Application News

Flexi Zoom

Content

NOTE
This hand out is additional training material.
For more information please refer to the user manual and/or reference manual.
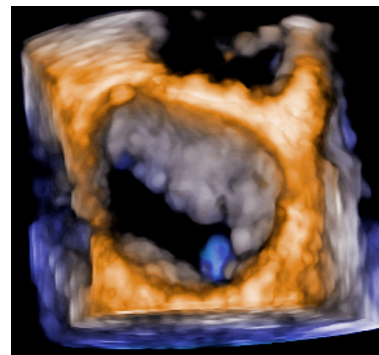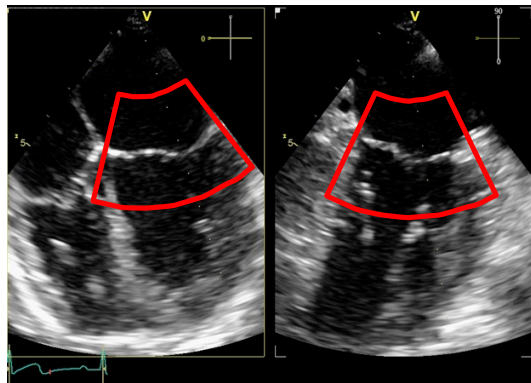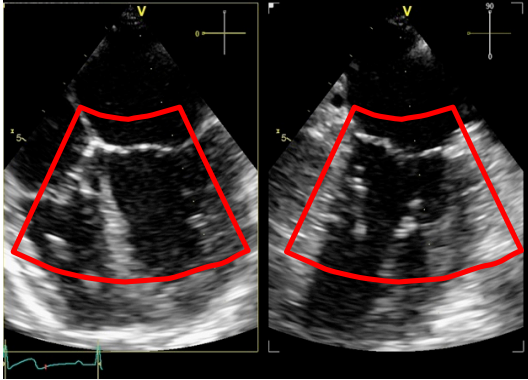
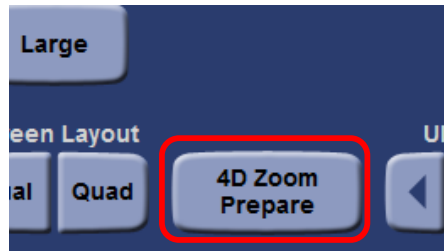# How to use the 4D Zoom Function

4D Zoom can be used on 4V-D probe, as well as on 6VT-D probe

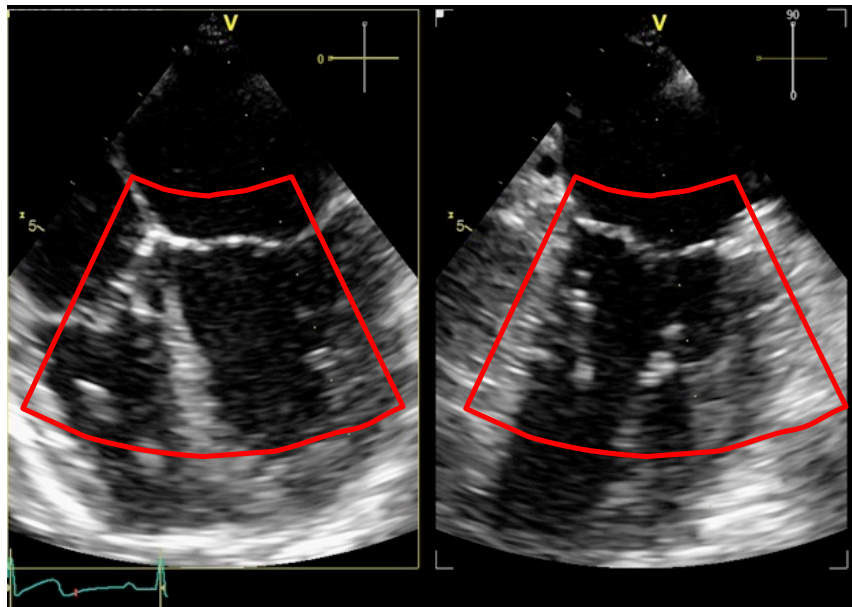## Workflow 01 - Starting from regular image 2D

