How can we get to the heart of the matter?

Echo in a Heartbeat.
Instantaneous full-volume imaging.

ACUSON SC2000 Volume Imaging Ultrasound System

Answers for life.

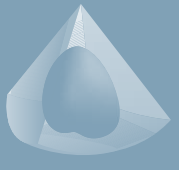
SIEMENS

What if we could enhance our standard of care—every day for every patient?

The new gold standard in volume imaging for ultrasound has arrived. It's real. It's proven. It's now.

The ACUSON SC2000™ volume imaging ultrasound system delivers the new gold standard in volume imaging. It's true Echo in a Heartbeat™: instantaneous full-volume imaging. Unparalleled information rate. No ECG gating. Streamlined and accelerated knowledge-based workflow with auto-measurements. Adaptive ergonomics. Innovative technologies and applications.

The ACUSON SC2000 ultrasound system introduces a new paradigm in cardiac imaging and workflow, transforming your echocardiography practice and giving you the power to see more—instantly.



Echo in a Heartbeat

16x the processing power of a high-performance 2D ultrasound system

Instantaneous volume imaging—up to 40 full volumes per second at 16 cm depth—for a whole new standard of diagnostic confidence.

Unlike traditional 3D ultrasound systems that require four to seven heart cycles to stitch together a volume, the ACUSON SC2000 volume imaging ultrasound system delivers true Echo in a Heartbeat—instantaneous full-volume acquisition. Full-volume imaging, 90 degrees x 90 degrees, up to 40 volumes per second at 16 cm depth, every second. Over 540 volumes per second at maximum information rate. No ECG gating, no stitching, no artifacts, no more breath holding and uncertainty. Derived reference plane images from the full volume cardiac dataset give you more accurate information in less time. eSieScan™ workflow protocols increase reproducibility and consistency of echo exams. Conducting a volume echo exam can decrease exam time by up to 50% versus a traditional 2D/3D echo exam.

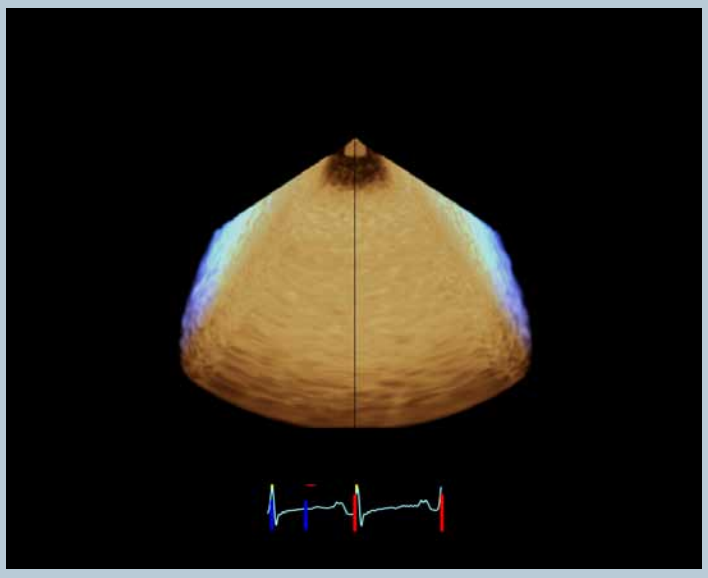
Detecting wall motion abnormalities using volume stress echo can now be a practical clinical application by allowing one full-volume acquisition per stage, leading to potential time savings and improved accuracy.*

