Choose versatility

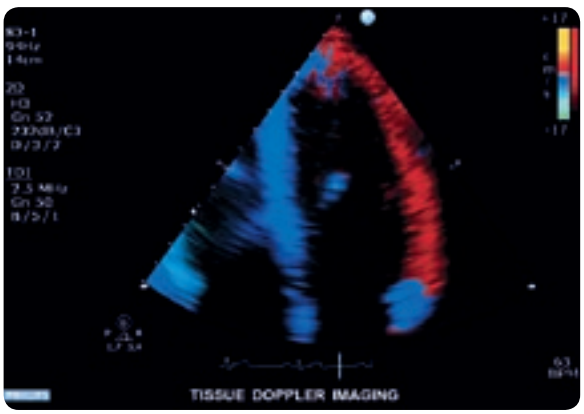
Philips HD11 XE echocardiography system high definition ultrasound made simple

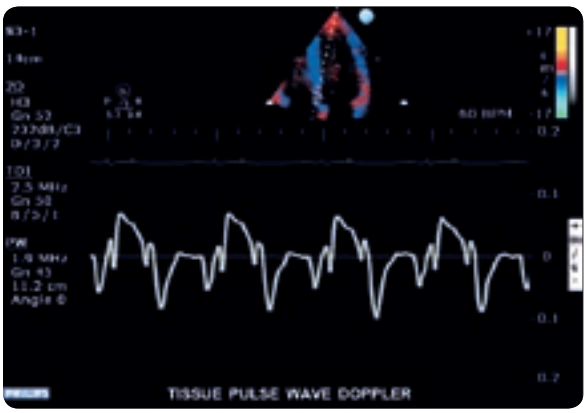
PHILIPS

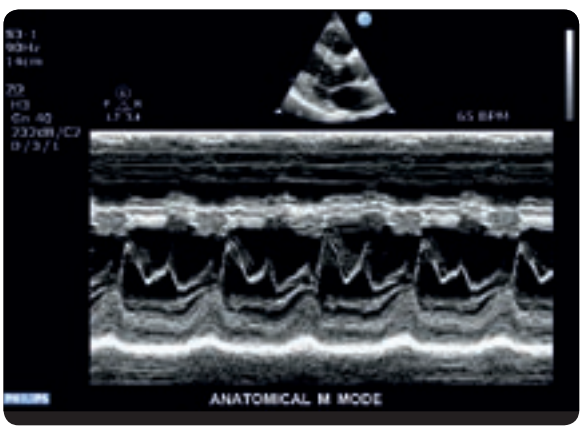
Fully equipped

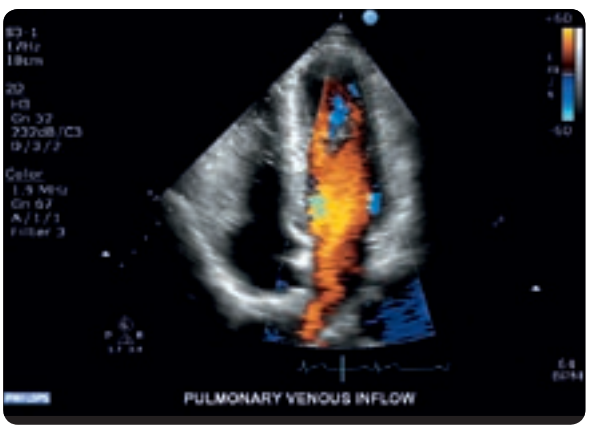
As cardiovascular ultrasound moves to the bedside and other crowded spaces, you need smaller, higher-performing systems designed to meet your specific clinical and operational needs.

The HD11 XE is a complete, digital cardiovascular imaging system that delivers high-definition imaging and ease-of-use in a compact, ergonomic and reliable package. You can also add powerful options like QLAB advanced quantification, stress echo, contrast imaging and TEE.