Image the heart in regular 2D mode.
Press **4D Zoom Prepare** on touch panel

A biplane image appears on the screen.
The Zoom region of interest appears with a standard width in the middle of the planes
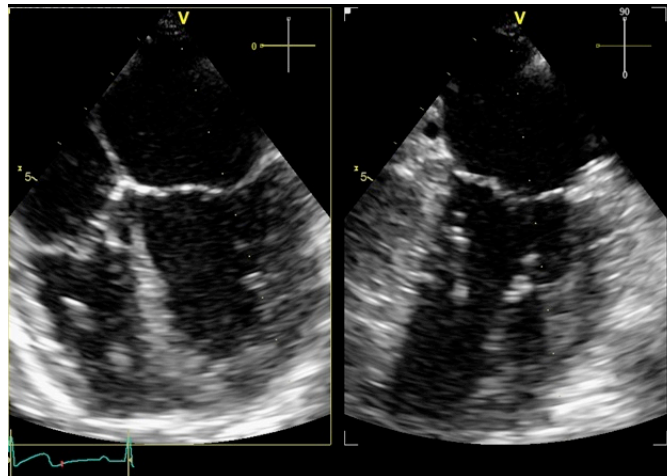
Workflow 02 - Starting from a biplane 2D image

Image the heart in regular 2D mode.
Press the **Multi-Dimensional** button on the keyboard.
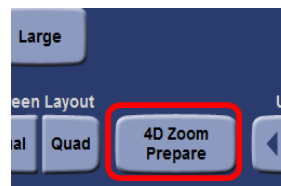A biplane image appears on the screen.

Example:

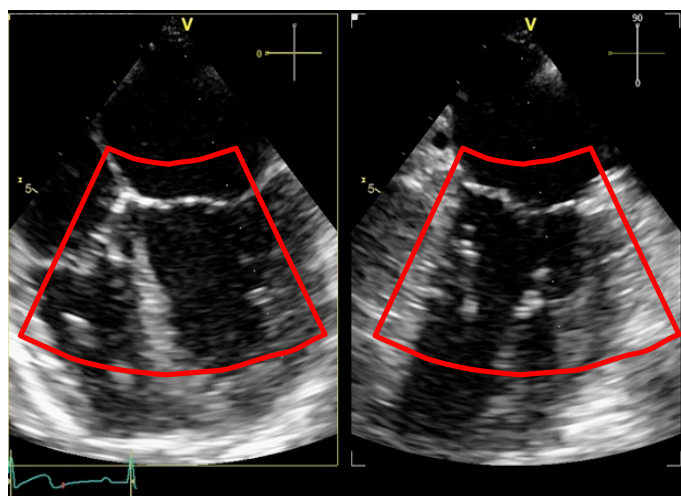On the left side the 4-Chamber view is seen   On the right side a view in 90° angle to
the 4CH

Press **4D Zoom Prepare** on touch panel

The biplane image together with the Zoom region of interest is displayed now.
The Zoom region of interest appears with a standard width in the middle of the planes.

