

VIEWTECH BORESCOPES

VJ-4 PROBE WITH 3D MEASUREMENT

QUICK START GUIDE



QUICK START GUIDE CONTENTS:

CAPTURE 3D IMAGES

3D MENU OPTIONS

3D MEASUREMENT SETTINGS

3D MEASUREMENT TYPES



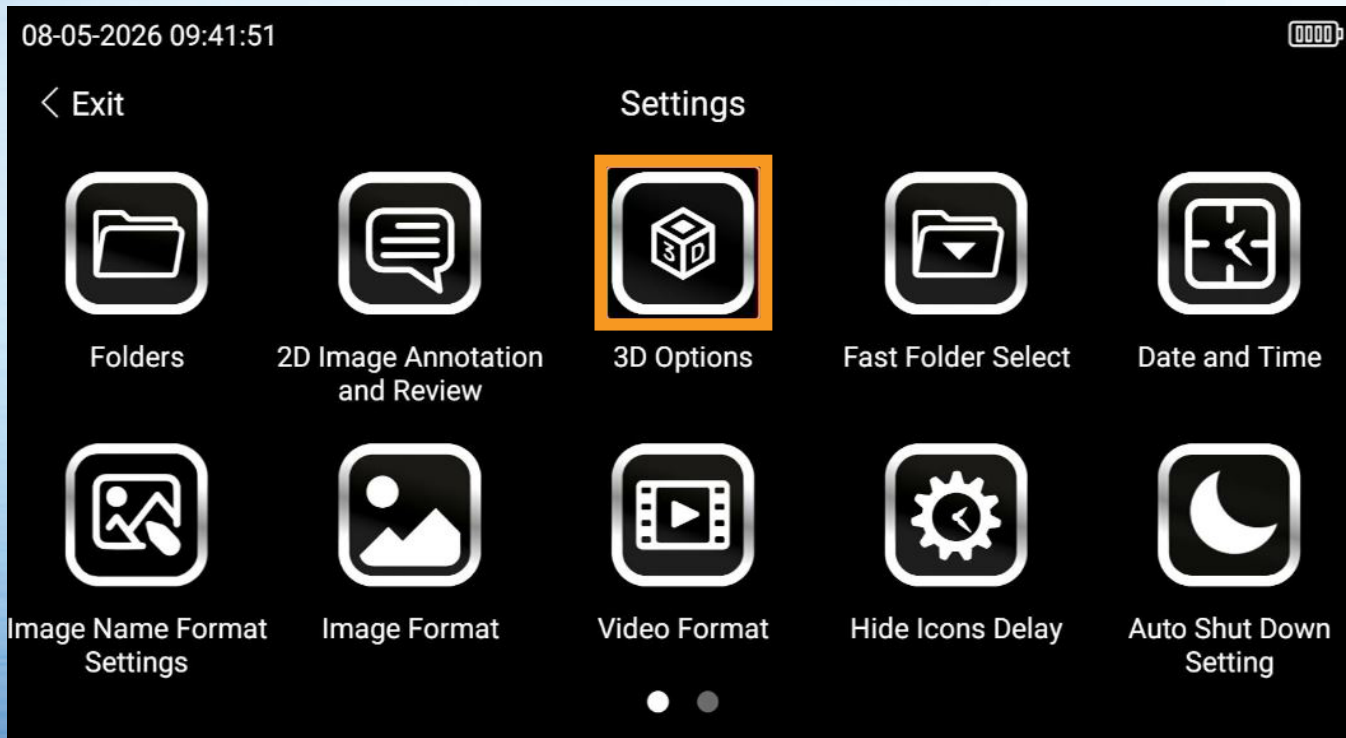
HOW TO CAPTURE 3D IMAGES



To take a 3D Image so you can complete measurements, squeeze and hold the trigger button for 2 seconds. A quick squeeze of the trigger will take a normal 2D Image.



3D MENU OPTIONS



- First, access *System Settings Menu* by pressing the *System Settings* icon in *Live Image Mode* or by pressing the *Right Control Button* for 3 seconds, then select *3D Options* within the *System Settings Menu* to verify the ideal settings (➡) are active before you begin an inspection.
- Options include: *3D Render Mode*, *Post-Capture Action* and *3D Assist*.



3D RENDER MODE

3D Options

3D Render Mode

Post-Capture Action

3D Assist

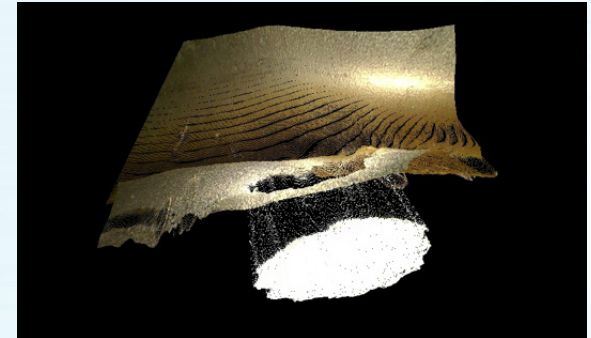
Standard (Raw Data): Best for high-precision measurement; may show gaps in reflective areas. ☐

Anti-Glare (Interpolated): Fills reflective gaps for a complete visual model; slightly lower measurement accuracy. ☒

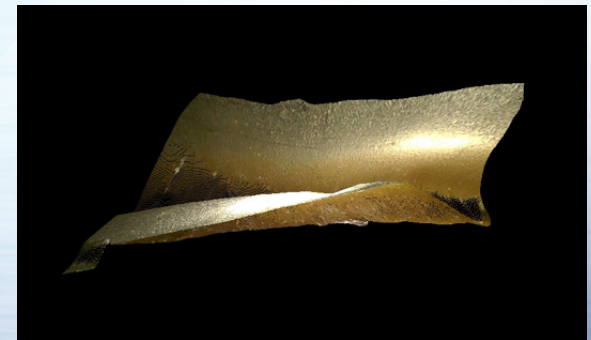
Cancel

OK

STANDARD



ANTI-GLARE



- In reflective environments, enabling *Anti-Glare* mode for 3D rendering may reduce measurement accuracy; however, it produces a more complete 3D visual model by minimizing gaps in the reconstructed surface.



