





REVISION 3.2 VIDEOSCOPES











DIAMETER

Choose the closest outer diameter of your probe to the inner diameter of your application. The right choice keeps the costs low and the image quality high, as well as enabling a robust stability inside the application.

WORKING LENGTH

To work without major interference, choose the correct working length necessary.

IMAGE PRESENTATION

Consider direction of view (DOV), field of view (FOV) and depth of field for the desired point of interest.

Most Remote Visual Inspection tasks are solved with viZaar®'s recommended industrial videoscopes. Image processing happens rirectly inside of the camera head, enabling high image quality and stability.





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WORLDWIDE

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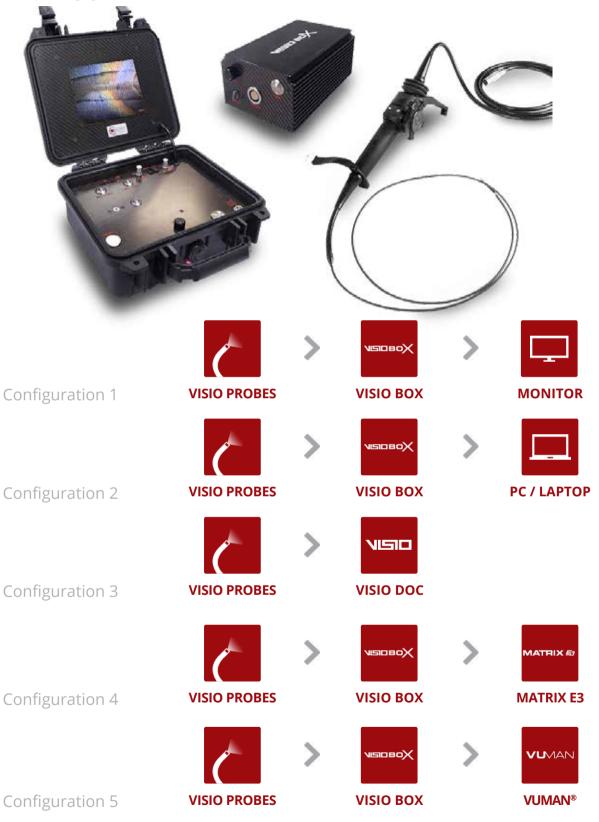




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1.1 VISIO



An industrial videoscope platform combining flexible, interchangeable probe ranges with high image quality at minimal costs. VISIO is well suited in production line and stationary test objects. It is a modular system:

- VISIO DOC: Full operating system with image presentation, image and video recording on a SD card.
- VISIO BOX: The probes are connected to a small desktop box containing all video electronics.

Depending on the needs, the image presentation is either realized by a simple video monitor, a PC or a laptop. VISIO BOX is compatible with MATRIX® and VUMAN® system for advanced documentation.

1.2 VISIO



OUTER Ø	LENGTH	ARTICULATION	FOV	DOV	PROBE MATERIAL	SYSTEM-KIT
3.7 mm	1200 mm	2 x 140°	85°	0°	Tungsten	HVT-70-000161
3.7 mm	2200 mm	2 x 110°	85°	0°	Tungsten	HVT-70-000162
3.7 mm	3000 mm	2 x 80°	85°	0°	Tungsten	HVT-70-000163
4.0 mm	1200 mm	2 x 140°	85°	0°	Tungsten	HVT-70-000164
4.0 mm	2200 mm	2 x 110°	85°	0°	Tungsten	HVT-70-000165
4.0 mm	3000 mm	2 x 80°	85°	0°	Tungsten	HVT-70-000166
6.0 mm	2200 mm	4 x 140°	40°	0°	Tungsten	HVT-70-000167
6.0 mm	3300 mm	4 x 130°	40°	0°	Tungsten	HVT-70-000168
6.0 mm	6600 mm	4 x 110°	40°	0°	Tungsten	HVT-70-000169

VISIO DOC 2 system kits

Including:

- VISIO DOC 2
- High power, longlife LED light source
- S-Video cable
- Composite cable
- Power supply
- VISIO P2 probe

Benefit from the pre-selected system kits

Full operating system with image presentation, image and video recording on a SD card. Powered by rechargeable battery (operating time up to 3.5 h).