The next steps are equal for both workflows

Adjust Zoom region of interest

Adjust the zoom ROI with several Trackball operations
Default function on the trackball is to adjust the **Position** of
the ROI in the Azimuth plane. The ROI in the elevation plane
moves in the same way together with the azimuth plane.
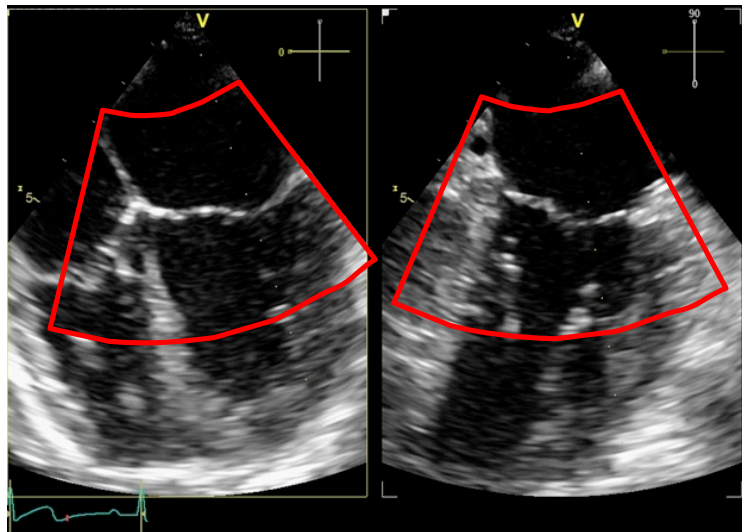
Press the **Set** button to change from Position to ROI **Size** and adjust
accordingly.
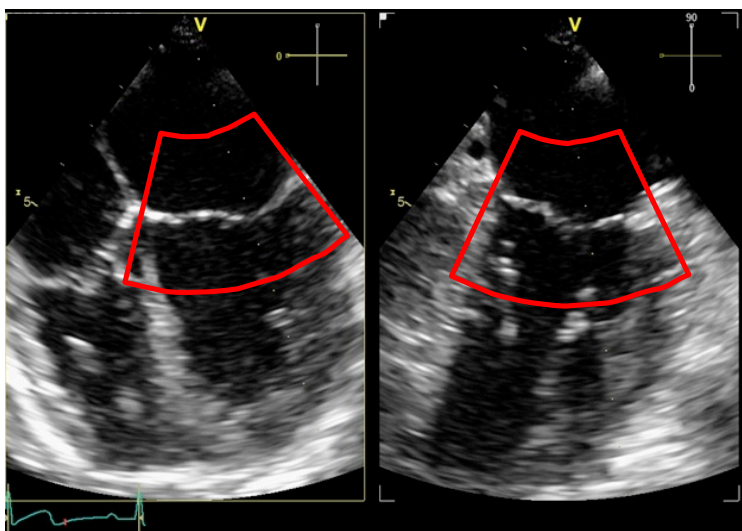
Use the **Set** button to change between **Position** and **Size** and optimize until satisfied.

To further adjust in Elevation plane, press the **Trackball** button

Adjust **Width** and **Position** in the elevation plane (switch between those two functions with **Set** button)
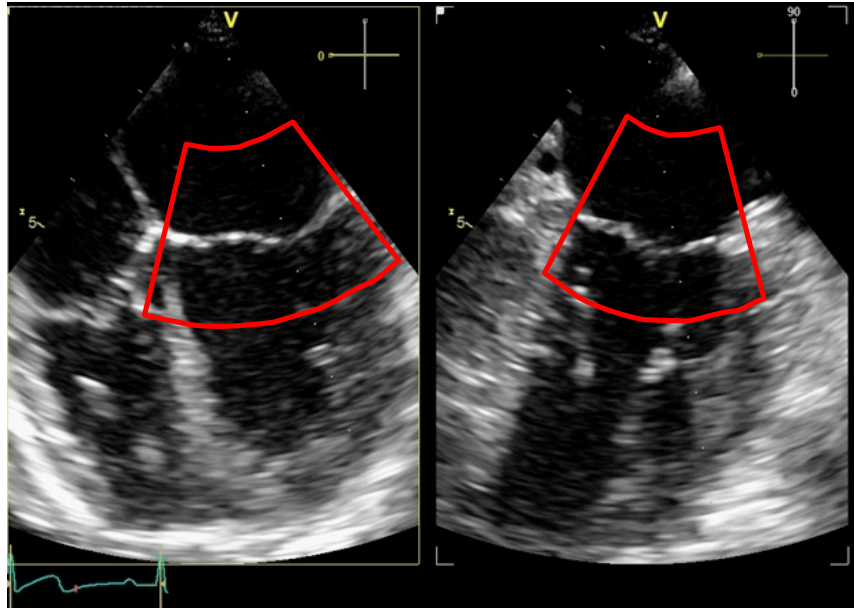
Finally when ready with the adjustments press the **4D Button** to start the 4D Zoom acquisition.

