

# Designed for cardiology. Built for better care.

EPIQ CVx cardiovascular ultrasound system

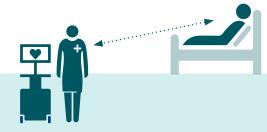
## Ultrasound for a changing world

Philips EPIQ CVx cardiovascular ultrasound system is designed to deliver quantifiable value to address the ever-increasing challenges of cardiology, with the exceptional ultrasound image quality for quick, definitive diagnoses and for confidence in interventional procedures. The EPIQ CVx is designed for cardiology, with configurability defined by the user and with simple everyday workflow that makes it easy to use.

The EPIQ CVx offers advanced and customizable capabilities that can significantly reduce exam time and speed time-to-results, including for transthoracic (TTE) or transesophageal (TEE) echo, so that you can provide greater care in less time for more types of cardiac patients.



COVID-19 has placed unimaginable demands on healthcare organizations. The need to perform fast, efficient echo exams that reduce the risk of virus transmission to technicians and clinicians has never been greater. It is essential to have fast image acquisition and the ability to seamlessly perform review and analysis away from the patient, either on-cart or off-cart.



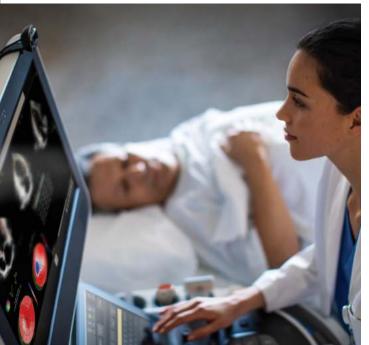
## Clinically definitive images empower cardiac care

#### Bedside exams matter more than ever

The sleep and transport modes become more important as more echo exams are performed at patient bedside rather than in the echo lab to reduce the risk of infection exposure during patient transport. Place the system into sleep mode, move it and boot up in seconds, saving valuable time between patients when performing mobile echo exams. This could help with reducing the overall likelihood of exposure to a potentially infectious patient.

As cardiac echo grows in importance, the need to diagnose, plan treatments, monitor and provide follow-up has never been greater. More time-intensive exams, in greater numbers, call for advanced tools that enhance diagnostic confidence and speed workflow.

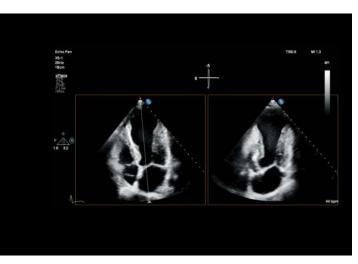
The transport mode enable fast shut down and boot up between mobile echoes, and reliable WiFI capability to send all data to the hospital PACs to reduce time between scan and report.



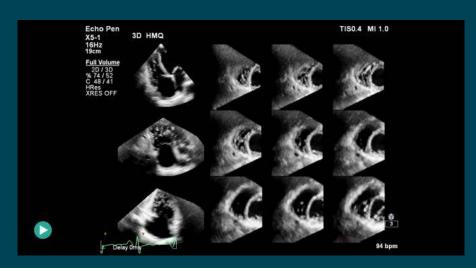


## Confidence in diagnosis

The EPIQ CVx ultrasound system brings superb image quality and streamlines evaluation of cardiac function, increasing diagnostic confidence for patients with cardiac conditions such as pulmonary hypertension, congenital heart disease, coronary disease and heart failure



2D xPlane image of an apical aneurysm



Real-time multislice imaging from a Live 3D volume

Click on the images to play the videos

#### Early detection to enhance cardiac care

TOMTEC AutoStrain integrated on the EPIQ CVx uses Philips advanced automation such as Auto View Recognition, Auto Contour Placement and speckle tracking to enable robust, reproducible one-button global longitudinal strain (GLS) measurement. This efficient tool for routine clinical use in LV, LA and RV strain measurements aids early detection of heart function change. Strain measurements are also important in cardiac evaluation for COVID-19 and cardio-oncology. Research also suggests that GLS may become a new gold standard for assessing heart failure.

#### Our most leading-edge, versatile transducer technology

The system features a complete suite of the world's most innovative transducers. With the touch of a button, xMATRIX offers all modes in a single transducer, including all 2D modes, as well as iRotate, Live xPlane, Live xPlane Doppler, Live 3D, Live 3D Zoom and Live 3D Full Volume.

