YATEKS REALTA
3D Measurement Video Borescope

The Yateks Realta 3D Measurement Video Borescope features sophisticated measurement software, a 7'' IPS high-definition LCD touch screen with a resolution of up to 1920 x 1080 pixels. Its touch screen user interface is efficient and easy to operate. Using general-purpose computing graphics processor technology, the speed of image and video processing algorithm is lightning-fast making the on-screen image clearer and smoother than previous Yateks models.

With its 3D measurement function, the Realta can generate 3D point cloud map that reproduces the appearance of the measured object. Users can zoom and rotate the mapping to make precise and accurate point selections in real time avoiding inaccurate measurement results caused by user error.

Use the Yateks Realta 3D is ideal for remote visual inspection and analysis in the aerospace, automobile manufacturing, precision casting, railway, shipbuilding, and power generation industries.

◎ Advanced measurement technologies

The Realta's advanced visual inspection measurement technology speeds up the inspection process and improves probability of detection. The measurement software generates a 3D surface map of measurement cursor points, allowing inspectors to quickly check their work in real time and ensure accurate measurement setup.

Length

Measures the straight-line distance between two selected points.

Example Applications:
- Simple measurement of features or components
- Indication length measurement
- Measurement of component size migration through expansion or erosion/corrosion/wear
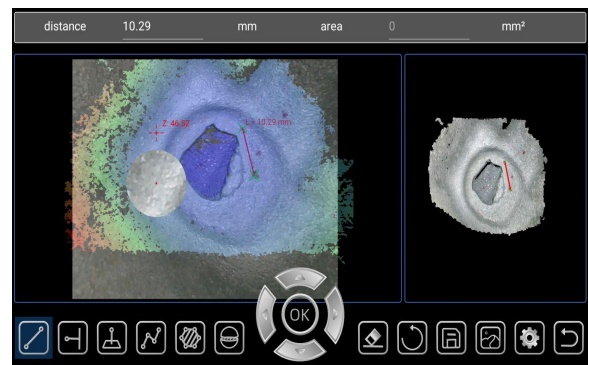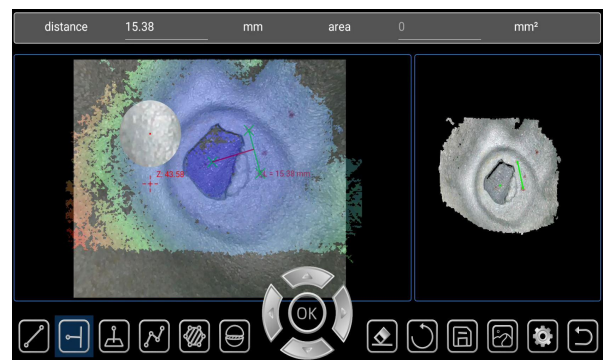
Point to Line

Measures the perpendicular distance between a line (defined by two points), and a selected point.
Example Applications:
- Turbine blade edge damage
- Estimate missing corner area using multiple point-to-line measurements
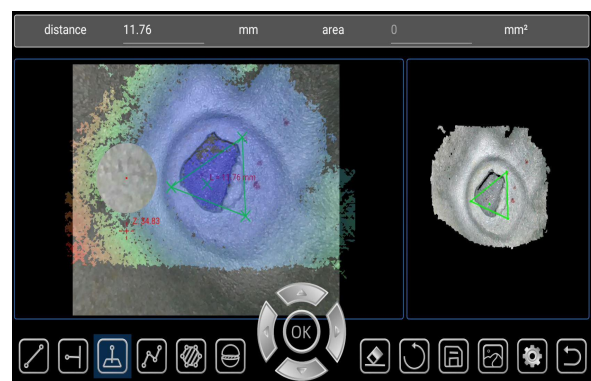- Gap or groove width
- Weld width