POST-CAPTURE ACTION

3D Options

3D Render Mode	Post-Capture Action	3D Assist
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Return to Live Image Mode
☐

Enter 3D Measurement Module
☒

Cancel

OK

- Enable *Return to Live Image Mode* if you plan to perform 3D measurements later and want to return directly to the live camera view after image capture.
- Enable *Enter 3D Measurement Module* to begin taking 3D measurements immediately after capturing an image.



3D ASSIST

3D Options

3D Render Mode

Post-Capture Action

3D Assist

On-Screen 3D Assistant Toggle Switch

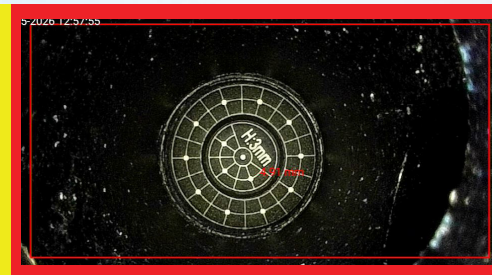
3D Assist presents a green/yellow/red box overlay onto the screen along with distance to inspection target. Set to OFF if only capturing 2D images. NOTE: If set to OFF, you can still capture 3D images; only the 3D Assist feature will be disabled.

On

Off

Cancel

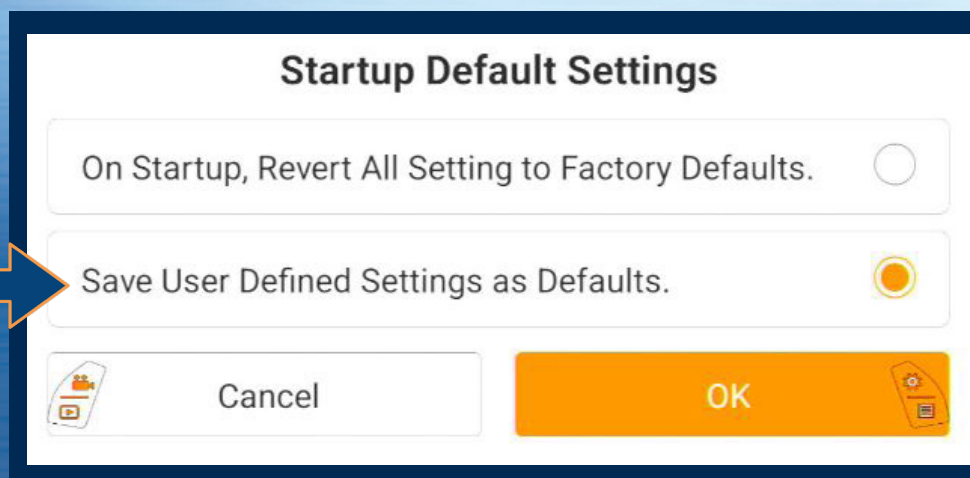
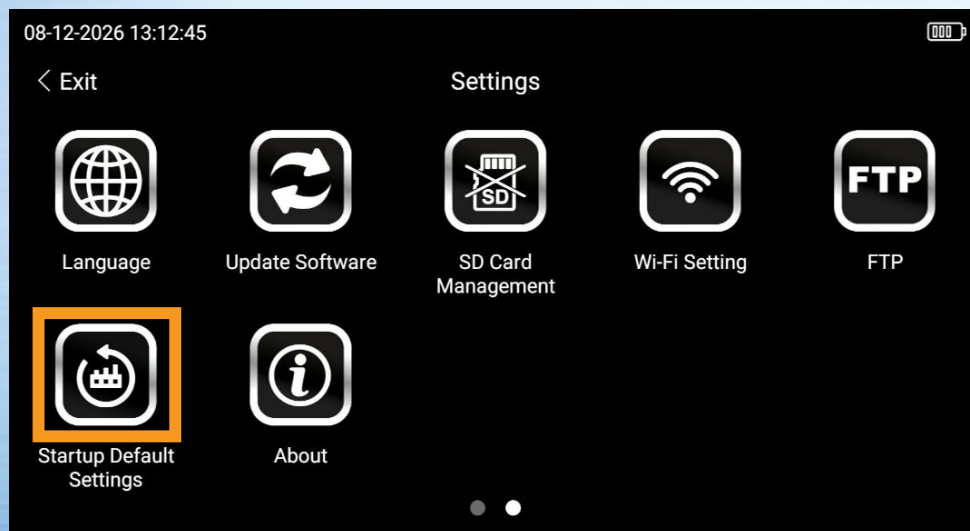
OK



- Enable 3D Assist to display a color-coded on-screen guide (green, yellow, or red) to indicate optimal positioning and distance for capturing the most accurate 3D images.
- Disabling 3D Assist does NOT prevent 3D image capture, but on-screen positioning guidance will no longer be displayed.