Live xPlane enables the ability to acquire images from virtually any view, as well as providing xPlane capabilities to Doppler, to ensure correct placement of the sample volume.

#### Robust, reproducible quantification with Live 3D imaging

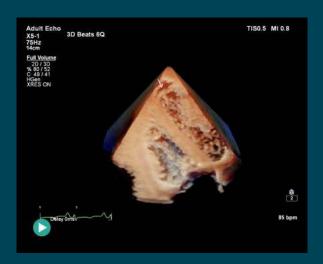
The EPIQ CVx expands automated applications to Live 3D imaging for robust and reproducible volume and EF calculations that are fast and easy to perform, and which support current EF quantification recommendations by the American Society of Echocardiography (ASE).

#### Full cycle quantification, every day

Dynamic HeartModel<sup>A,I,\*</sup> offers LV and LA functional information in the same application from the same cardiac cycle. One-button workflow is made possible by advanced automation to automatically label and initiate border tracking. 3D Auto RV segments, identifies borders and aligns views of the right ventricle so that clinicians can quickly perform quantification and check measurements.

Together, Dynamic HeartModel<sup>A,I,\*</sup> and 3D Auto RV allow for full-cycle cardiac quantification that fits into everyday workflow by using anatomical and artificial intelligence to provide fully automated quantification of the LV. LA and RV.

\*A.I. refers to Anatomical Intelligence

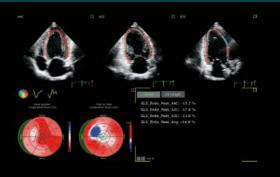




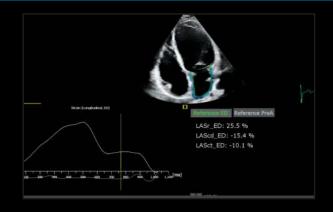
Clear visualization of the LV thrombus with Cardiac TrueVue

Dynamic HeartModel<sup>A.I.</sup>

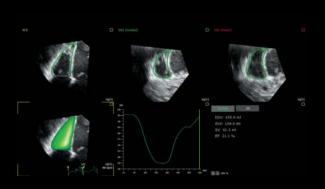
Click on the image to play the video



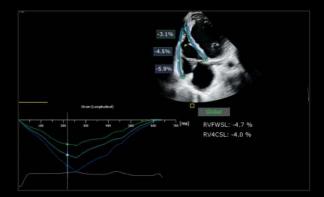
AutoStrain LV with bullseye view



AutoStrain LA



3D Auto RV



AutoStrain RV

## Functional assessment for cardio-oncology

Together, Dynamic HeartModel<sup>A.I.\*</sup> and AutoStrain LV provide an excellent solution for fast and consistent 3D ejection fraction and 2D GLS measurements for monitoring patients undergoing chemotherapy.

### Assessing cancer therapy-related cardiac dysfunction (CTRCD)

While improvements in cancer treatment have markedly decreased cancer-related mortality, highly effective chemotherapeutic agents may cause CTRCD, marked by a decrease in left ventricular ejection fraction (LVEF). Echocardiography is the method of choice for cardiac evaluation of patients before, during and after cancer therapy, but to be effective it needs to be robust and reproducible.

#### The importance of 3D echo

LVEF calculated by conventional 2D echocardiography often fails to detect small changes in LV contractility because of LV geometric assumptions, inadequate visualization of the true LV apex, lack of consideration of subtle regional wall motion abnormalities and inherent variability of the measurement. 3D echocardiography is the preferred technique for monitoring LV function and detecting CTRCD.

#### **Detecting subclinical LV dysfunction**

GLS is the optimal parameter of deformation for the early detection of subclinical LV dysfunction and measurements during chemotherapy should be compared with the baseline value.

\*A.I. refers to Anatomical Intelligence

Robust tools help you monitor and track function over time in CTRCD







## Exceptional advances for pediatric imaging

Pediatric patients come in all shapes and sizes. From the tiniest premature neonate to adult congenital patients, Philips offers a depth of imaging capability combined with streamlined cardiac workflow to reduce the steps and time needed for challenging exams.