Temporal resolution

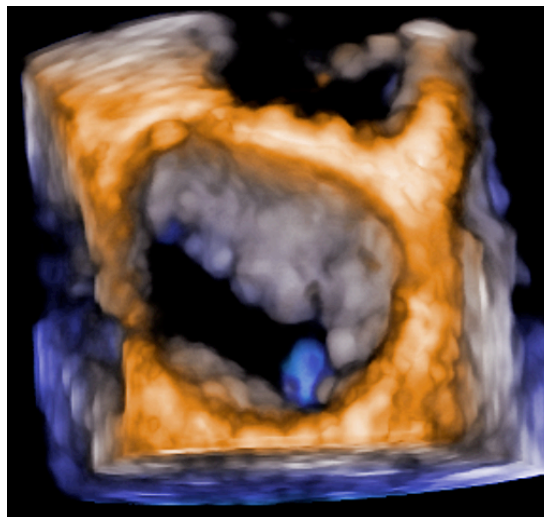If higher temporal resolution is needed a multi-beat acquisition might be necessary. By splitting the entire volume into several sub volumes (by keeping the selected volume size from single beat), higher volume rates can be achieved, without losing spatial resolution

Adjust your single beat acquisition as describe above.
Then select the **number** of heart **cycles** you want to collect.
Possible settings are 2-3-4 or 6 cycles.

Note

The volume will be split in several sub volumes according to the selection of the number of heart cycles. This will increase the frame rate by 2 times, 3times, 4 or 6 times according to the number of cycles.

Press **Multi Beat** to start the stitched acquisition.

Press **Image store** whenever satisfied with the dataset.

Difference between regular 4D Zoom and Flexi Zoom

When using the regular Zoom, the user starts from a 2D image and adds the HR Zoom (by pressing the Zoom button). In the single plane 2D image the Zoom size and position can be adjusted. When pressing the 4D button then, the system will show the zoomed rendered image.
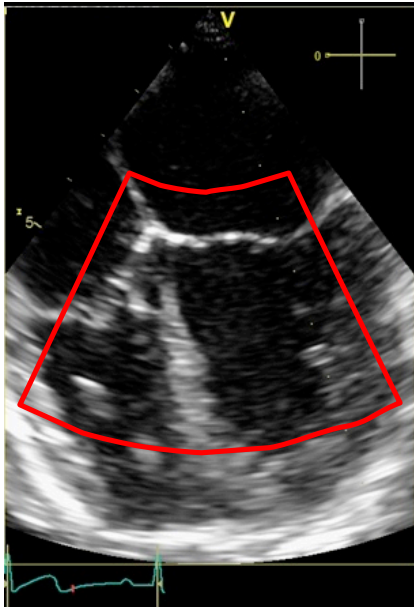
Adjusting the Zoom Size and width in single plane 2D
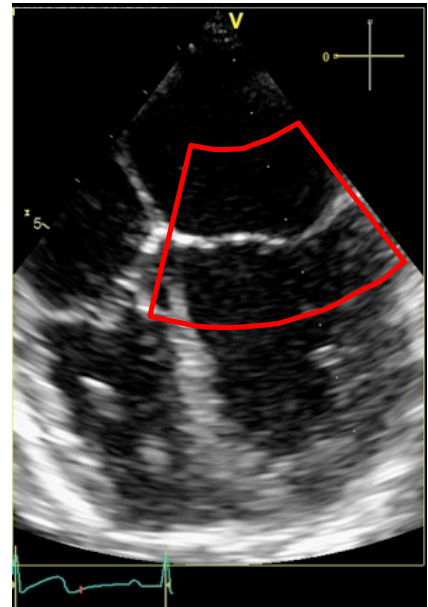
Since the user only works on a single 2D image the elevation plane cannot be adjusted, when using the regular Zoom mode.

The advantage of using the Flexi Zoom functionality is, that the Zoom ROI can be adjusted in size and position in the elevation additionally.