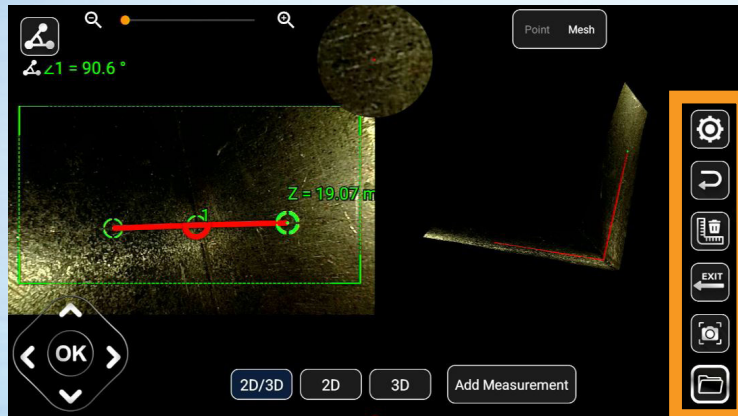
STARTUP DEFAULT SETTINGS



To save the previous three 3D settings as the startup defaults, first open the *System Settings Menu* by selecting the *System Settings* icon in *Live Image Mode* or by pressing and holding the *Right Control Button* for 3 seconds. Next, navigate to the second page of the *System Settings Menu* and select *Startup Default Settings*.



MEASUREMENT SETTINGS



Measurement Settings

Font and Line Size Unit of Measure

Font Size: ☐ Small ☐ Medium ☒ Large

Line Size: ☐ Small ☐ Medium ☒ Large

Cancel OK

Measurement Settings

Font and Line Size **Unit of Measure**

Unit of Measure: ☒ mm ☐ inch

Cancel OK



MEASUREMENT SETTINGS

Adjust font, line size and unit of measure



EDIT MEASUREMENT

Undo a previous plot and select new points.



NEW MEASUREMENT

Remove previous measurements and select new points.



EXIT MEASUREMENT

Return to Live Image Mode.



SAVE SCREENSHOT

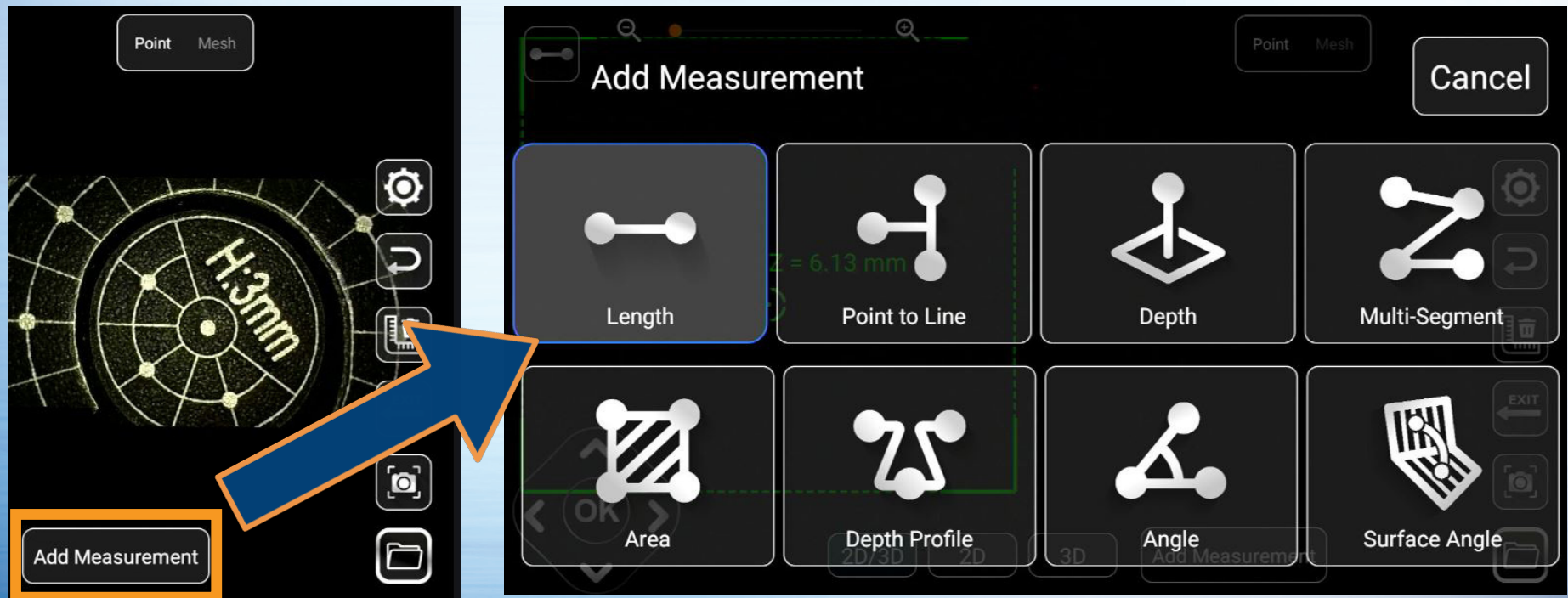
Save a screenshot image with measurement calculations.



IMAGE FOLDER

Access saved images to calculate new measurements.