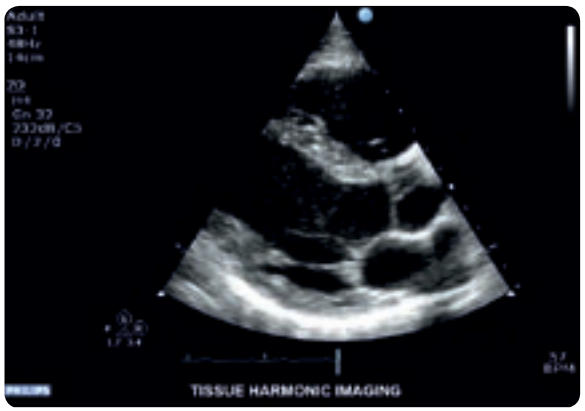


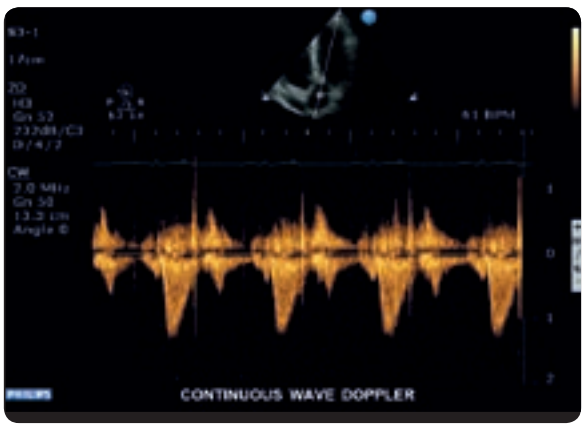




The right stuff

In this full-featured performer, Philips has combined broadband beamforming, automated image optimization tools, and clinically proven technologies. All of which make the HD11 XE ideal for a shared-service lab, private office, or mobile imaging service. And it's built on an upgradable platform to protect your investment, backed by Philips award-winning customer support program.





Standard advanced features

The following advanced modes and technologies are standard on every HD11 XE system:

- 2D with Pulse Inversion Harmonic Imaging, Philip's patented method for producing pure, broadband harmonic signals for superb grayscale presentation.
- Adaptive Color Doppler, which automatically selects the optimal Doppler or angio frequency for highly sensitive resolution, as well as Color Power Angio technology for assessing amplitude and direction of flow.
- Pulsed wave and continuous wave Doppler with Adaptive Doppler technology to boost weak signals and reduce noise, and high PRF capability for measuring higher velocities than ordinary pulsed Doppler ultrasound.
- Tissue Doppler Imaging (TDI), including Color TDI to assess direction and timing of myocardial function, and pulsed wave TDI for velocity mapping of vessel wall motion and cardiac tissue.
- Anatomical M-mode, for more accurate measurements of chambers, walls, and ejection fraction; makes it easier to keep the M-mode line perpendicular to the anatomy, even in abnormally shaped or positioned hearts.

With the HD11 XE system, you get an uncompromising platform, plus the advanced options you need in a highly mobile and easy-to-use system.

Designed to meet clinical needs and

The HD11 XE ultrasound platform offers powerful, clinically proven innovations in its basic package, and gives you the ability to add more advanced capabilities to match your clinical environment.

Stress Echo

The HD11 XE stress echo option is fully integrated into the user interface for the rapid acquisition and display of high resolution images, with plenty of flexibility.

- Fixed and user-defined protocols: capture up to eight stages and eight views
- Single-, quad-, and multi-cycle acquisition available
- Continuous acquisition mode is available during peak and immediate post-stage
- Pause control lets you temporarily exit the stress protocol to acquire additional images
- Deferred selection allows you to review and select loops after the exam
- Shuffling of loops lets you look at systolic loops – all fully synchronized – by stage or by view
- Gain/Save feature automatically saves your preferred control settings (such as power level (MI), gain and depth) for each view while acquiring resting images, eliminating setup time at peak stress
- Each loop is automatically labeled according to its view and at what stage it was obtained
- Left ventricular opacification (contrast) with stress
- Wall motion scoring and reporting

Vascular Imaging

The HD11 XE offers exceptional Imaging of vasculature and abdominal organs, expanding the power of your HD11 XE.

