



FOR MORE  
INFORMATION

MADE  
IN  
GERMANY



# inViZ **VUMAN** RA-Y

MORE LIGHT. MORE FEATURES. MORE VUMAN®.





## EXTENDED INSPECTION SOFTWARE

INDIVIDUAL, UPGRADEABLE SOFTWARE KITS FOR YOUR RVI NEEDS



### LED BACKLIGHT TOUCH SCREEN

Unique and portable LCD control unit with 10.4" LED backlight touch screen. Control your INVIZ® probe and all features via touch screen and direct access buttons.



### DIGITAL DOCUMENTATION ON SSD

Save up to 60 hours of high resolution videos and/or several thousand high quality images on the fast SSD memory.



### RECORDING IMAGES AND VIDEOS

Record high resolution videos and images with personalized text entries, reference charts or customer logos. Manage all inspection data in the customizable file manager and export your data to USB for further processing.



### EXTENDED SOFTWARE FEATURES

New features like advanced image presets, probe articulation display and continuous image capture ease your inspection flow.



### MEASUREMENT FUNCTION

Measure paths (distance between two points) and circles (radius, diameter, circumference and circular area), save inspection images with measurement information and manage your measurement data.



### SAFE SYSTEM BACKUPS

Save your individual user settings for up to nine individual user profiles.



# HIGH-END LONG RANGE VIDEO PROBES

## ALWAYS STAY FOCUSED WITH INVIZ® PROBES

The patented Remote Focus in combination with the patented LLP means no missed details from close ups to infinity (30 µm resolution at 2 mm distance = 1/33 mm)!

Save time, money and improve inspection results.

The high power polymer fiber hybrid LED's deliver a homogenous ray of light, with market-leading performance, illumination, reproducibility and constant light color.



### X-WAY ARTICULATION

INVIZ® interchangeable video probes with unique X-WAY articulation, 360° in all directions with up to 30 m working length.



### LINEAR LENS POSITIONING

Always in focus with viZaar®'s linear lens positioning. Developed by our German engineers, the standard in remote visual inspection provides the best optical system performance and image quality on the market.



### PATENTED REMOTE FOCUS TECHNOLOGY

The patented Remote Focus technology allows INVIZ® probes a wide range of inspections; from very small access tubes to long distance inspection in huge cavities. All without optical adapters.



### HIGH POWER DUAL LED LIGHT SOURCE

The new dual high power LED light source provides best illumination control in every application. Balance the two separate light outputs to achieve powerful results. An additional illumination power boost enables clear videos and images even in darkest areas.



INTERCHANGEABLE VIDEO PROBE INVIZ® 6

INTERCHANGEABLE VIDEO PROBE INVIZ® 6

INTERCHANGEABLE VIDEO PROBE INVIZ® 8

INTERCHANGEABLE VIDEO PROBE INVIZ® 8 X-WAY

INTERCHANGEABLE VIDEO PROBE INVIZ® REVOLVER 12.7

## VIDEO ENDOSCOPE INVIZ® VUMAN® RA-Y X-WAY

THE HIGH-END VIDEO ENDOSCOPE SYSTEM FOR REMOTE VISUAL INSPECTIONS.

New dual high power LED light source for precise remote visual inspections, long range X-WAY video probes for an increased application range and extended software features for even better inspection results.



### PATENTED DRUM STORAGE

Enjoy full X-WAY probe articulation with the majority of your probe stored in the patented drum storage.

Avoid tripping hazard and maintain clean working environment.



### CARBON CONSTRUCTION

Robust, compact and lightweight, optimized for industrial environment.



### BATTERY OPERATION

Independent remote visual inspections in every industrial area with the high capacity, rechargeable NiMh battery.



### NO EXTERNAL AIR SUPPLY

Full X-WAY articulation with no external air supply due to the integrated micro compressor.



### HOT SHOP REPAIR

100% customer commitment: Our Hot Shop Service meets the demands of all our customers, even those in the most demanding industries. We are ISO 9001 and KTA 1401 compliant and are always constantly improving our products & service.