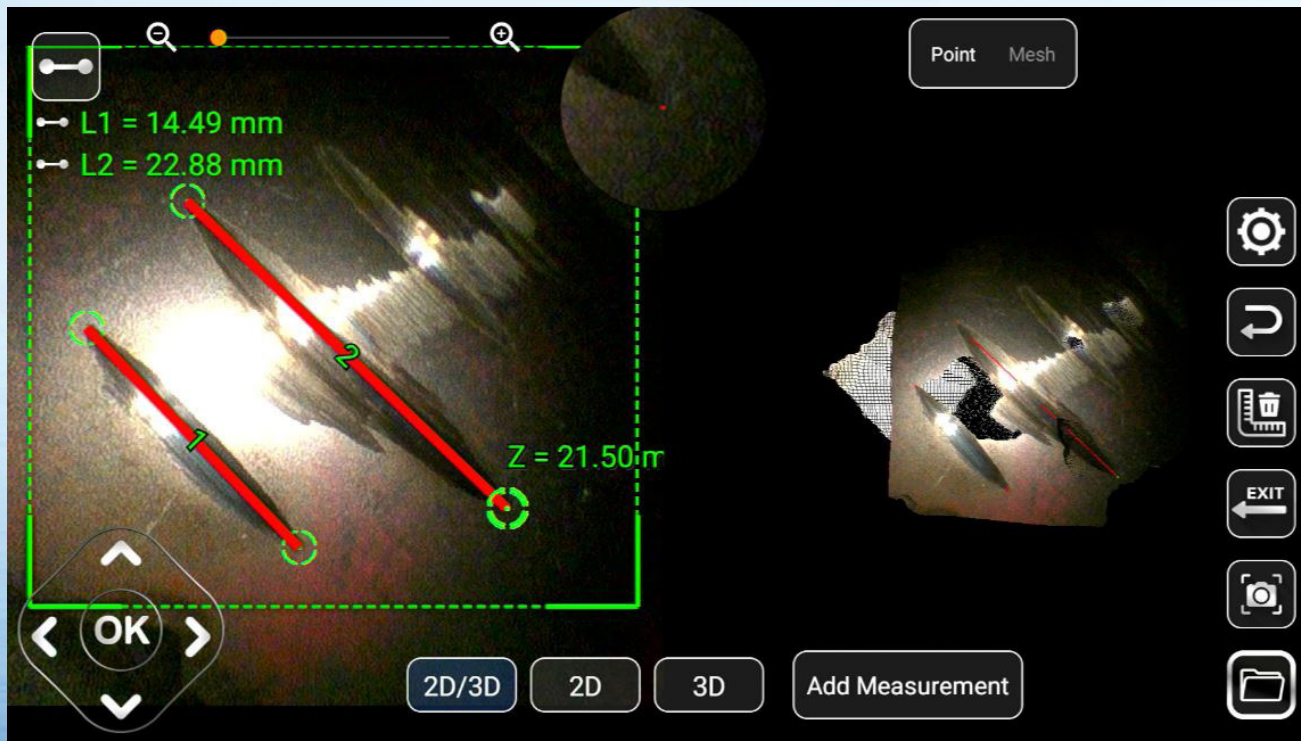
3D MEASUREMENTS



- After capturing a 3D image, press *Add Measurement* to choose the desired measurement type.
- Use the available measurement tools to perform precise quantitative analysis of detected defects, providing objective data to support informed maintenance decisions.



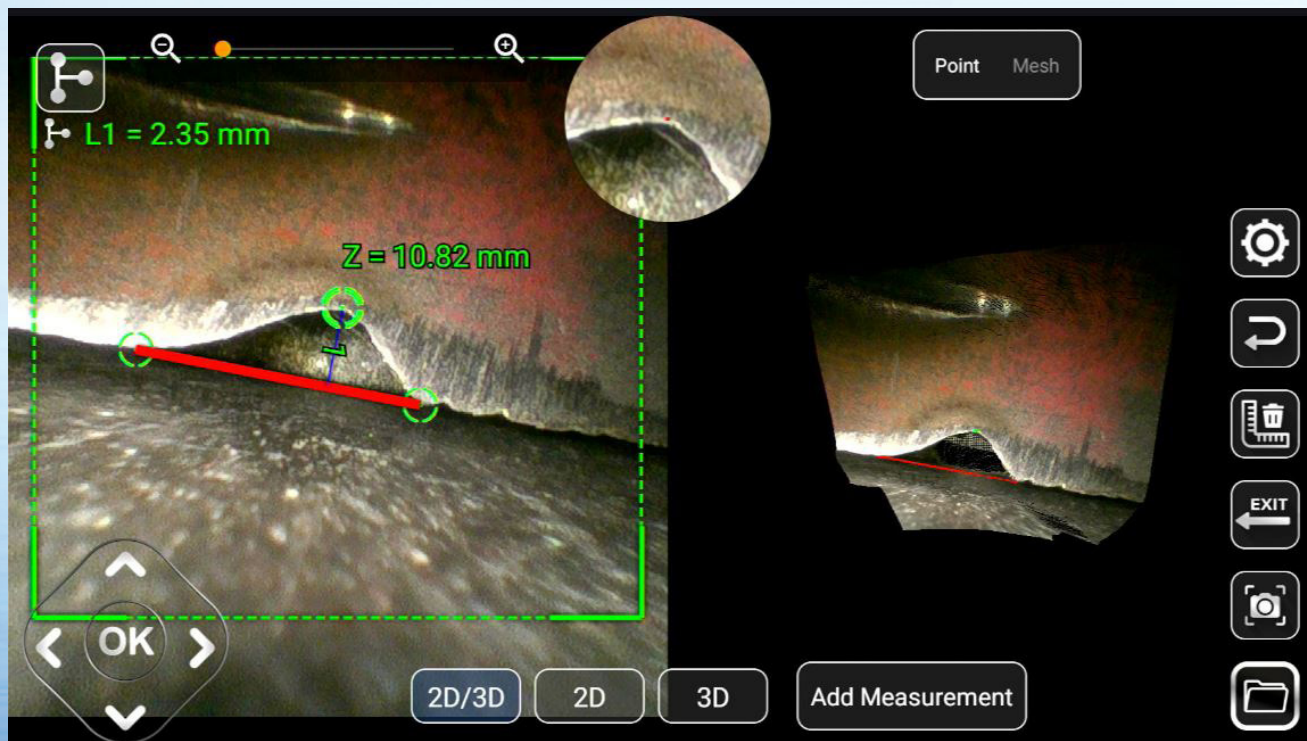
LENGTH



- Capture 3D image, select *Add Measurement* then *Length*.
- Select the first point in the 2D image on the left and select OK.
- Select the second point and click OK to obtain the straight-line distance between the two points in the 3D coordinate system.
- Don't forget to select  *Save Screenshot* to save the image measurement.