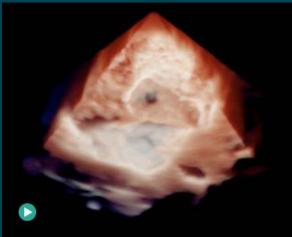
#### Visualize extraordinary levels of detail

The 2D TTE PureWave S9-2 transducer simplifies pediatric cardiac exams by displaying high levels of detail and contrast resolution, and providing tissue information at greater depths, enhancing coronary artery visualization.

#### One-button coronary sub-mode

All Philips sector transducers feature a one-button coronary sub-mode designed for easier and faster evaluation of the coronary artery and flow.

Coronary view with S9-2 transducer



X7-2 xMATRIX pediatric 3D TTE transducer brings 3D to even the smallest pediatric patients.



Right ventricular congenital defect seen using S9-2 transducer

Click on the images above to play the video

## Definitive imaging



X8-2t transducer

#### Acquisitions in a single beat

The xMATRIX X8-2t transducer brings true one-beat acquisitions and our highest volume rates in Live 3D and Live 3D color flow to TEE imaging, without compromise to image quality.

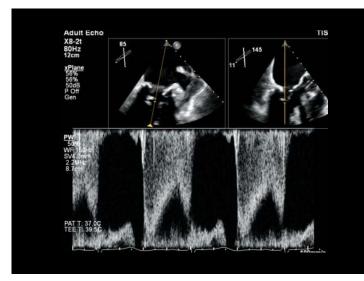
#### **Boost image quality**

While 3D TEE is becoming the standard imaging modality for interventional procedures, interventional device artifacts can compromise image quality, making it difficult to assess anatomy around the device.

Dependent upon the chosen imaging preset, the X8-2t transducer optimizes settings for either tissue or device. When using the interventional preset, the algorithm reduces the appearance of artifacts coming from the device to help maintain diagnostic confidence in all phases of the procedure.

#### **xPlane Doppler**

During complex TEE examinations, diagnostic confidence in valve disease assessment is fundamental, the X8-2t transducer with xPlane Doppler enables accurate representation and doppler quantification of the target flow without losing the correct image alignment.



xPlane Doppler with the X8-2t transducer





Excellent color sensitivity using the X8-2t transducer

xPlane imaging using the X8-2t transducer

Click on the images to play the videos

### 3D photorealistic rendering

Fully appreciate the structure of cardiac anatomy and cardiac flow through real-time rendering with moveable light source that can be applied in both echo and color images. This unique visualization brings shadow and depth to the volume for a clearer understanding of flow and its position.

#### **Cardiac TrueVue**

Available when imaging in 3D or when reviewing a 3D dataset, Cardiac TrueVue provides easy touchscreen control of both the volume and position of the light source. Place the light source anywhere in the volume, even behind a structure to fully understand its orientation, shape and position within the heart.

#### Cardiac TrueVue Color

When in the TrueVue mode, instantly access 3D color and benefit from the movable light source in

the volume. Moving the light source around the color flow jets creates shadows that can help locate jet origin and indicate direction more clearly than in 2D.

#### **Cardiac TrueVue Color with Glass**

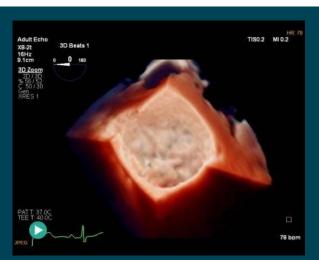
Visualize flow without the need to crop the image, which could potentially remove anatomical context. View regurgitate jet location and trajectory, as well as origin of the regurgitate orifice and gain overall improved visualization of echo behind the color.



**86% of clinicians** preferred the presentation of flow information from Cardiac TrueVue Color in viewing the regurgitant jet location and trajectory, as well as the origin of the regurgitant orifice.\*

**90% of clinicians** preferred the presentation of 3D tissue data from the Cardiac TrueVue Color rendering.\*

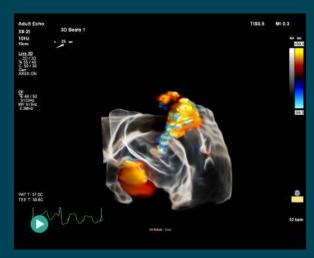
\*Compared with the color Vision H.