ø 6,4 mm ▪ Working lengths: 8 / 15 m ▪ DOV: 90° ▪ FOV: 65° ▪ Spring loaded



ø 6,4 mm ▪ Working lengths: 8 / 15 m ▪ DOV: 0° ▪ FOV: 130° ▪ Spring loaded



ø 8,4 mm ▪ Working lengths: 8 / 12 / 15 / 20 / 30 m ▪ DOV: 0° / 90° ▪ FOV: 70° ▪ Spring loaded



ø 8,4 mm ▪ Working lengths: 5 / 8 / 12 / 15 / 20 / 30 m ▪ DOV: 0° / 90° ▪ FOV: 70° ▪ X-WAY articulation



ø 12,7 mm ▪ Working lengths: 8 / 15 m ▪ DOV: 0° / 90° / 360° ▪ FOV: 60° ▪ Continuously rotating camera head with side view adapter



## THE INTERCHANGEABLE INVIZ® VIDEO PROBES

BENEFIT FROM THE WIDE RANGE OF INVIZ® VIDEO PROBES „MADE IN GERMANY“

Different inspection demands require the utilization of different probe models.

The INVIZ® VUMAN® RA-Y features an unique INVIZ® interchangeable probe concept for easy and fast probe exchange on-site.

Even with longer INVIZ® video probes, full operational capability, articulation and probe control is guaranteed.

- Scan your application step by step with two probe articulation types and the probe lock for precise camera head control. The probe head either remains in the current position or moves back to 0°.
- All interchangeable INVIZ® video probes are available with working lengths up to 30 m / 100 ft. for maximum range.
- The functional design of our interchangeable INVIZ® video probes is based on the feedback of our customers and the extensive experience of our own industrial inspection service.
- Over 100 times more flexibility and bending radius, still remaining excellent torsion and friction characteristics due to the polyurethane stainless steel composite construction.
- The patented Remote Focus technology is offering the best focus range on the market from 0 mm to ∞, with no need for optical adapters.
- The INVIZ® Revolver 12.7 is the most efficient and effective tool available for extensive orbital tube and weld inspections. Adjustable and endless 360° camera head rotation (clockwise / counter-clockwise), this small motorized camera head offers excellent continuous orbital weld & wall inspections.
- The boost of the dual high power LED light source provides outstanding illumination in every application. Balance two separately adjustable light outputs increasing failure analysis capabilities, reducing reflections and thus improving inspection results. Increase safety and productivity. A light source failing is no longer ending in sightless and risky probe exits and work stops.
- Non articulating INVIZ® video probes are designed for heavy duty tube inspections over long periods. Operated with its centering devices, these video probes with its spring loaded probe tip are an economically unbeatable and robust remote visual inspection system for your tube inspection needs.