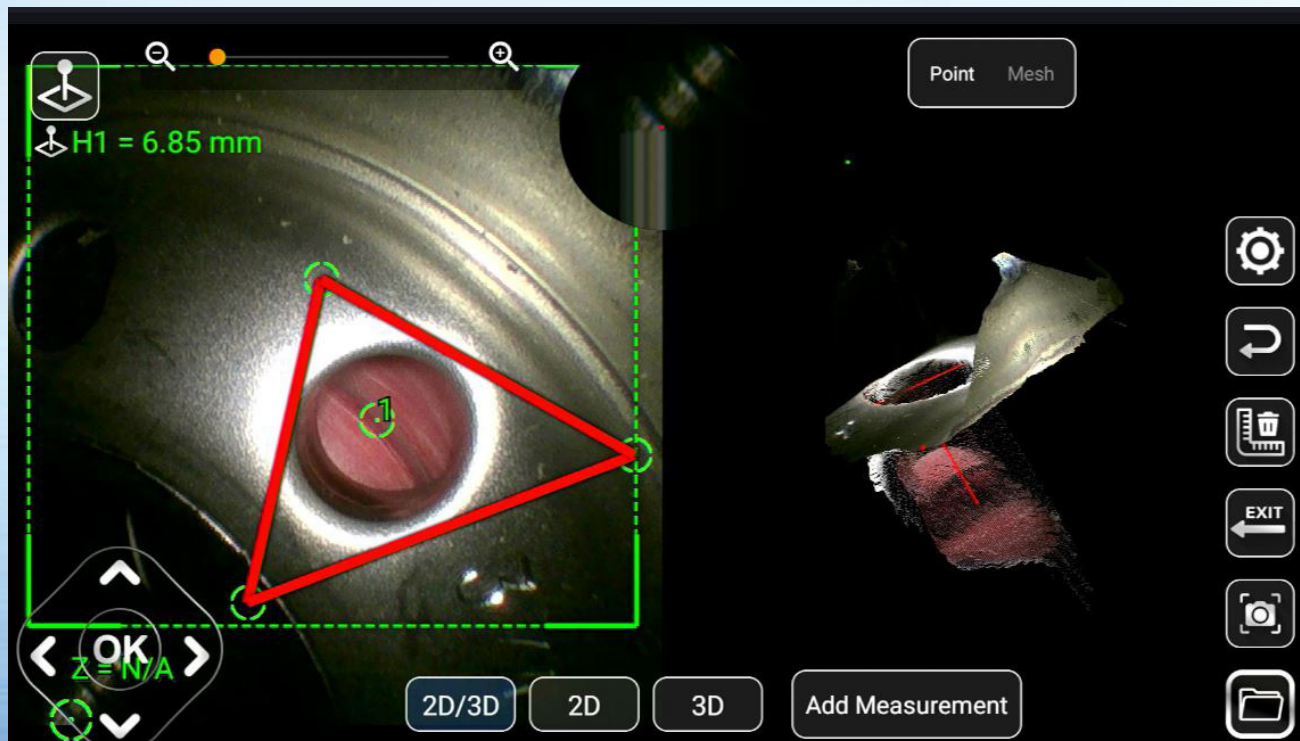
POINT TO LINE



- Capture 3D image, select *Add Measurement* then *Point To Line*.
- Select two points in the 2D image to define a line.
- Select the third point and click *OK*.
- The perpendicular distance from the point to the line in the 3D coordinate system will be calculated.
- Don't forget to select  *Save Screenshot* to save the image measurement.