- Trapezoidal image format adds more image area than a standard linear image, so that entire carotid bifurcations and grafts can be viewed in a single image
- The optional QLAB IMT plug-in provides intima media thickness measurements
- Intelligent Doppler picks the optimal angle-to-flow every time, producing angle-consistent spectral Doppler measurements
- Two-probe transcranial imaging solution with D2tcd 2.0 MHz Doppler pencil probe and S3-1 sector transducer
- The L15-7io intraoperative transducer

Easy to move

The HD11 XE is lightweight and easy to push from here to there. And once you've arrived, its intuitive design lets you complete your studies with ease.

The ultimate in ergonomics and mobility

From the adjustable monitor and control panel, to the easy-to-access transducer connectors and highly maneuverable cart, the HD11 XE was built with the best possible ergonomics in mind.

- The HD11 XE adapts to virtually any scanning position for optimal user comfort and convenience
- Meets Industry Standards* recommendation for independent height adjustment of the monitor and control panel, facilitating neutral working postures and reducing repetitive stress injuries
- Ultra-bright, virtually flickerless LCD flat panel display reduces eye strain
- The HD11 XE is the lightest and smallest system in its class, enhancing its portability and making it easy to bring world-class ultrasound to your patients
- The integrated footrest allows correct posture, reducing stress on the spine
- Up to five available transducer ports reduce bending to switch out transducers
- Advanced circuitry produces less heat, helping to keep users and patients more comfortable

*Society of Diagnostic Medical Sonography, Industry Standards for the Prevention of Musculoskeletal Disorders in Sonography, May 2003.

and use

Automation tools

Built-in automation tools, brought from the iE33 ultrasound system, make it easy to achieve the best 2D, Doppler and vascular imaging on the HD11 XE, using minimal keystrokes.

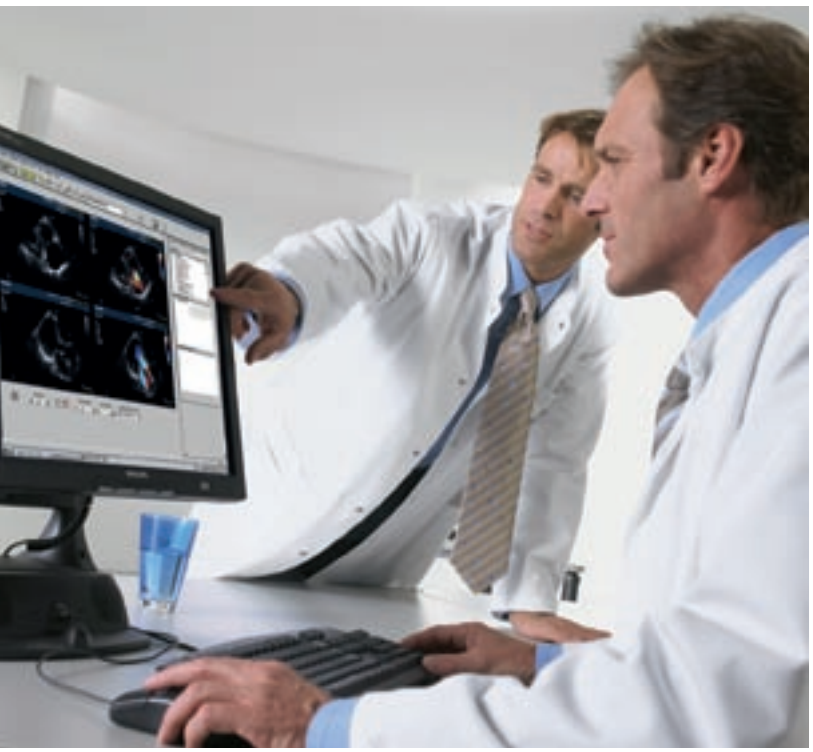
- Exclusive iSCAN intelligent optimization technology replaces numerous fine-tuning steps, simplifying and streamlining most Doppler exams and vascular studies while increasing consistency from user to user
  - With the push of a button, iSCAN automatically adjusts gain, TGC and compression on 2D vascular images
  - iSCAN also operates in Doppler modes, providing automatic scale and baseline adjustments
- Intelligent Doppler for vascular studies automatically maintains a specified scanning angle as you adjust for flow, making it easier and faster to complete exams
- High Q Automated Doppler Analysis provides real-time measurements of user-defined Doppler waveforms
- Harmonics provides a clear advantage over fundamental imaging in difficult-to-image patients, reducing clutter and increasing the resolution of walls and fine details of tissue structures
- The Fusion key allows users to optimize the image to patient type by emphasizing Resolution, General, or Penetration imaging characteristics
- All Clinical Software packages contain presets for virtually all standard exam protocols. You can also create customized presets for preferred transducers and exam types.
- Adaptive color Doppler automatically picks the optimal color Doppler or Angio frequency as a function of focal depth. It sets higher frequencies when you're close to the surface and lower frequency when you're imaging deep, for fine resolution and high sensitivity.