BASE UNIT	INVIZ® VUMAN® RA-Y X-WAY	INVIZ® VUMAN® RA-Y	INVIZ® VUMAN® RA X-WAY	INVIZ® VUMAN® RA
<b>Dimensions in mm / inch</b>	(W) 335 x (H) 410 x (D) 275 (W) 13.19 x (H) 16.14 x (D) 10.83	(W) 335 x (H) 410 x (D) 275 (W) 13.19 x (H) 16.14 x (D) 10.83	(W) 335 x (H) 410 x (D) 275 (W) 13.19 x (H) 16.14 x (D) 10.83	(W) 335 x (H) 410 x (D) 275 (W) 13.19 x (H) 16.14 x (D) 10.83
<b>Weight in kg / lbs</b>	9.9 / 21.8	7.4 / 16.4	9.9 / 21.8	7.4 / 16.4
<b>X-WAY drive</b>	Integrated compressor, maintenance free.	-	Integrated compressor, maintenance free.	-
<b>Construction</b>	Aluminum–Carbon fiber with elastomer bumpers	Aluminum–Carbon fiber with elastomer bumpers	Aluminum–Carbon fiber with elastomer bumpers	Aluminum–Carbon fiber with elastomer bumpers
<b>LED dual light source</b>	Lifetime guarantee High efficiency LED illumination 7.8 Watt Color temperature 6.500 K	Lifetime guarantee High efficiency LED illumination 7.8 Watt Color temperature 6.500 K	Lifetime guarantee High efficiency LED illumination 7.8 Watt Color temperature 6.500 K	Lifetime guarantee High efficiency LED illumination 7.8 Watt Color temperature 6.500 K
<b>System memory</b>	80GB SSD	80GB SSD	2GB SSD	2GB SSD
<b>Connectors</b>	USB 2.0 Recording remote control 12V(DC) / 500mA Aux-Out Optional external compressed air Rechargeable battery	USB 2.0 Recording remote control 12V(DC) / 500mA Aux-Out Optional external compressed air Rechargeable battery	USB 2.0 Recording remote control 12V(DC) / 500mA Aux-Out Optional external compressed air Rechargeable battery	USB 2.0 Recording remote control 12V(DC) / 500mA Aux-Out Optional external compressed air Rechargeable battery
<b>Video input</b>	PAL / NTSC, Composite, S-Video	PAL / NTSC, Composite, S-Video	PAL / NTSC, Composite, S-Video	PAL / NTSC, Composite, S-Video
<b>Video output</b>	VGA analog (1024 x 768 px)	VGA analog (1024 x 768 px)	VGA analog (1024 x 768 px)	VGA analog (1024 x 768 px)
<b>AC input</b>	96V(AC) - 256V(AC) 47Hz - 63Hz max. 175 Watt	96V(AC) - 256V(AC) 47Hz - 63Hz max. 175 Watt	96V(AC) - 256V(AC) 47Hz - 63Hz max. 175 Watt	96V(AC) - 256V(AC) 47Hz - 63Hz max. 175 Watt
<b>Environmental specifications</b>	Operation: -15°C (+5°F) to +48°C (+118°F) Storage: -25°C (-13°F) to +65°C (+150°F) Relative humidity: max. 95%, non condensing	Operation: -15°C (+5°F) to +48°C (+118°F) Storage: -25°C (-13°F) to +65°C (+150°F) Relative humidity: max. 95%, non condensing	Operation: -15°C (+5°F) to +48°C (+118°F) Storage: -25°C (-13°F) to +65°C (+150°F) Relative humidity: max. 95%, non condensing	Operation: -15°C (+5°F) to +48°C (+118°F) Storage: -25°C (-13°F) to +65°C (+150°F) Relative humidity: max. 95%, non condensing
<b>Standard Software Kit</b>	✓	✓	✓	✓
<b>Advanced Memory &amp; Interface Kit</b>	✓	✓	-	-
<b>Advanced Documentation &amp; Image Kit</b>	✓	✓	-	-
<b>Software</b>	Default user   Individual user 1-9   VGA output   Video / S-Video input Multi language user interface   E-Manual Dual LED illumination balance 8x (left/right)*   Dual LED illumination boost* White balance   Brightness / contrast   Digital image processing (Presets)* Long time exposure   Flip / Mirror / Zoom   Rotate (clockwise / counter-clockwise) Individual reference chart / customer logo   Full screen mode   Point marker Probe articulation display*   Articulation mode (absolute / relative) Adjustable video recording length   Different video quality settings Different image quality settings   Continuous image capture* 4 status bars   Free text   Text color   Text background color Date & time   Item positioning   Save & load user settings Copy / rename / delete files   Create / copy / rename / delete folders / subfolders Video playlist   Image slide show   Play / pause   Forward / backwards Measure distances between two points*   Measure circles (radius, diameter, circumference, circular area)*   Assistance (grid & reference quality)* Save / move / zoom / delete measurements*			Default user   VGA output   E-Manual   White balance Probe articulation display*   Articulation mode (absolute) 2 status bars   Text color (black / white) Text background color (black / white)   Copy / delete files   Play / pause

#### LCD CONTROL PANEL

<b>Dimensions in mm / inch</b>	(W) 320 / 12.6 x (H) 30 / 1.18 x (D) 230 / 9.06
<b>Weight in kg / lbs</b>	1.3 / 2.85
<b>Mounting</b>	On base unit: integrated mounting   Portable: shoulder strap
<b>Display</b>	10.4" touch screen   Transreflective LED backlight   Contrast 1.200:1   Brightness 400 cd/m²   262.144 colors   Viewing angle all directions +/- 90°
<b>Operation</b>	Touch screen incl. five direct access buttons and joystick (approved for operation with working gloves).
<b>Construction</b>	Carbon fiber design with all around elastomer bumper; umbilical cable 2.5 m / 8.2 ft.
<b>Functions</b>	Image recording   Video recording   Freeze   Toggle function   Articulation control   Articulation lock   Probe lock   Remote Focus slide bar   Illumination slide bar

\* Features only available with V3 VUMAN® probes and base units from V3.