V1210	O B	UΧ	Sys	ter	II I	K

Including:

- VISIO BOX unit
- High power, longlife LED light source
- S-Video cable
- Composite cable
- Power supply
- VISIO P2 probe

OUTER Ø	LENGTH	ARTICULATION	FOV	DOV	PROBE MATERIAL	SYSTEM-KIT
3.7 mm	1200 mm	2 x 140°	85°	0°	Tungsten	HVT-70-000152
3.7 mm	2200 mm	2 x 110°	85°	0°	Tungsten	HVT-70-000153
3.7 mm	3000 mm	2 x 80°	85°	0°	Tungsten	HVT-70-000154
4.0 mm	1200 mm	2 x 140°	85°	0°	Tungsten	HVT-70-000155
4.0 mm	2200 mm	2 x 110°	85°	0°	Tungsten	HVT-70-000156
4.0 mm	3000 mm	2 x 80°	85°	0°	Tungsten	HVT-70-000157
6.0 mm	2200 mm	4 x 140°	40°	0°	Tungsten	HVT-70-000158
6.0 mm	3300 mm	4 x 130°	40°	0°	Tungsten	HVT-70-000159
6.0 mm	6600 mm	4 x 110°	40°	0°	Tungsten	HVT-70-000160

Benefit from the pre-selected system kits

High performance low budget solutions. Powered from mains, providing a high quality video image for presentation on PC/laptop, monitor or advanced documentation via MATRIX® and VUMAN®.

Other configurations, spare probes and accessories are available in further chapters.

1.2 VISIO probes



VISIO P2 probes

OUTER Ø	LENGTH	ARTICULATION	FOV	DOV	PROBE MATERIAL	SYSTEM-KIT
3.7 mm	1200 mm	2 x 140°	85°	0°	Tungsten	HVT-70-000143
3.7 mm	2200 mm	2 x 110°	85°	0°	Tungsten	HVT-70-000144
3.7 mm	3000 mm	2 x 80°	85°	0°	Tungsten	HVT-70-000145
4.0 mm	1200 mm	2 x 140°	85°	0°	Tungsten	HVT-70-000146
4.0 mm	2200 mm	2 x 110°	85°	0°	Tungsten	HVT-70-000147
4.0 mm	3000 mm	2 x 80°	85°	0°	Tungsten	HVT-70-000148
6.0 mm	2200 mm	4 x 140°	40°	0°	Tungsten	HVT-70-000149
6.0 mm	3300 mm	4 x 130°	40°	0°	Tungsten	HVT-70-000150
6.0 mm	6600 mm	4 x 110°	40°	0°	Tungsten	HVT-70-000151



Centering devices

FOR PROBE Ø*	DISK Ø	ITEM-NO.
6.0 mm	15.0 mm	HVT-90-000131
6.0 mm	30.0 mm	HVT-90-000132
6.0 mm	60.0 mm	HVT-90-000133
6.0 mm	80.0 mm	HVT-90-000134

^{*}Upon request, other disks for other probe diameters are possible.

Centering devices are very helpful accesories lifting the camera optic off the ground. As the probe is pushed inside a test object, if fitting, a centering device will reduce the force needed to push the probe, avoid potentially moist and other remains building up in front of your optics and lightning. During inspections, the distance to the object and therefore image magnification will remain similar providing better inspection results.



Guide tubes

Guide tubes help entering flexible probes into different test objects. The guide tubes can be semi flexible or pre-formed, guiding the probe. To protect the probe from heavy wear and tear, guide tubes are used simultaneously in specific situations.

OUTER Ø	FOR PROBES WITH Ø	LENGTH	CONSTRUCTION	FOR PRODUCTS	ITEM-NO.
8 mm	4.0 mm	200 mm 400 mm 600 mm 800 mm	Semi rigid	VISIO & VUCAM® probes	HVT-90-000157 HVT-90-000158 HVT-90-000159 HVT-90-000160
12 mm	6 mm	200 mm 400 mm 600 mm 800 mm	Semi rigid	VISIO & VUCAM® probes	HVT-90-000-161 HVT-90-000-162 HVT-90-000-163 HVT-90-000-164
15 mm	8.4 mm	200 mm 400 mm 600 mm 800 mm	Semi rigid	VUMAN® probes	HVT-90-000165 HVT-90-000166 HVT-90-000167 HVT-90-000168
6 mm	4 mm	200 mm 400 mm 600 mm 800 mm	Rigid	VISIO & VUCAM® probes	HVT-90-000169 HVT-90-000170 HVT-90-000171 HVT-90-000172
8 mm	6 mm	200 mm 400 mm 600 mm 800 mm	Rigid	VISIO & VUCAM® probes	HVT-90-000173 HVT-90-000174 HVT-90-000175 HVT-90-000176
10 mm	8.4 mm	200 mm 400 mm 600 mm 800 mm	Rigid	VISIO & VUCAM® probes	HVT-90-000152 HVT-90-000153 HVT-90-000154 HVT-90-000155