**Cardiac TrueVue** for best-in-class photorealistic 3D rendering



**Cardiac TrueVue Color** improves visualization of flow and its location within the anatomy



**Cardiac TrueVue Color with Glass** to see complete color flow without losing anatomical context

### Procedural confidence

Sizing and proper alignment of new cardiac devices can be challenging, affecting cost as well as the experience of both the clinician and patient. The EPIQ CVx has advanced capabilities tailored to interventional solutions, with the streamlined workflow to make interventional procedures more predictable and practical for everyday use. Philips solutions in imaging and measurement can provide a better appreciation of morphology and size for devices, which may reduce time in the OR.

#### 3D Auto LAA for LAA sizing

Acquire the LAA ostium size quickly and easily with 3D Auto LAA. Using automation reduces inter- or intra-user variability, increasing confidence during procedures.

#### **Cardiac TrueVue Glass**

Obtain an improved view of morphology using ultrasound. Cardiac TrueVue Glass can also enable a cast-like rendering of any 3D structure, and is especially useful when assessing morphology of a structure e.g., the LAA. This can be performed live or on an image that has already been acquired.

#### 3D Auto MV for mitral valve quantification

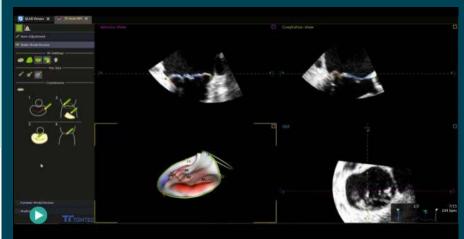
Analyze the complex anatomy of the mitral valve in 3D as well as its dynamic mechanics. Geometric measurements such as annular dimensions, leaflet morphology and coaptation descriptions can be used from the initial discovery of MV disease or pathology, to support device planning, and through monitoring of pre- and postoperative cases.



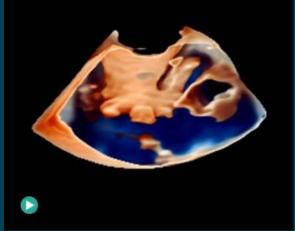
3D Auto LAA for automated LAA ostium sizing

Gain complete visualization of LAA morphology and ostium size in **70% less time** by using TrueVue Glass and 3D Auto LAA\*

\* Results based on internal comparison between 3D Auto LAA and 3DQ on a set of 15 3D LAA datasets of randomized subjects.



**3D Auto MV**Click on the images above to play the videos



Cardiac TrueVue Glass showing LAA morphology

### A smart investment

Built to withstand the rigors of daily use, EPIQ CVx offers low operating costs and is backed by Philips support and value-added services. The EPIQ CVx system boasts a low total cost of ownership, making it a smart investment.

#### **Enhance uptime**

- · Modular design for enhanced reliability and rapid repair
- Philips remote services\* monitoring, which corrects issues using a standard Internet connection, reducing the need for service calls
- Access to our award-winning service organization

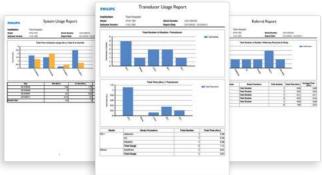
#### **Responsive relationships**

The value of a Philips ultrasound system extends far beyond technology. With every EPIQ CVx system, you get access to our award-winning service organization. our competitive financing, and educational programs that help you get the most out of your system.

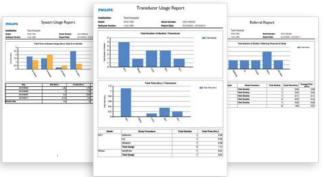
EPIQ CVx offers a defense-in-depth strategy, implementing a suite of security features designed to help clinical IT professionals and healthcare facilities provide additional patient data privacy and virus protection, as well as protection from unauthorized access via the ultrasound systems on hospital networks.



Support request button for immediate access to Philips support.



Philips data intelligence tools help you manage your department, maximize resources and improve workflow.



**Exceptional serviceability** 

The system features a superb modular design for rapid repair.

<sup>\*</sup> Not all services available in all geographies; contact your Philips representative for more information. May require service contract.



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