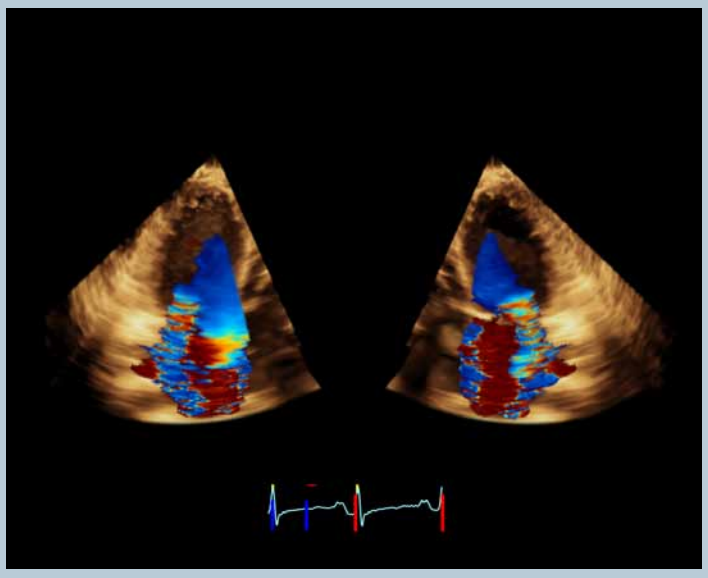
A standard adult echo exam focuses on multiple 2D view acquisitions. With the ACUSON SC2000 system, imaging becomes the shortest part of your exam. Our 4Z1c volume imaging transducer solution gives you all the information you need and more.

Our breakthrough technology showcases Siemens' acoustic mastery and delivers on the promise of true volume imaging—for every patient. It all adds up to a powerful new paradigm for cardiology care.

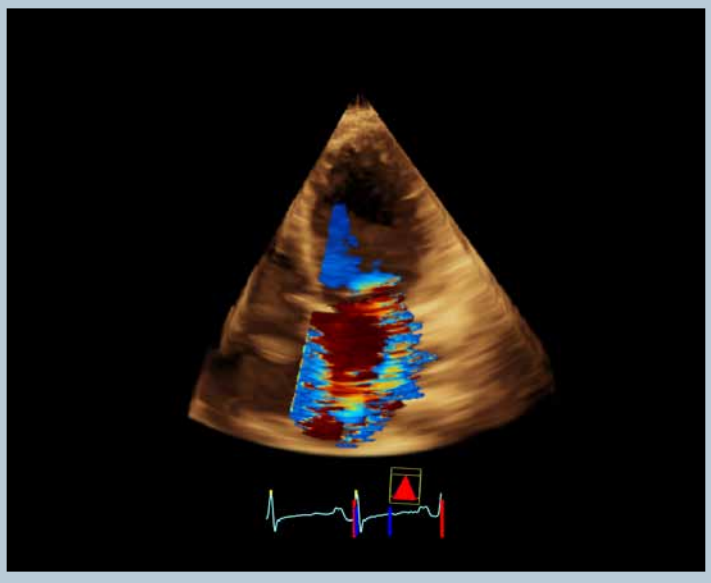
*Would require external clinical validation of time savings and improved accuracy from Rapid Stress™ volume stress echo application