Innovation and commitment –

Data management and connectivity

Image and data management capabilities allow flexible recording, archiving, editing and even exam reports with embedded Images.

- On-screen image thumbnails let you build your study and check exam status, at a glance
- Multi-session CD and optional peripheral devices allow you to meet your documentation and archiving needs
- Prepare professional patient reports with embedded images



QLAB Advanced Quantification Software

QLAB provides on-cart and off-cart (on Xcelera) access to advanced cardiac analysis such as strain and strain rate and essential measurements such as ejection fraction, as well as automated IMT measurements for vascular studies. Just choose the plug-ins you want:

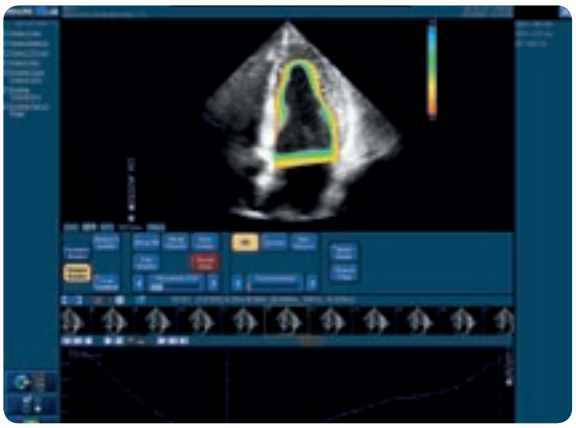
- Cardiac 2D quantification (2DQ) with semi-automated border technology for cardiac chambers and vessel cavities for fast, easy:
  - Quantitative assessment with Fractional Area Change/Ejection Fraction (FAC/EF)
  - Global and regional wall motion detection using Color Kinesis
  - Mitral Annular Color Kinesis for displaying mitral valve annular motion over time parametrically
- Strain Quantification (SQ) uses Tissue Doppler imaging (TDI) for quantifying velocity, strain rate and strain image data
- Automated Intima Media Thickness (IMT) provides measurements of carotid and other superficial arteries
- Region of Interest (ROI) quantification allows researchers to analyze pixel intensities from 2D or color Doppler data sets in up to 10 user-defined regions, and graph them over time