1.4 VISIO

Accessories

Optional accessory

- VISIO DOC 2
- VISIO BOX
- VISIO BOX transport case
- VISIO BOX to MATRIX cable
- 90° side view, 120° FOV optical adapter for 6.0 mm VISIO probe
- 90° side view, 45° FOV optical adapter for 6.0 mm VISIO probe
- 0°, 120° FOV optical adapter for 6.0 mm VISIO probe
- Video monitor/laptop solutions

VISIO DOC 2 CONTROL UNIT

HVT-80-000100



Portable documentation solution for VISIO probes. Image presentation via LCD display. Illumination control of VISIO probes. Digital image and video recording on SD card. White balance. Video input/output. Battery operation time: 2 h. Power supply included.

VISIO BOX P2

HVT-90-000180



Desktop solution for the support of VISIO probes. Illumination control of VISIO probes. Video out (S-Video, BNC), white balance. Power supply included.

VISIO BOX TRANSPORT CASE

HVT-90-000100



All probes and accessories fit perfectly into the custom-fit interior of the light weight but robust transport case.

VISIO BOX TO MATRIX CABLE P2

HVT-90-000181



Power via MATRIX® and VUMAN® utilizing the MATRIX® power supply or battery pack. One single connection point for power and signals.

SIDE VIEW OPTICAL ADAPTER DOV 90°, FOV 120° (WIDE ANGLE, CLOSE FOCUS)

BOX-70-000118



Side-view optical adapter (DOV 90°) for Ø 6 mm VISIO-P2 probe, depth of field: 2 mm to 120 mm.

STRAIGHT VIEW OPTICAL ADAPTER DOV 0°, FOV 120° (WIDE ANGLE, CLOSE FOCUS)

DOV 50 00044



Straigth-view optical adapter (DOV 0°) for Ø 6 mm VISIO-P2 probe, depth of field: 3 mm to 120 mm

SIDE VIEW OPTICAL ADAPTER DOV 90°, FOV 45° (FAR FOCUS)

BOX-70-000120



Side-view optical adapter (DOV 90°) for Ø 6 mm VISIO-P2 probe, depth of field: 12 mm to $\infty.$

STORAGE BOX FOR OPTICAL ADAPTERS

BMX-50-000364



All your optical adapters are protected inside a custom-fit interior and a solid waterproof box.

VIDEO MONITOR/LAPTOP SOLUTIONS



Please contact viZaar for current models.

info@vizaar.com



2.1 VUCAM® XO/XO+









CARBON DESIGN

The VUCAM® XO/XO+ is a professional and portable, battery operated industrial videoscope system. It is the best choice for remote applications with the demand for high robustness and portability. The light weight design of the VUCAM® XO/XO+ utilizes a carbon fiber construction, operating over two hours with in-field replacable batteries. The modern touch screen and GUI operation in combination with best-in-class image quality eases the inspection work and documentation. A system offering best value for your money. At the point of purchase and the cost of ownership.



2.1.1 VUCAM® XO/XO+

VUCAM® XO

Including:

- Integrated high power LED light source
- Transport case
- 16 GB SD card
- Operating instructions
- 1x set of rechargeable batteries
- Charger
- Charging cable

OUTER Ø	LENGTH	ARTICULATION	FOV	DOV	DEPTH OF VIEW	SYSTEM KIT
6.0 mm	2200 mm	4 x 130°	45°	0°	15 mm to ∞	VXX-10-000157
6.0 mm	3300 mm	4 x 120°	45°	0°	15 mm to ∞	VXX-10-000158
6.0 mm	6600 mm	4 x 100°	45°	0°	15 mm to ∞	VXX-10-000159

The VUCAM® XO standard edition gives you everything you need to perform visual inspections for your application. Record images and videos and save them on an SD card, use pre-trigger recording and adjust brightness and contrast. You also benefit from the zoom-function and full screen mode. Furthermore, you can rotate and mirror the image vertically and/or horizontally.