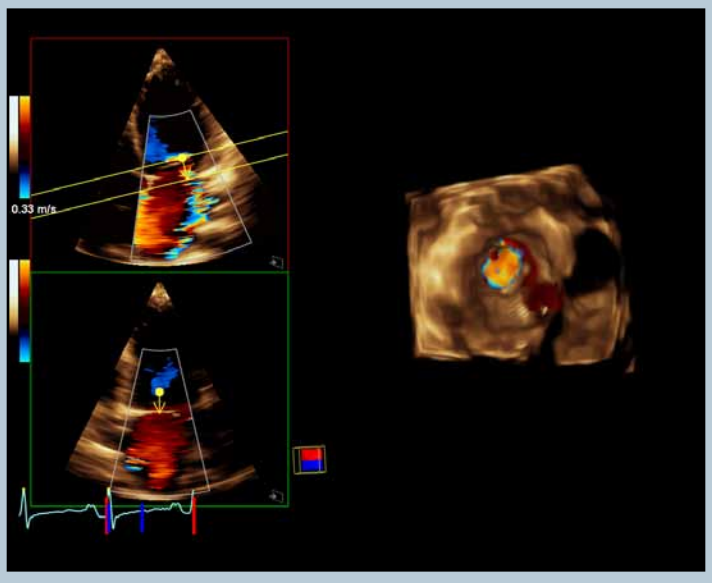
Unparalleled Information Rate



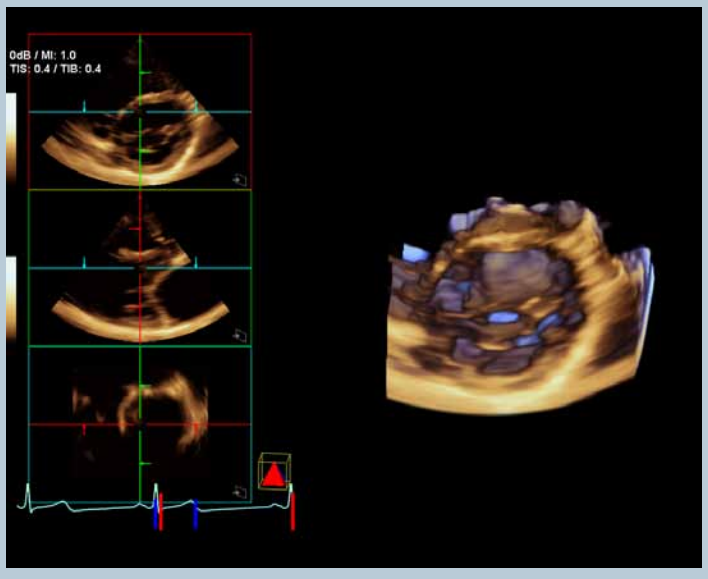


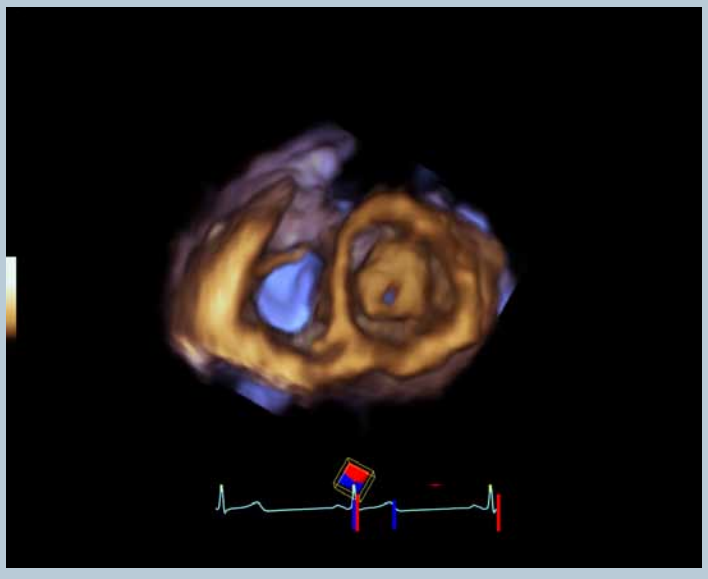
Continuous full-volume capture of both B-mode and Color Doppler is enabled by unprecedented information rate in the ACUSON SC2000 system. Mitral regurgitation is captured and displayed in both halves of the full volume, using SieShell live display format.





The same mitral regurgitation jet displays volumetric distribution within the left atrium. The color baseline is down-shifted to reveal the PISA formation left, and the D'Art navigation tool navigates the volume domain from easily recognized reference frames (right).





In mitral stenosis, the valve orifice can be readily visualized for effective assessment of severity. Reference planes are automatically derived from the full volume (left) to associate the conventionally recognized views. All data is simultaneously captured as a full volume image in a single heartbeat.

What if I could take my workflow to a new dimension?

Automated, accelerated, integrated and streamlined. Workflow innovations will give your practice a real edge.

With the ACUSON SC2000 system, we're innovating every step of your workflow. Our knowledge-based workflow software uses learned pattern recognition technology, and an expert database of real clinical cases to recognize anatomical patterns and landmarks as well as perform automatic measurements. This includes customizable protocol-driven workflow, automated reference plane extraction from the cardiac volume dataset, automated volume contouring of ejection fraction, and automated measurements of imaging modes. To free your ultrasound system from post-imaging analysis, all applications are available off the system on the *syngo*® SC2000 Workplace with a common user interface. Improve your bottom line with greater efficiency, accuracy, consistency and care across your practice—from data acquisition to analysis to diagnosis.