DICOM Networking option

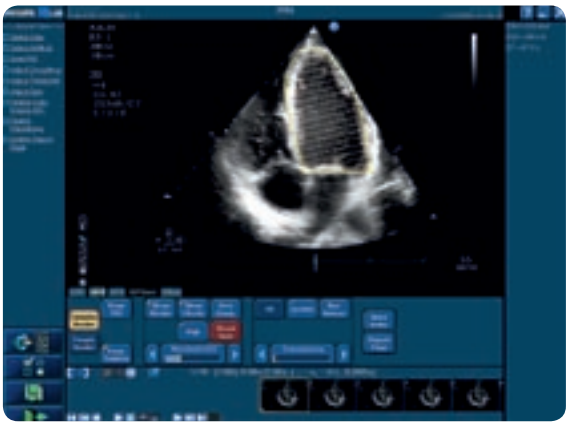
Allows you to adapt to the Philips Xcelera Echo Lab Management system, or to most DICOM management systems. Includes DICOM Print and Store, Modality Worklist, Performed Procedure Step and Structured Reporting.

- DICOM networking allows you to take advantage of DICOM functions such as Print and Store, Modality Worklist and Performed Procedure Step to streamline scheduling, archiving and billing functions
- DICOM Structured Reporting for cardiac exams supports both conventional free-text reports and structured information, for improved precision, clarity, and value of clinical documentation

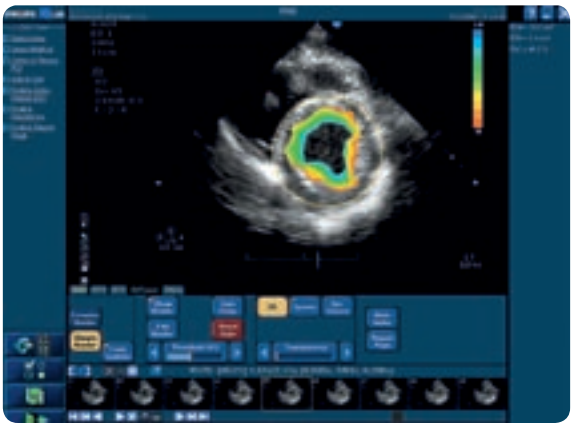
delivering solutions



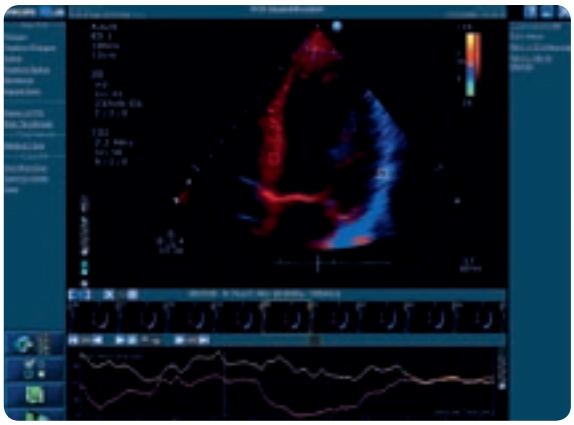
Apical four-chamber view with Color Kinesis



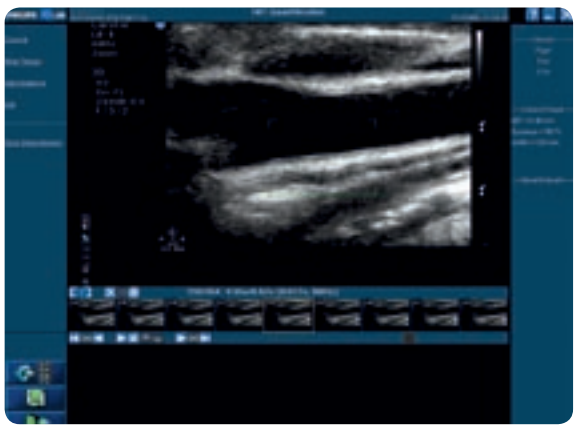
Apical four-chamber semi-automated border detection for Ejection Fraction



