Complete Clinical Capability

80 detector row Ultra Helical CT
From fast patient throughput to robust cardiac scanning and new diagnostic capabilities, the new Aquilion Prime SP is a CT system of choice for all your imaging needs.

Built with premium technology migrated straight from our high-end CT, Aquilion Prime SP empowers your facility to handle all patients from pediatric to bariatric, even the most challenging cases, while providing all staff with a fast and efficient solution to make their work easy.

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Expand your clinical capability
Enhance your productivity
Capitalize on your investment
From complex to routine, Aquilion Prime SP is designed to keep pace with your work list, with a better balance between image quality and dose. 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.

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A better balance between image quality and dose – from the youngest to the largest

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

PUREViSION Optics transforms routine CT imaging to new levels of image detail and low contrast detectability with up to 31% less dose.*

*Patient-specific beam shaping filters provide an optimized X-ray spectrum and more homogenous distribution, improving low contrast detectability by up to 22% for body imaging and up to 19% for brain imaging as shown by a model observer study.*

+PUREViSION detector with industry-leading 0.5 mm element size delivers sharp isotropic images with a boost of 40% more light output.

*A non-prewhitening model observer study was conducted comparing Aquilion Prime SP to Aquilion PRIME. Maximum dose reduction values were established by comparing low contrast detectability under baseline conditions for abdominal and brain examination based on the detectability index performance metric, a measure of signal to noise that takes into account the magnitude and texture of both the signal and the noise for a given LCD task.
Brain Imaging
With up to
19% Better*
Low Contrast Detectability
at equivalent dose

Body Imaging
With up to
22% Better*
Low Contrast Detectability
at equivalent dose

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Adaptive Diagnostics

- Patient-centric imaging solutions
- Simplifying complex protocols
- Providing consistent quality results

SURESubtraction™ Angio*
- Improved visualization in CTA with true subtraction of bone and calcification.

SURESubtraction Iodine Mapping*
- Enhance your diagnostic capabilities with color iodine maps provided automatically for any multiphase abdominal protocol.

SURECardio™ Prospective*
- SURECardio Prospective reacts instantly to a change in the patient’s heart rate ensuring diagnostic image quality even in patients with arrhythmia.

SURESubtraction Iodine Mapping*
The right application for a confident diagnosis
Automated, reliable and robust

vHP* 3 Phase
(Three-phase variable Helical Pitch)

Improved three exams in one with vHP3.

SURECardio Prospective reacts instantly to a change in the patient’s heart rate ensuring diagnostic image quality even in patients with arrhythmia.

SURECardio
SURESubtraction
SURESubtraction Iodine Mapping
SUREAngio*
Dual Energy*

Enhance your diagnostic capabilities with color iodine maps provided automatically for any multiphase abdominal protocol.

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

SEMAR™
(Single Energy Metal Artifact Reduction)

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

vHP* 3 Phase
(Three-phase variable Helical Pitch)

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(Single Energy Metal Artifact Reduction)

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

Dual Energy*
Clinical capabilities you can rely on

A better balance between image quality and dose with every examination defines CT imaging on the Aquilion Prime SP.

AIDR* 3D Enhanced

A better balance between image quality and dose

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

*Adaptive Iterative Dose Reduction

SUREkV

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 SUREExposure™ technology, this function has the potential to help optimize the use of iodine contrast, may help decrease cost and patient risk.
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Worry-free metal imaging
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 tissue for more clear and confident diagnoses.
Robust cardiac CT examinations – automated, adaptive and easy

SURECardio Prospective is a unique application that dramatically lowers patient dose during coronary CTA exams. This advanced software adapts to the patient’s heart rate adjusting scan parameter (pitch) and exposure window settings.

Prospectively gated ultra helical cardiac CTA

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.

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

Others
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’s accessible gantry design, 4D respiratory-gated acquisition capability and powerful advanced imaging applications deliver an ideal oncology solution from detection and planning to intervention and treatment response verification.
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Oncology imaging – from detection to treatment response

*Option

Workflow-automated volumetric CT Fluoroscopy* with iterative reconstruction.