Innovative Applications

- **eSieScan Workflow Protocols** streamline exams and increase reproducibility by integrating both volume imaging and standard 2D exam.
- **Rapid Volume Stress Echo**** automatically generates the standard views per stage providing rapid extraction and analysis of stress echo volumes. This eliminates the need to acquire multiple views per stage, leading to potential time savings*.
- **Workflow Acceleration Package**** automates measurements in multiple imaging modes.
- **Auto Volume Left Ventricular Analysis Package** automates the volumetric measurement of key left ventricular functions, such as ejection fraction via auto volume contouring.
- **Volume Right Ventricular Analysis Package** helps you evaluate RV function from full-volume captures.
- **Volume Left Atrial Analysis Package**** for volumetric assessment of LA function for diagnostic and prognostic evaluation.

*Would require external clinical validation of time savings from the Auto LV Analysis application and Rapid Stress Echo

**Works-in-progress

Typical Study Time

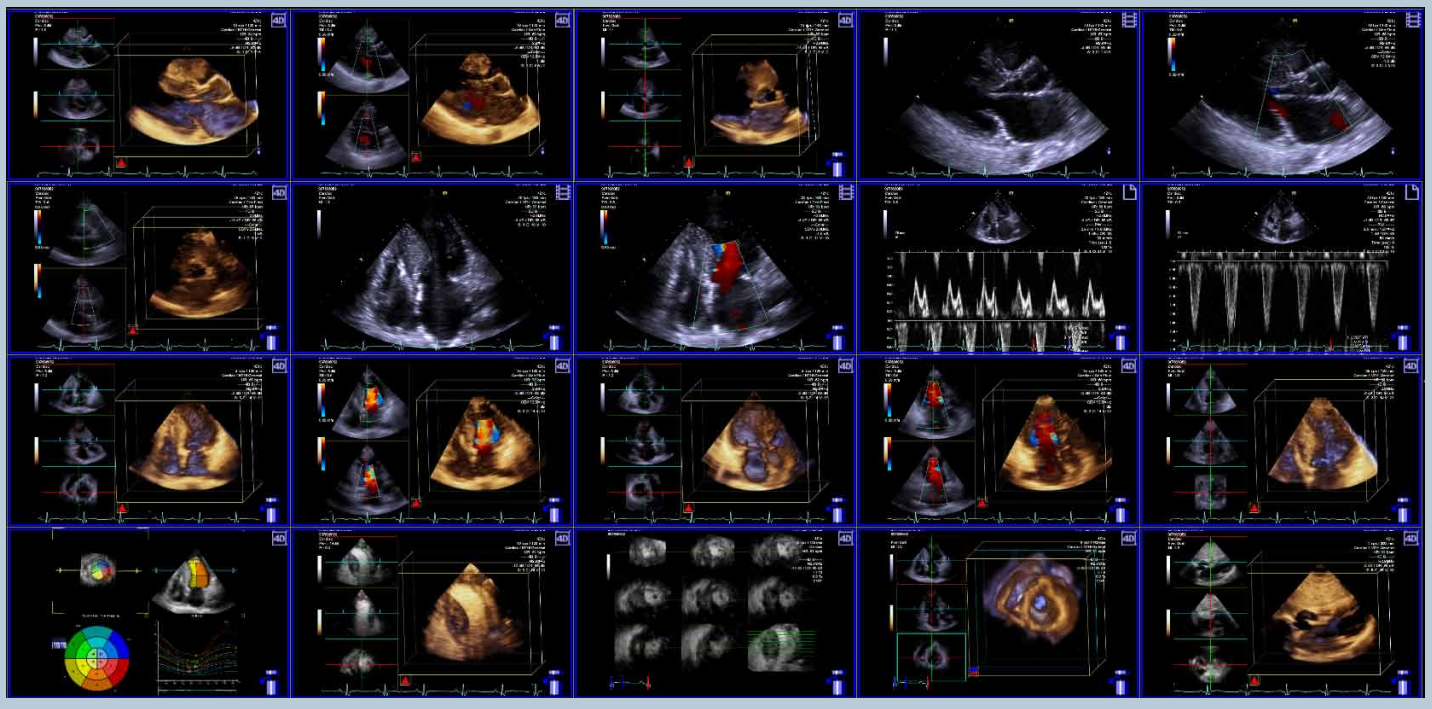
CONVENTIONAL 2D/3D ECHO EXAM

2D ACQUISITION	COLOR DOPPLER ACQUISITION	SPECTRAL DOPPLER ACQUISITION	MEASUREMENTS	ANALYSIS & INTERPRETATION	3D

VOLUME ECHO EXAM OF TODAY

VOLUME ACQUISITION	COLOR DOPPLER VOLUME ACQUISITION	SPECTRAL DOPPLER ACQUISITION	AUTO MEASURE-MENTS	ANALYSIS & INTERPRETATION