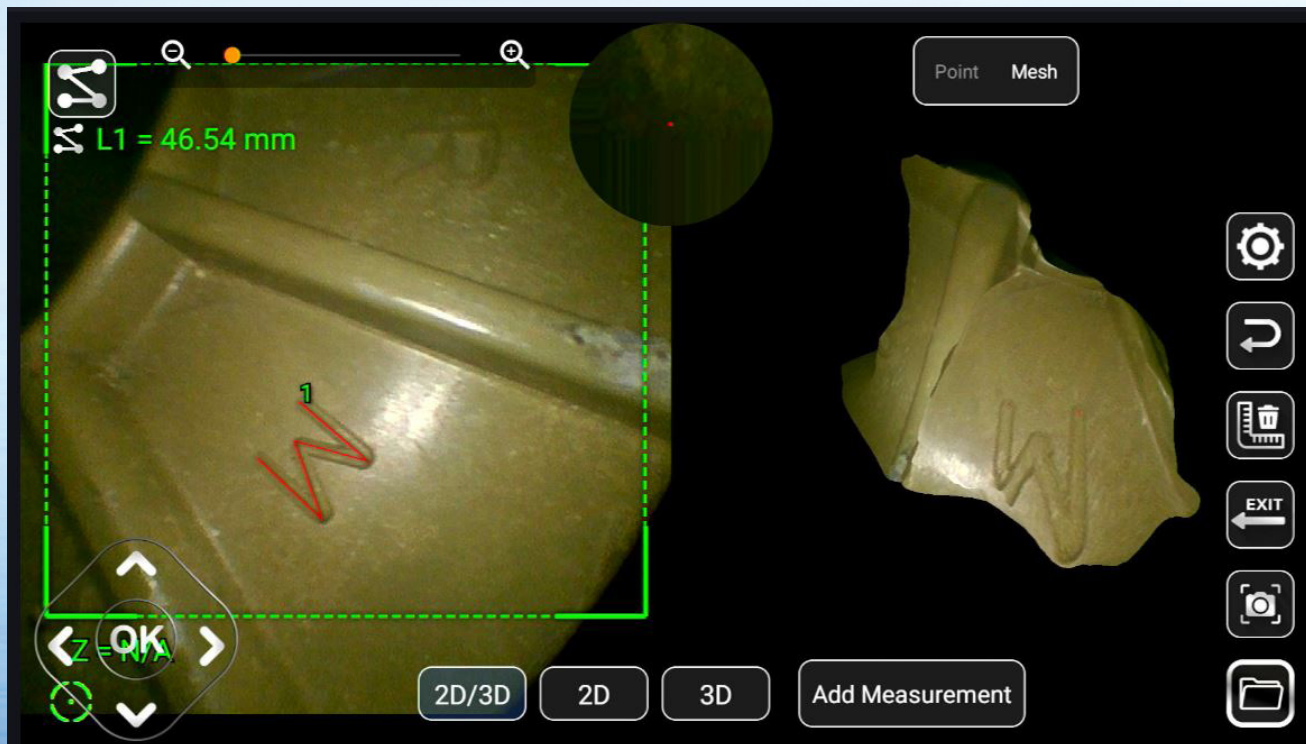
DEPTH



- Capture 3D image, select *Add Measurement* then *Depth*.
- Select three points in sequence on the 2D image to define a plane.
- Select the fourth point and click *OK*.
- The perpendicular distance from point-to-plane in the 3D coordinate system will be calculated.
- Don't forget to select  *Save Screenshot* to save the image measurement.



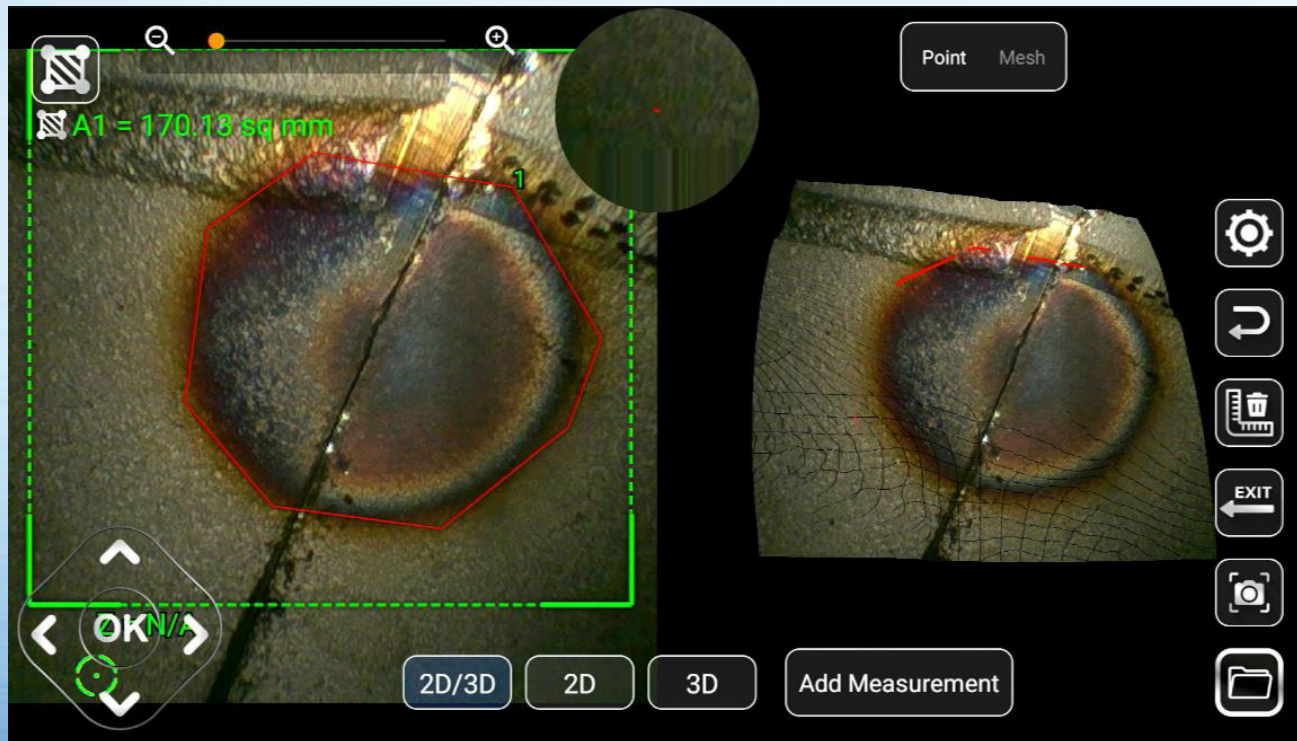
MULTI-SEGMENT



- Capture 3D image, select *Add Measurement* then *Multi-Segment*.
- Select multiple points in the 2D image to define a line segment.
- Select the *DONE* icon to determine the length of the first set of line segments.
- A second set of line segments can then be added.
- Don't forget to select  *Save Screenshot* to save the image measurement.