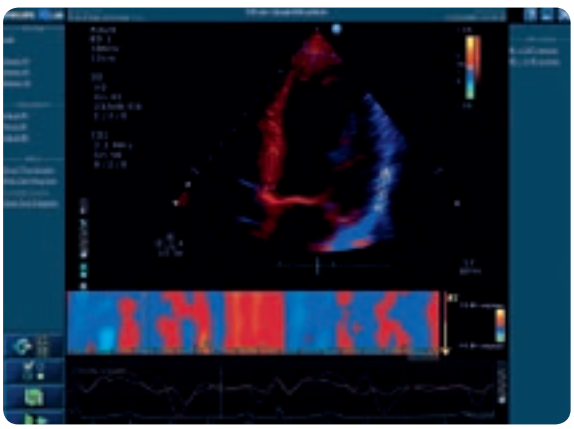
Short axis Color Kinesis



Apical four-chamber Tissue Doppler Imaging (TDI) with strain wave forms



Carotid automated Intima Media Thickness



Apical four-chamber view TDI with Strain M-mode

Reliability you can

The HD11 XE is a system you can depend on – every day, patient after patient. And it's built on an upgradeable platform to protect your investment.

A family of transducers for any application, any patient

The HD11 XE offers a comprehensive selection of sector, linear-array, curved linear array, TEE and Doppler pencil transducers. And with transducer frequencies ranging from 1 to 15 MHz, you can meet a complete range of adult, pediatric and neonatal applications.

- The HD11 XE supports over 20 transducers, including many from the Explora line
- Explora tranducers deliver maximum acoustic efficiency for greater penetration and resolution, and have extremely lightweight and flexible superflex cables that dramatically ease wrist strain
- Select transducers are compatible across platforms, including the iE33 and EnVisor systems
- TEE transducers include the S7-2omni with harmonic imaging, and the S7-3t for pediatric and small adult patients

Broadband transducers and Fusion signal processing

Philips broadband transducers and beamformer capture and preserve the entire bandwidth of ultrasound signals to retain the quantity and quality of vital tissue signatures. Fusion signal processing integrates the low- and high-frequency range in the same image. The quality of the "fused" image exceeds that of the low- or high-frequency images, exhibiting improved tissue texture, contrast resolution and image quality. And the Fusion control makes it easy to customize the system's settings to a patient's particular acoustic window, enhancing your ability to extract the most clinical information from each image:

- The Penetration setting utilizes more of the low-frequency information, thus providing the greatest amount of penetration
- The General setting provides maximum speckle reduction and enhances myocardial tissue texture
- The Resolution setting assigns a much higher weight to the high-frequency information

depend on

Protect your investment

Award-winning CUSTOM*er*CARE Services*
At Philips, we are committed to our tradition of delivering the highest quality of customer support in our industry – innovative services you can depend on. Our CUSTOM*er*CARE service agreements provide the flexibility and choice to manage your financial performance, with innovative solutions that promote uptime, lower the cost of ownership and increase your productivity.

One-touch on-line help
When you have questions about a study you're performing, the touch of a button puts the Help facility on-line. At any time during the scanning session, you can receive assistance for that part of the exam and then automatically return to where you left off.

Bringing expertise and vision to your ultrasound education
Philips Ultrasound offers a wide array of clinical and technical education, online resources and training courses to meet the increasingly complex needs of healthcare professionals.

Advancing ultrasound technology for better patient care
Our mission is simple: advancing ultrasound for better patient care. Our commitment to development has resulted in systems that meet and exceed expectations across a wide range of users. We've played a significant role in clinical research leading to new applications and advanced techniques. And we aren't stopping here. We are always working on tomorrow's advances.

We'd like to be your ultrasound partner for today and tomorrow. Please contact us to learn more about our systems, support programs and financing options.

*IMV Limited, based in Greenbelt, MD., is an independent healthcare research firm.

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