Depth

Measures the distance from a reference plane (defined by three selected points) to a fourth selected point above or below the plane.
Example Applications:
- Blade tip to shroud gaps
- Pits or dents from corrosion, erosion, or FOD impact
- Pipe inside diameter
- Weld height
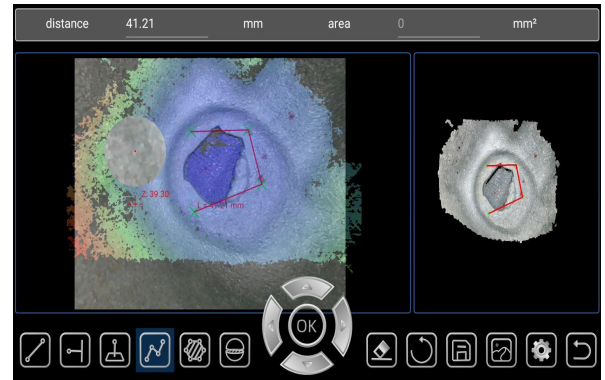- Stator vane rock
- Gap width

Multi-Segment

Measure the length between line segments composed of multiple points

Example Applications:
· Total travel path of a complex crack
· Total length along a curved surface
· Use three cursors to measure the angle between a turbine
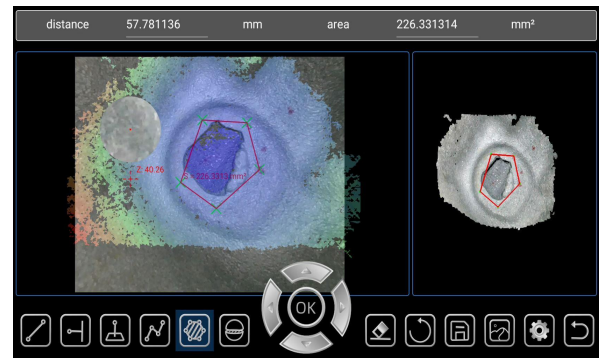blade edge and an indication or blended area

Areq

For measuring the perimeter and area of polygons composed of multiple points

Example Applications:
· Missing blade corners using a measurement plane
· Coating loss
· Surface area of pitting or corrosion
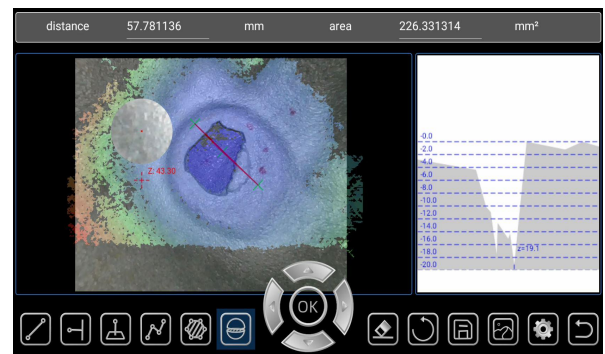· FOD impact damage

Area Depth Profile

Obtain a graph of the depth trend of a section relative to a point on the measured object

Example Applications:
· Corrosion, erosion and pitting
· FOD impact damage
· Maximum weld height including orbital welds
· Maximum wear groove depth

◎ High-definition megapixels, general-purpose computing graphics processor technology, ultra-clear images
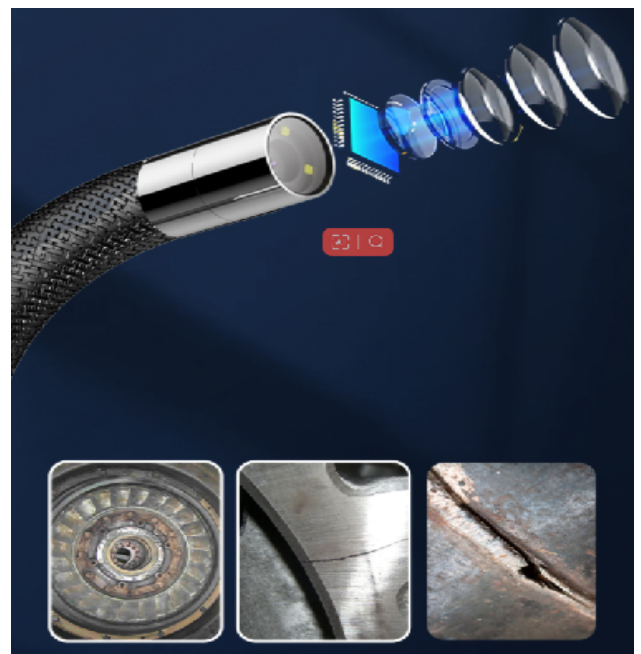
◎ Modular design, easy to carry, to repair, and to replace