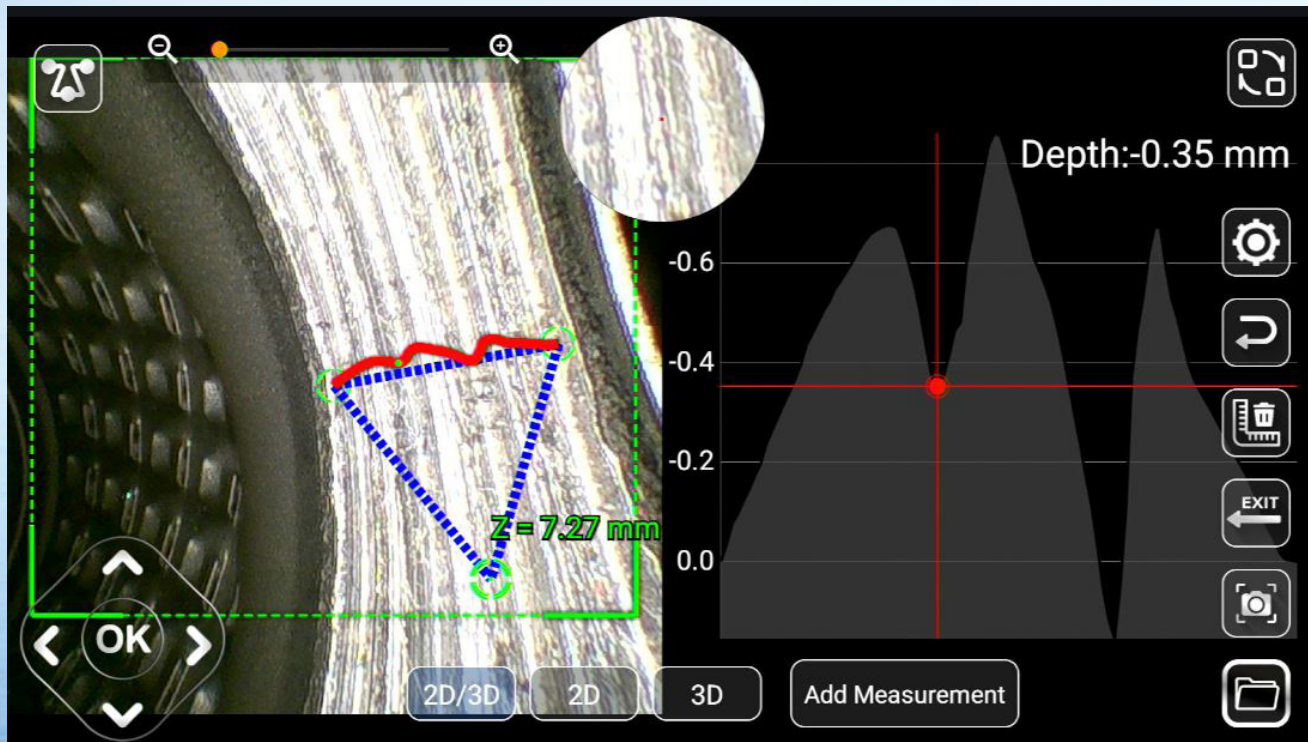
AREA



- Capture 3D image, select *Add Measurement* then *Area*.
- Select three points in the 2D image and click *OK* to define a triangular plane.
- Select points along the outline to be measured to form the area enclosed.
- Select the *DONE* icon to confirm the size of the area.
- Don't forget to select  *Save Screenshot* to save the image measurement.