Easy patient access with 78 cm large bore and 70 cm extended field-of-view* (FOV).
From new graduates to experienced technologists, the Aquilion Prime SP's integrated work/flow solutions render even the most complex of tasks easy. Through exposure control automation, vHP3 scanning and automatic image processing, Aquilion Prime SP will be a powerful part of your imaging team. Enhance your productivity.
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, vHP3 scanning and automatic image processing, Aquilion Prime SP will be a powerful part of your imaging team.
Faster, safer and optimal patient imaging

The all new vHP3*, allows three examinations to be performed in a single acquisition, seamlessly transitioning between scan parameter settings that have been optimized for each body region.

Providing the flexibility to vary between ECG gating, scan pitch and exposure control in a single uninterrupted scan, enables patient exams to be performed faster, with the potential for less contrast media and lower radiation dose.

vHP3’s adaptive reconstruction engine 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.
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Power assisted patient positioning

When every second counts, you need imaging equipment to work for you. The Aquilion Prime SP Tech Assist Lateral Slide* expedites the setup of patients and reduces the heavy lifting required by the attending care team.

- Faster patient setup
- Safer for technologists
- Comfortable for patients
- Accurate iso-center scanning

SUREPosition remotely adjusts the patient to the exact iso-center ensuring best practice in CT accuracy – without the need for repeating the scanogram image.
When every second counts, you need imaging equipment to work for you. The Aquilion Prime SP Tech Assist Lateral Slide* expedites the setup of patients and reduces the heavy lifting required by the attending care team.

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

Capitalize on your investment
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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.
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Increased productivity, lower costs, enhanced diagnostic performance

With only 2.0 dB above ambient noise level, the system's console is extremely quiet, 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 Imaging
Chest Imaging
Cardiac Imaging
TAVR scan with vHP3* for optimal gating
Body Imaging

Original

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

Dual Energy monosodium urate visualization
Dual Energy* monosodium urate visualization
Detector

- PUREViSION detector technology
- 80 rows of 0.5 mm

Gantry

- Rotation time 0.35 s
- Generator 72 kW
- Bore aperture 78 cm
- Tilt ± 30°

Patient couch

- Max. load 220 / 315 kg*
- Max. scan range 150 – 200 cm *

Reconstruction

- Helical 50 fps / 70 fps*

Image quality

- Spatial resolution 21.5 lp/cm at MTF 0% *

Reconstruction

- Iterative reconstruction AIDR 3D Enhanced

FOV 500 mm , 700 mm*

Installation

- Power capacity 100 kVA / 110 kVA*
- Min. installation space 14.8 m 2 (short couch)

Main specifications

- 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.
  - Options listed in this brochure may not be available in all regulated markets. Please contact your regional sales company to verify availability.

*1 Option
*2 Depends on system configuration
*3 For reference
### Main specifications

<table>
<thead>
<tr>
<th>Detector</th>
<th>PUREVISION detector technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotation time</td>
<td>0.35 s</td>
</tr>
<tr>
<td>Generator</td>
<td>72 kW</td>
</tr>
<tr>
<td>Bore aperture</td>
<td>78 cm</td>
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<tr>
<td>Tilt</td>
<td>± 30°</td>
</tr>
<tr>
<td>Max. load</td>
<td>220 / 315 kg*</td>
</tr>
<tr>
<td>Max. scan range</td>
<td>150 – 200 cm*</td>
</tr>
<tr>
<td>Reconstruction speed</td>
<td>Helical</td>
</tr>
<tr>
<td>Iterative reconstruction</td>
<td>AIDR 3D Enhanced</td>
</tr>
<tr>
<td>FOV</td>
<td>500 mm / 700 mm*</td>
</tr>
<tr>
<td>Power capacity</td>
<td>100 kVA / 110 kVA*</td>
</tr>
<tr>
<td>Min. installation space</td>
<td>14.8 m² (short couch)</td>
</tr>
<tr>
<td>Spatial resolution</td>
<td>21.5 lp/cm at MTF 0%*</td>
</tr>
</tbody>
</table>

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