7" Industrial HD Touch LCD screen

Large-capacity lithium battery, easy to replace quickly

USB，Type -C Port

Anti-fall anti-collision bag Angle protection

Equipped with suspendable straps for easy operation

Replaceable insertion tube

◎ Automatic locking and precise positioning flexible articulation - mechanical 360°steering function,one-way bending can be up to 220°
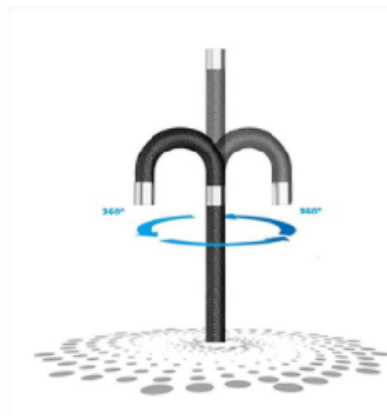
◎ Multi-display function and image can be simultaneously displayed on a smartphone or TV (wireless or hard-wired). Conveniently share with groups.

◎ Probe of IP67 rating,

Category		Description	
System	Product Dimension	410mm*230mm*143mm	
	Weight	<3kg	
	Display screen	7"IPS ,1920*1080（16：9），Industrial HD touch LCD screen	
	Main function	Photo, video, light source brightness adjustment, screen brightness adjustment, zoom in and out, screen flip, color inversion, screen freeze, color mode adjustment, aspect ratio, grid measurement, automatic white balance, image browsing, lock fine-tuning, menu	
	Joystick control	Mechanical rocker for 360°rotation	
	Steering control	automatic set, direction fine tuning adjustable	
	Memory	Built-in 128G + expansion 64G USB flash drive (up to 256G expansion)	
	Data I/O port	Two USB2.0 host A ports, network ports RJ-45, Type-C ports, and headset ports	
	Video output	Mini HDMI interface, WIFI interface	
	Battery	Removable, independently rechargeable battery pack	
	Battery	≥4h	
	Operating mode	The host and the operating handle can be separated, and more than one host is equipped with more than one handle	
Software	Operating system	Multi-task intelligent operating system, menu driven and key operation	
	UI	Touch screen operation menu	
	File management	Supports image/video playback, deletion, formatting, and renaming	
	Image control	Zoom and playback	
	Negative film function	Dynamic negative	
	Digital Zoom	Continuous (Level 10)	
	Image control	Screen freeze, image flip	
	Picture format	JPG、PNG（Record the date and time）	
	Video format	AVI、MP4（Record the date and time）	
	Language	Simplified Chinese, English, French, Spanish, Russian, Japanese, Korean, Traditional Chinese, German, Portuguese	
	Color Settings	Near, medium, Far, custom color modes	
	White balance	Automatic white balance, manual white balance	
	3D dimensional measurement	Principle of measurement	Binocular vision measuremen
		Piont to piont	The distance between two points
		Piont to line	The vertical distance between a point and a custom line
		Piont to area	Depth/height of direct intersection between a point and a customized plane
		Aera/line	Measurement of circumference and area of multiple points
		Measuring error	≤5%
	Text annotation	It has the function of adding text annotation, which can be annotated at any time according to the detection situation, so as to facilitate the generation of later reports	
	Software upgrade	Upgrade using the USB flash drive upgrade package	
Insertion tube Parameters	Diameter	4mm, 6mm	
	Insertion tube length	1~3m	
	Insertion tube material	Tungsten alloy steel wire braided 4-layer tube	
	Camera articulation	360° electric arbitrary direction	
Operating environment	Monitor working temperature	-10~50℃	
	Probe working temperature	-20~70℃	
	Relative humidity	Up to 90%, no condensation	
	Waterproof	Host IP54/Probe IP67	