POTENTIAL TIME SAVINGS



A volume imaging protocol begins with volume acquisition and is supplemented by thin volume and Doppler captures. The heart is imaged as a whole, then the operator chooses to add detailed data as required. The above data set includes LV analysis and contrast* images of the LV.

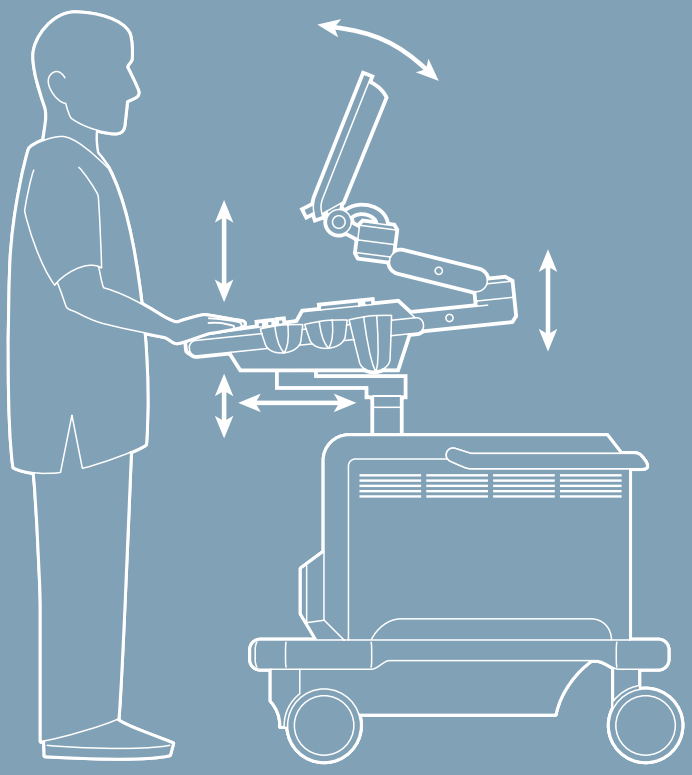
* At the time of publication, the U.S. Food and Drug Administration has cleared ultrasound contrast agents only for use in LVO. Check current regulations for the country in which you are using this system for contrast agent clearance.

Form follows function.

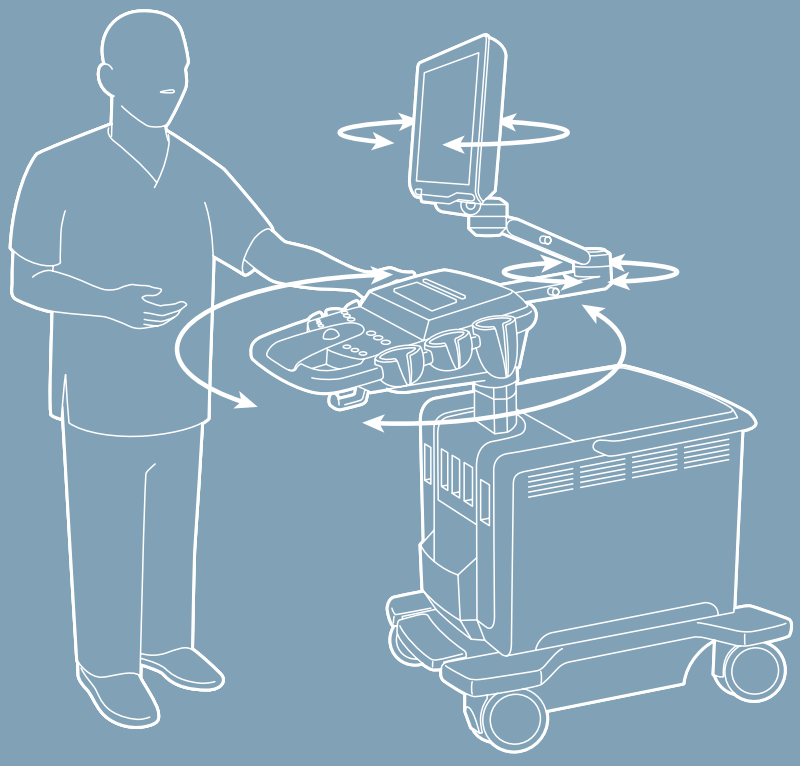
Never before has such a powerful ultrasound system been so easy or flexible to use. Designed to meet and exceed today's recommended ergonomic guidelines, the ACUSON SC2000 volume imaging ultrasound system can be easily adjusted for optimal use. Compact and highly mobile, the system adapts to all clinical environments, providing you with the ultimate in simple and stress-reduced operation.