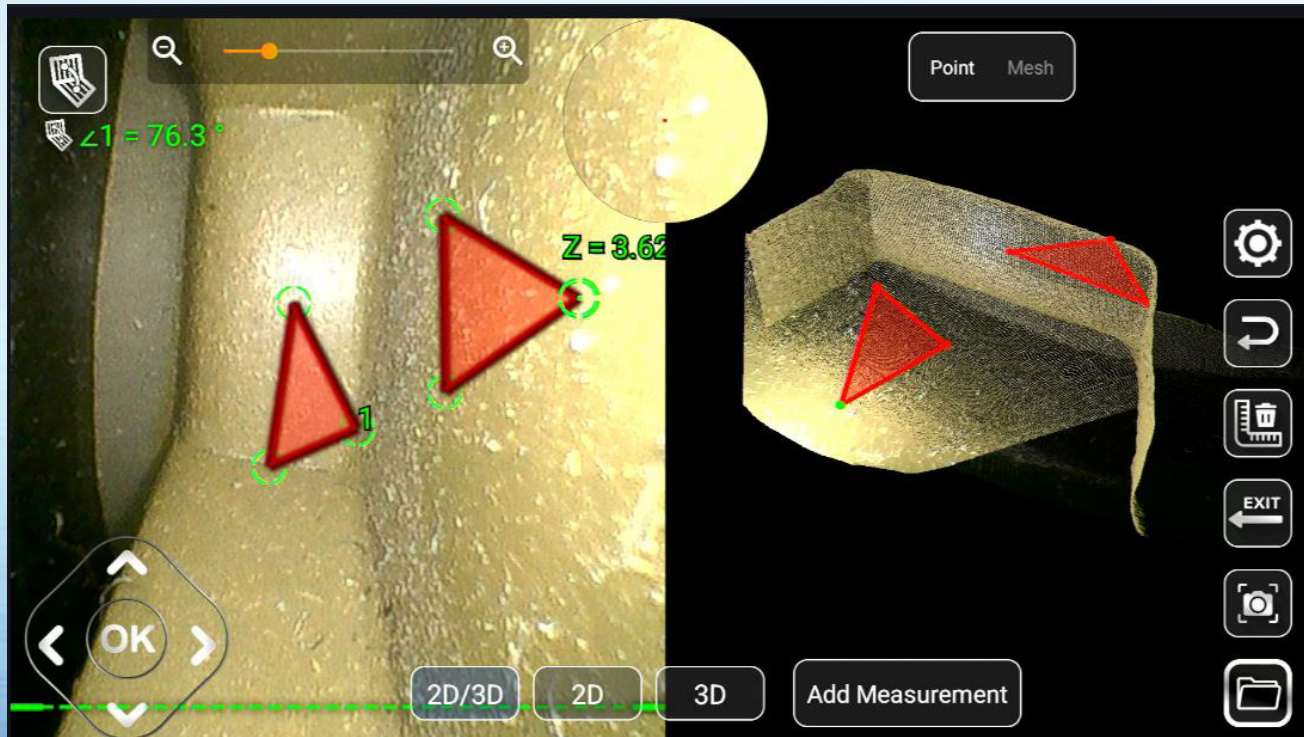
DEPTH PROFILE



- Capture 3D image, select *Add Measurement* then *Depth Profile*.
- Select two points in the 2D image, the starting and ending point.
- Select a third point, which will create a plane and generates a perpendicular line segment.
- The intersecting segment forms a tangent in the 3D drawing and moving this point represents the profile trajectory of the tangent line.
- The profile shape is drawn on the coordinates with the red dot corresponding to the green dot in the 2D image.
- Don't forget to select  *Save Screenshot* to save the image measurement.



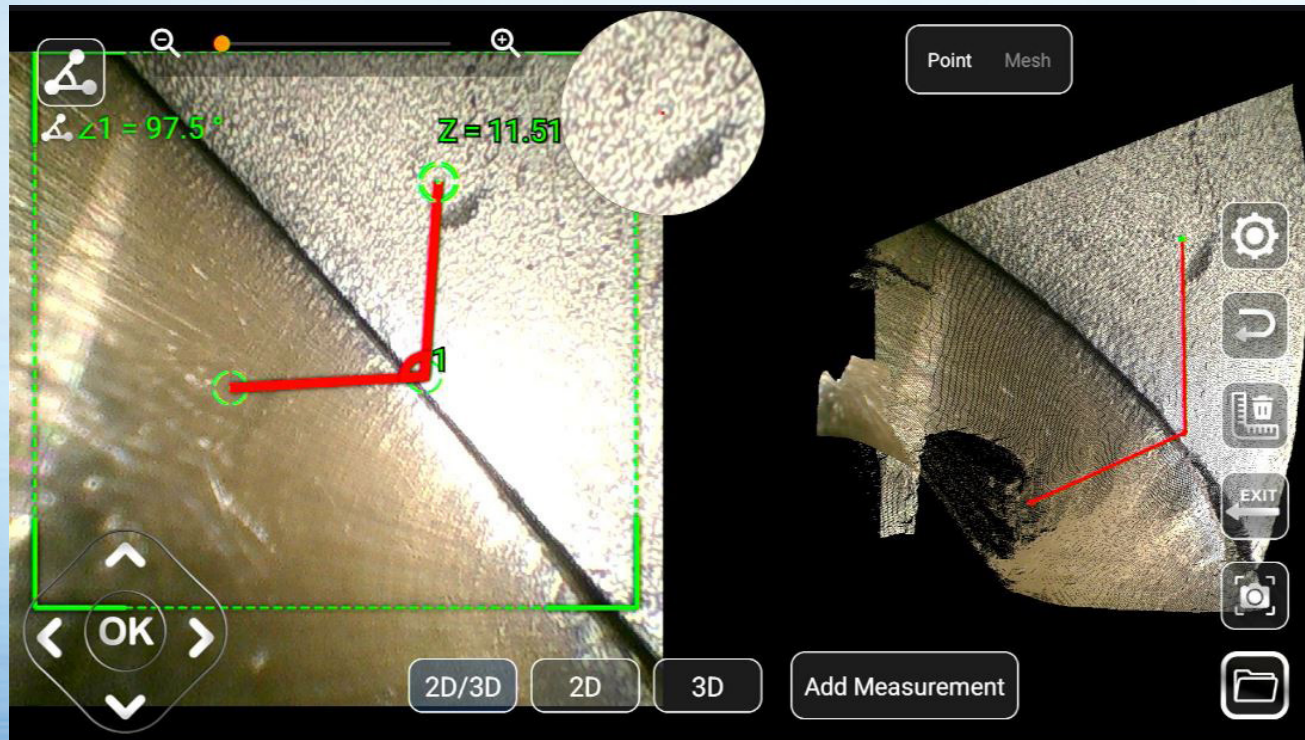
SURFACE ANGLE



- Capture 3D image, select *Add Measurement* then *Surface Angle*.
- Select three points in sequence in the 2D image to define a plane.
- Click the three points again to define the second plane.
- After clicking OK, the angle between the two planes in the 3D coordinate system will be calculated.
- Don't forget to select  *Save Screenshot* to save the image measurement.



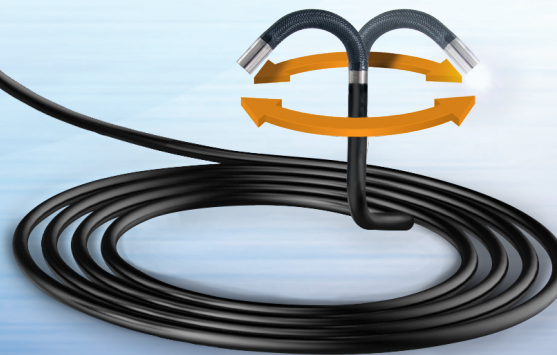
ANGLE



- Capture 3D image, select *Add Measurement* then *Angle*.
- Select two points in the sequence in the 2D image to generate a line.
- Click the two points again to define the second line.
- After clicking OK, the angle between the two lines in the 3D coordinate system will be calculated.
- Don't forget to select  *Save Screenshot* to save the image measurement.



Questions?
Contact a ViewTech
representative at:
231-943-1171



Speak with a ViewTech representative about pairing this video borescope with other VJ-4 insertion tubes.