VUCAM® XO+

Including:

- Integrated high power LED light source
- Transport case
- 16 GB SD card
- Operating instructions
- 1x set of rechargeable batteries
- Power supply
- VULINK cable (TV-OUT, Audio IN/OUT, power cable)
- VULAN cable for network connection
- Headphone with integrated microphone
- Software-package with configuration software on USB-stick

OUTER Ø	LENGTH	ARTICULATION	FOV	DOV	DEPTH OF VIEW	SYSTEM KIT
6.0 mm	2200 mm	4 x 130°	45°	0°	15 mm to ∞	VXX-10-000185
6.0 mm	3300 mm	4 x 120°	45°	0°	15 mm to ∞	VXX-10-000186
6.0 mm	6600 mm	4 x 100°	45°	0°	15 mm to ∞	VXX-10-000187

The VUCAM XO+ model offers you several enhanced soft- and hardware features. Benefit from the integrated video-out and audio-in/out connectivity. Paired with the enhanced pre-trigger recording, you will achieve an even better workflow. Furthermore, push-to-FTP allows you to save your recordings directly on an FTP server. Realtime broadcast via LAN is also possible.



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2.1.2 VUCAM® XO/XO+

Optional accessory - VUCAM® XO/XO+ accessory Kits

VUCAM® XO/XO+ accessory kit PRO

BEM-30-000194

With the VUCAM accessory kits you are always well equipped for every inspection.

The VUCAM XO/XO+ Accessory Kit Pro includes the following accessories:

- Storage box for optical adapters
- Side view optic adapter 90° DOV, 120° FOV
- Forward view optic adapter 0° DOV, 120° FOV
- 32GB SD-Card
- Battery charging station
- VUCAM spare battery (LiFePo)
- Shoulder strap
- Display protection sheet



■ VUCAM® XO/XO+ accessory kit PREMIUM

BEM-30-000362

Das VUCAM XO/XO+ Accessory Kit Premium includes the following accessories:

- Storage box for optical adapters
- Side view optic adapter 90° DOV, 120° FOV
- Straight view optic adapter 0° DOV, 120° FOV
- Side view optic adapter 90° DOV, 45° FOV
- 2x 32GB SD-Cards
- Battery charging station
- VUCAM spare battery (LiFePo)
- Shoulder strap
- 2x display protection sheets



For detailed information about the accessories please refer to the following chapter.

2.1.3 VUCAM® XO/XO+



Side view optical adapter (close focus)

SIDE VIEW OPTICAL ADAPTER DOV 90°, FOV 120° 6 MM (CLOSE FOCUS)

BOX-70-000118

Ideal for narrow test objects where no articulation is possible. This optical adapter changes the direction of view (DOV) to 90°, opens the field of view (FOV) to 120°, and operates in the near-focus range (depth of field (DOF): 2 mm to 120 mm). The design is engineered for tight tube bends and the double thread protection prevents loss of the optical adapter in the test object.



Straight view optical adapter (wide angle)



BOX-70-000119

Ideal for narrow test objects and in orbital weld inspections. This straight-view optical adapter (DOV 0°) opens the field of view (FOV) to 120° and operates in the near-focus range (depth of field (DOF): 3 mm to 120 mm). It is designed for tight tube bends and the double thread protection prevents loss of the optical adapter in the test object.