- **Streamlined natural and extended reach zones** place the most frequently used controls at your fingertips and enable quick access to peripheral devices, recording media and transducer connectors. The control panel is designed for motor-memory learning.
- **20-inch wide screen LCD display** mounted on a flexible, articulating arm ensures optimal monitor placement, extended viewing angles and enhanced image quality in all lighting situations.
- **Configurable desk format** with 90 degree side-to-side positioning enhances user comfort and close proximity to the patient.
- **The 4Z1c volume imaging transducer** features a patented ergonomic Palmar grip with an elastomeric gripping surface designed to reduce repetitive stress injuries.
- **Highest mobility.** Small footprint and lightweight design allow fast and uncomplicated transport for examinations anywhere, anytime.

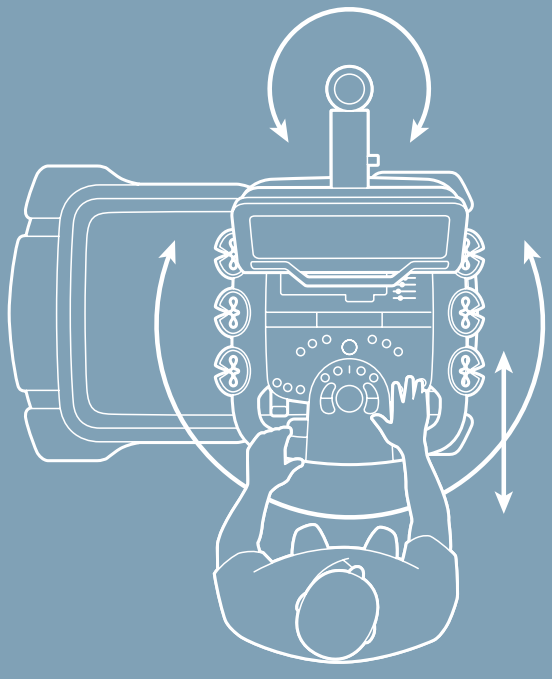
Fully Adjustable Adaptive Ergonomics



Height-adjustable user console and articulating arm with high-resolution, wide-screen LCD display



Side-to-side independent adjustment of floating user console and high-resolution, wide-screen LCD display

