardiac CTA
Prospectively gated ultra helical

Combining the advantages of helical scanning with ECG narrow phase exposure, SURECardio Prospective offers excellent z-axis uniformity, short scan times, and the low-dose advantages delivered by prospective ECG scanning.

SURECardio Prospective: Faster scan for reduced contrast requirements and superior temporal uniformity.

Step & Shoot: Longer scan time and temporally misaligned segments.

Real-time adaptive exposure

When detecting arrhythmia or an irregular heartbeat, the SURECardio engine compensates in real time by adapting the exposure window to ensure image reconstruction can provide a diagnostic examination.
Oncology imaging – from detection to treatment response

Aquilion Prime SP empowers you to detect, stage and track lesions with SURE Subtraction iodine mapping* available for every routine multi-phased liver exam.
Aquilion Prime SP’s accessible gantry design, 4D respiratory-gated acquisition* capability and powerful advanced imaging applications deliver an ideal oncology solution from early detection and planning to intervention and treatment response verification.

Easy patient access with 78 cm large bore and 70 cm extended field-of-view* (FOV)

Workflow-automated volumetric CT Fluoroscopy* with iterative reconstruction

*Option
Enhance your productivity

From new graduates to experienced technologists, the Aquilion Prime SP’s integrated workflow solutions render even the most complex of tasks easy. Through exposure control automation, vHP 3 phase scanning and automatic image processing, Aquilion Prime SP will be a powerful part of your imaging team.
vHP 3 phase* allows three scans to be performed in a single acquisition, seamlessly transitioning between scan parameters optimized for each body region.

vHP 3 phase has potential for less contrast media and lower radiation dose by providing the flexibility to seamlessly transition:
- Between ECG Gating on and off during a cardiac scan
- Between dose and image quality during a CAP scan
- Between fast and detailed pitch during a trauma scan

Additionally, AiCE provides high-fidelity images through the entire scan range, overcoming the challenges of image reconstruction through the transition zones. With three scans in one, the single series reconstruction enables several studies to be interpreted simultaneously for faster reading.
vHP 3 phase – Optimal Exposure
Chest, Abdomen, Pelvis scan

vHP 3 phase – Optimal Speed
Trauma scan

Chest
Low Dose

Liver
High IQ

Pelvis
Standard Dose

Neck
Detail Pitch

Chest
Fast Pitch

Abdomen
Standard Pitch

*Option
Power assisted patient positioning

When every second counts you need imaging equipment to work for you. The Aquilion Prime SP power assisted positioning* expedites the set up of patients and reduces the heavy lifting required by the attending care team.
Workflow that makes you perform

Protocol integrated automation at every step empowers even a novice operator with the skills to perform brilliantly the first time – every time.
Capitalize on your investment

From installation to department expansion, the Aquilion Prime SP is the right economic choice. Designed to be more than efficient, Aquilion Prime SP checks all the boxes for a CT system capable of fast throughput, patient and technologist safety and a platform to expand any department’s imaging portfolio for improved productivity.
Increased productivity, lower costs, enhanced diagnostic performance

Aquilion Prime SP is a total solution for all your clinical demands. A full host of innovative design features ensure outstanding patient accessibility, efficient workflow and low running costs. A wide range of robust imaging applications and workflow automation features provide exceptional diagnostic precision and clinical versatility.
With only 2.0 dB above ambient noise level, the system’s console is silent, providing radiographers with a calm workspace.

With a minimum installation space of just 14.8 m²*, Aquilion Prime SP provides you more space to work in.

*With short couch
Brain
Chest
Cardiac
TAVR planning scan with vHP 3 phase for optimal gating
Body

Original

SEMAR
SURE Subtraction Angio* with automated bone, calcium and stent removal

*Option
Musculoskeletal
Dual Energy* mono-sodium urate visualization

*Option
**Disclaimer:** Any reference to X-ray exposure is intended as a reference guideline only. The guidelines in this document do not substitute for the judgment of a healthcare provider. Each scan requires medical judgment by the healthcare provider about exposing the patient to ionizing radiation.

In clinical practice, the use of the AIDR 3D feature may reduce CT patient dose depending on the clinical task, patient size, anatomical location and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task.

Due to local regulatory processes, some of the products included in this brochure may not be available in each country. Please contact your sales representative for the most current information.

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*1 Option  
*2 Depend on System Configuration  
*3 For reference