

GE Healthcare

# Vivid E90



Ultrasound. Elevated.

# The Vivid™ E90 is a premium 2D cardiovascular ultrasound system designed to help you rise above some of today's complex healthcare challenges, such as helping to reduce non-diagnostic exams.

## Put your department ahead of the technology curve

By combining the proven breadth and performance of the Vivid product line with the cSound™ powerful, software beamformer image reconstruction platform, the Vivid E90 takes ultrasound to a whole new level – potentially helping to reduce non-diagnostic exams and cost of care.

Conventional ultrasound systems too often yield non-diagnostic exams. Recognizing this, GE has developed a new imaging platform called cSound. In a conventional scanner, ultrasound beamforming is performed by special-purpose hardware – a hardware beamformer. Conversely, cSound is truly a software beamformer. Data from every probe element/channel is acquired and temporarily stored in a “Local

Big Data Memory” before being analyzed and processed by parallel processors similar to those found in many of today's supercomputers.

The cSound software beamformer has given us the flexibility to rapidly introduce new complex image processing algorithms, like **True Confocal Imaging (TCI)**, which helps us fully remove the variable focus control, and **Adaptive Contrast Enhancement (ACE)** which amplifies real signals and reduces undesired noise and artifacts. TCI and ACE together result in **exceptional contrast- and spatial resolution**, from near field to far field, which may help reduce the number of non-diagnostic exams.

The many ways Vivid E90 with cSound performance elevates patient care:

- Exceptional visualization with impressive penetration and/or high sensitivity while maintaining high spatial resolution in 2D, color flow and Doppler
- Elevated performance in:
  - Near field image quality
  - Lateral wall definition
  - Image uniformity
  - Penetration

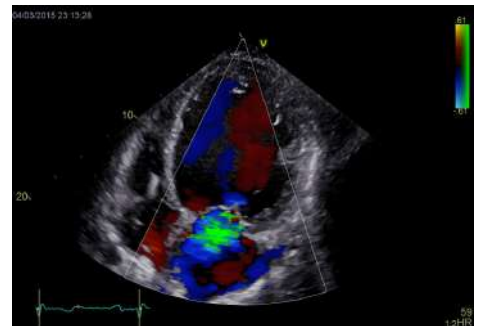
## Visualization

### Crisp imaging. Deep views.

GE's proprietary new cSound software beamformer and image reconstruction platform, combined with GE's XDclear™ probe technology, captures data from every channel in the probe to deliver exceptional 2D image quality with impressive penetration and/or high sensitivity while maintaining high spatial resolution. In addition, 2D TEE is simple, quick and clear. View detailed images of the heart during assessment and diagnosis in the echo lab.



**True Confocal Image for TEE** introduces uniform focusing, combined with enhanced contrast resolution throughout the field of view at high frame rates.



**Color Flow XDclear** transducer technology provides excellent color sensitivity, contrast resolution and spectral crispness.



**Triplane** lets you image three planes from the same heartbeat, with high temporal and spatial resolution.

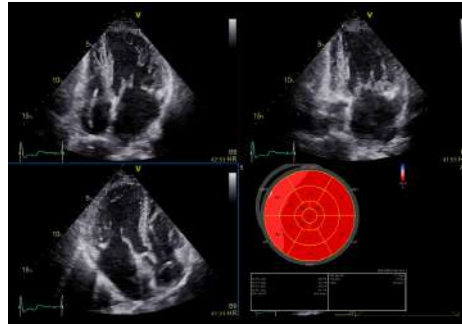


**Virtual Apex** - Phased array probes provide a wide field of view for increased visualization of structures at the sides of the sector.

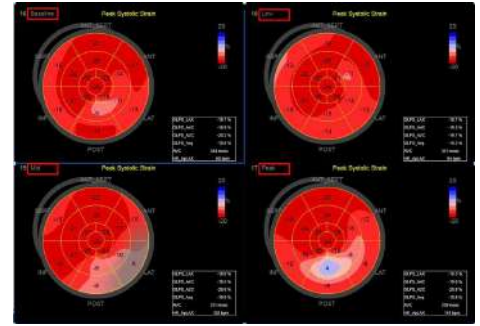
# Quantification

## Quickly, easily define care path

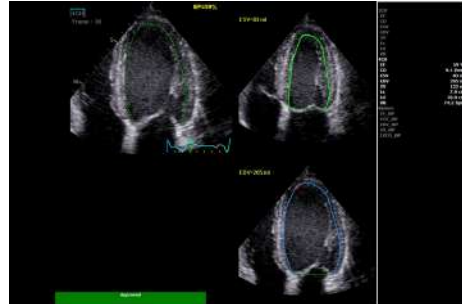
Quantification with Vivid E90 is all about helping providers evaluate problems and pursue the path forward. Count on a full suite of simple, intuitive tools to make your work easy and efficient.



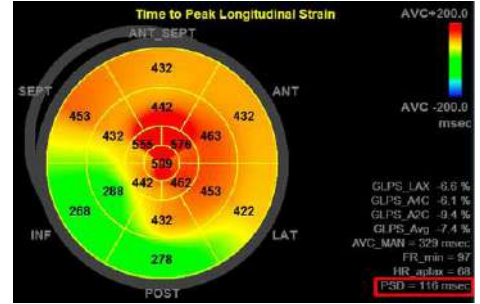
**Automated Function Imaging (AFI)** - Assess and quantify left ventricular wall motion at rest, calculating a large set of parameters.



**AFI Stress** protocols acquire standard apical 2D views and quantify both longitudinal segmental and global strain wall motion assessment at each stress level.



**Auto EF** - Based on a 2D-speckle tracking algorithm, assists in measuring the most commonly used parameter to describe the LV function.



**Peak Strain Dispersion (PSD)** - The index shows the standard deviation from the average (of all segments) of the time to peak strain assessment over the entire heart cycle.

# Workflow

## Streamlining your exams

Vivid E90 with cSound performance brings new advantages in efficiency. The high-quality DICOM® adapts to your preferences in terms of resolution and gray scale. You'll also appreciate the simple, tablet-like experience of the new configurable touch panel with an Image Manager for quick and easy access to patient images.

**Auto Gain** provides automatic 2D image optimization for every patient. It works continuously in real time according to your user preferences, with no need to reactivate when changing the scanning view. The tool also incorporates Time Gain Compensation adjustments, and helps improve image quality in difficult-to-scan patients. Choose from two basic settings according to preference and use cases.

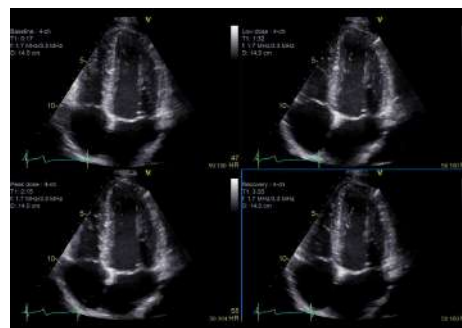
# Ergonomics

## A familiar, yet modern and efficient package

- 22" high-resolution OLED monitor
- 12" LCD touch screen
- Adjustable floating keyboard
- Convenient data management
- Easy mobility
- Low power consumption with efficient and low noise cooling



**User Interface** - You'll feel right at home with the full touch panel functionality and easily configurable interface.



**SmartStress** automatically sets up various scanning parameters for each level according to the same projection on the previous level.



## About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter - great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

## Imagination at work

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ULTC-0281-05.15-EN-US

JB31160XX