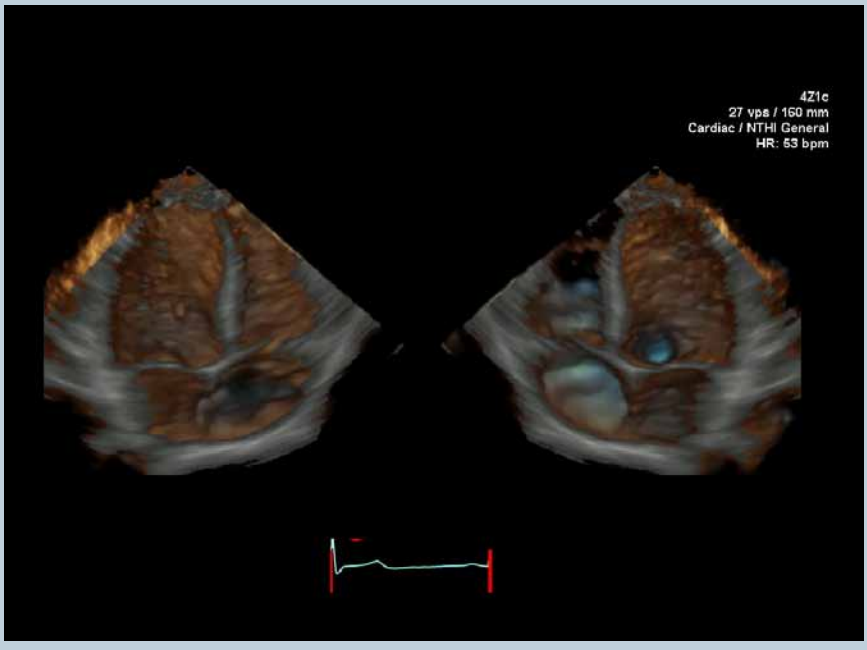


Configurable desk format with 90 degree side-to-side positioning

Next-generation architecture and innovative applications deliver more information for better outcomes.

The ACUSON SC2000 volume imaging ultrasound system is founded upon Siemens' long tradition of innovative acoustic technologies. New system architecture delivers vastly more information than today's conventional 3D systems—enhancing the practice of echocardiography. Achieving up to 40 full volumes per second at 16 cm depth, its unparalleled information rate and information density increase diagnostic confidence while simultaneously reducing exam time and accelerating workflow efficiencies. ACUSON SC2000—Introducing the new gold standard in volume imaging for ultrasound.

- **Coherent Volume Imaging™ technology**. The ACUSON SC2000 system's advanced architecture is strengthened by Siemens' patented Coherent Volume Imaging™ technology. Coupled with up to 64 parallel beams, it moves away from serial, line-by-line acquisition towards simultaneous, multiple-beam high volume rate acquisition. Further enhancing image resolution, received information is combined from multiple images to synthesize the transmit focus through the entire range. This same advanced Coherent Image Formation technique applies to the 2D imaging on the 4V1c transthoracic transducer.
- **Patented active cooling technology** on the 4Z1c volume imaging transducer enables it to operate at high transmit voltage levels commonly used with standard cardiac imaging transducers. This allows for deeper penetration than other matrix transducers and thus the ability to image a wider range of cardiac patients including the technically difficult-to-image patients.
- **Intracardiac Volume Imaging.** The unique ACUSON AcuNav™ V volume imaging ultrasound catheter is enabled on the ACUSON SC2000 system to support intracardiac echocardiography along with the complete suite of ACUSON AcuNav 8F and 10F 2D catheters.
- **Support for 3D DICOM open standard and protocol.** ACUSON SC2000 system images are DICOM 3D-compliant and interchangeable for use on other DICOM 3D-compliant image management platforms.



From this full volume capture comes the opportunity to reveal the edge, and the potential to make direct measurements from the full volume data.

To acquire this level of image data without any ECG gating has required an entirely new architecture from the ground up—an architecture which will define the future of echocardiography. This is the promise of the ACUSON SC2000 volume imaging ultrasound system.

Customer Care. Life.
Taking your practice to new heights.

Our goal is your success—over the entire life cycle.

Performance, productivity, patient satisfaction: You want to get the best results from your investment. That's our goal too. This is why Siemens bases its Life customer care program on four key elements:

- **Services and support** provide a wide range of services for maximum performance in every situation, from individual systems to entire organizations
- **Upgrades and migrations** present several paths to help your practice stay current with the latest technologies and applications
- **Education and training** help you keep your knowledge and expertise up-to-date and help you to fully leverage the benefits of full volume imaging
- **Information and communication** offer you interactive platforms and diverse media for experiencing our latest innovations

With the Life customer care program, we not only take care of your systems, but help keep your know-how—and that of your practice—up-to-date. So you can focus on something even more important—your patients.

Maximizing Your Investment

Siemens' legendary upgradeability consistently delivers long-term value with continuous, cost-effective upgrades and updates—innovations that enable your investment to grow with your practice, meeting today's clinical needs—and tomorrow's medical challenges.

Standalone clinical images may have been cropped to better visualize pathology.

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