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INVIZ® INTERCHANGEABLE VIDEO PROBES	6 SIDE VIEW	6 STRAIGHT VIEW	8 X-WAY	8	REVOLVER 12.7
Probe diameter in mm / inch	6.4 / 0.25	6.4 / 0.25	8.4 / 0.33	8.4 / 0.33	12.7 / 0.5
Probe length in m / ft.	8 / 26.3 15 / 49.3	8 / 26.3 15 / 49.3	5 / 16.4 8 / 26.3 12 / 39.4 15 / 49.3 20 / 65.6 30 / 100	8 / 26.3 12 / 39.4 15 / 49.3 20 / 65.6 30 / 100	8 / 26.3 15 / 49.3
Probe length extension (up to 30 m / 100 ft.)	✓	✓	-	-	✓
Weight in g / lbs	820 / 1.8 1140 / 2.5	820 / 1.8 1140 / 2.5	920 / 2.0 990 / 2.2 1175 / 2.6 1360 / 3.0 2330 / 5.4 3300 / 7.2	870 / 1.9 1055 / 2.3 1240 / 2.7 2160 / 4.7 3080 / 6.8	1120 / 2.5 1520 / 3.4
X-WAY camera head articulation up / down / left / right	-	-	+/- 90° to +/- 120°	-	-
Optional Remote Focus (RF)	✓	-	✓	✓	-
Direction of view (DOV)	90°	0°	0° / 90°	0° / 90°	90° / 360°
Field of view (FOV)	65°	130°	70°	70°	60°
Focus range	0 mm to ∞	7 mm to ∞	0 mm to ∞	0 mm to ∞	0 mm to ∞
Resolution 440.000 px, (H) 752 x (V) 582	✓	✓	✓	✓	✓
Mounting for centering device	✓	✓	✓	✓	✓
Mounting for side view adapter	-	-	✓	✓	✓
Self centering supple bending section at camera head	✓	✓	-	✓	-
Hard wearing stainless steel braid on polyurethan probe	✓	✓	✓	✓	✓
Watertight up to 1.5 bar / 14 psi	✓	✓	✓	✓	-
Splash waterproof	✓	✓	✓	✓	✓
Centering device kit included in scope of delivery	✓	-	-	-	✓

ACCESSORIES	
<b>Option transport case</b>	<p>Dimensions in mm / inch: (W) 635 / 25 x (H) 510 / 20.08 x (D) 365 / 14.37. Weight (empty): 8,7 kg / 19,1 lbs. Transport case with wheels.</p> 
<b>Option transport case INVIZ® spare probe</b>	<p>Dimensions in mm / inch: (W) 415 / 16.34 x (H) 465 / 18.31 x (D) 190 / 7.48. Weight (empty): 3,25 kg / 7.16 lbs. Transport case for spare probe.</p> 
<b>Option side view adapter</b>	<p>Side view prism for 8 mm interchangeable probes and side view adapter for 12.7 mm interchangeable probes.</p> 
<b>Option centering device kit</b>	<p>INVIZ® VUMAN® RA-Y 8 mm X-WAY, Ø in mm / inch: 60 / 2.36   44 / 1.73   34 / 1.34   24 / 0.94   17 / 0.67 INVIZ® VUMAN® RA-Y 8 mm non articulating, Ø in mm / inch: 60 / 2.36   44 / 1.73   34 / 1.34   24 / 0.94   17 / 0.67 INVIZ® Revolver 12.7 mm, Ø in mm / inch: 60 / 2.36   46 / 1.81   36 / 1.42   26 / 1.02</p> 
<b>Option pushing aid</b>	<p>PE coated glass fiber pushing aids with 4.5 mm / 0.17" for up to 30 m / 100 ft. video probe length.</p> 
<b>Option battery incl. charging unit</b>	<p>Capacity of coldness resistant NiMH: 9 Ah, 24 Volt.   Operation time: approx. 1.5 h.   Operation environment: -25°C to +45°C (-13.0°F to +113.0°F).</p> 

All specifications are subject to change without notice due to technical progress.



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