Side view optical adapter (far focus)

SIDE VIEW OPTICAL ADAPTER DOV 90°, FOV 45° 6 MM (FAR FOCUS)

BOX-70-000120

This optical adapter changes the direction of view (DOV) to 90° side-view and maintains the field of view (FOV) of 45°. With the optical adapter, you can achieve the desired image result in applications with greater distance to the probe tip (far focus with depth of field: 12 mm to ∞). The design is made for tight tube bends and the double thread protection prevents loss of the optical adapter in the application.



entering devices

FOR PROBE Ø	Ø	ITEM-NO.
6.0 mm	15.0 mm	HVT-90-000131
6.0 mm	30.0 mm	HVT-90-000132
6.0 mm	60.0 mm	HVT-90-000133
6.0 mm	80.0 mm	HVT-90-000134

OUTER Ø	FOR PROBES WITH Ø	LENGTH	CONSTRUCTION	ITEM-NO.
8.0 mm	6.0 mm	500 mm	Rigid	HVT-90-000137
12.0 mm	6.0 mm	500 mm	Semi-rigid	HVT-90-000141



Guide tubes

Battery charger



VUCAM® EXTERNAL INTELLIGENT BATTERY CHARGER

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BEM-30-000220

While you are working with the first set of batteries, the second one is already charging. This means you are always ready for the next job and minimize downtime. The charging station synchronizes and optimizes the individual batteries for long life and operating times. The power pack can be used worldwide and is supplied with a car charger for maximum mobility.

SPARE BATTERY VUCA	M®	EXX-91-000114
Туре	Rechargeable LiFePo	
Power	3,2V DC / 3200 mAh	
Function	Integrated deep discharge Over charge protection Fast charge	Air transportable
Attention	Please always order 2 pcs and change them together.	



2.1.3 VUCAM® XO/XO+



SHOULDER STRAP FOR VUCAM®

FXX-90-000222

This high quality shoulder strap allowing hands free operation. Protect the unit and get your hands free to climb up a scaffolding. Reduce user fatigue.



Shoulder strap

32GB SD card

SD CARD 32GB

DXX-60-000262

Increase the documentation capacity to several thousand images and video sequences.



Storage box optical adapters

STORAGE BOX FOR VUCAM® OPTICAL ADAPTERS

BMX-50-000364

All of your optical adapters and SD cards are protected inside a tailored interior and a solid waterproof box.



Display protective foil

VUCAM® TOUCH DISPLAY PROTECTIVE FOIL

MXX-70-000392

This display cover will perfectly fit and protect your touch screen from any dirt, scratches and chemical substances. The antireflective coating will provide perfect image quality. The touch screen functions are guaranteed even with gloves on.



2 YEAR WARRANTY FOR VUCAM® SYSTEM

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VXX-90-000100

Containing a warranty extension to two years to the VUCAM® product. The warranty will apply for typical application and usage. It will not cover transport damage, misuse and typical wear and tear.



2.2 VUCAM® XF/XF+



The VUCAM® XF/XF+ is the best choice for Remote Visual Inspections (RVI) in the aviation industry. The portable videoscope system offers unique hardware features, matching the requirements and desires of industrial applications and users. The light weight design of the VUCAM® AM design is utilizing a carbon fiber construction, operating over two hours with in-field replacable batteries. The modern touch screen and GUI operation in combination with best-in-class image quality eases the inspection work and documentation. A system offering best value for your money. At the point of purchase and the cost of ownership.



2.2.1 VUCAM® XF/ XF+

VUCAM® XF

Including:

- Integrated high power LED light source
- Transport case
- 16 GB SD card
- Operating instructions
- 1x set of rechargeable batteries
- Power supply

OUTER Ø	LENGH	ARTICULATION	FOV	DOV	DEPTH OF VIEW	SYSTEM KIT
4.0 mm	1100 mm	4 x 160°	85°	0°	4 mm to ∞	VXX-10-001206
4.0 mm	2200 mm	4 x 160°	85°	0°	4 mm to ∞	VXX-10-001207
4.0 mm	3300 mm	4 x 160°	85°	0°	4 mm to ∞	VXX-10-001208
4.0 mm	6600 mm	4 x 160°	85°	0°	4 mm to ∞	VXX-10-001225

The VUCAM® XF is the best choice for Remote Visual Inspections (RVI) in the aviation industry. Record images and videos and save them on an SD card, use pre-trigger recording and adjust brightness and contrast. You also benefit from the zoom-function and full screen mode. Furthermore, you can rotate and mirror the image vertically and/or horizontally.

VUCAM® XF+

Including:

- Integrated high power LED light source
- Transport case
- 16 GB SD card
- Operating instructions
- 1x set of rechargeable batteries
- Power supply
- VULINK cable (TV-Out, Audio In/Out, power cable)
- VULAN cable for network connection
- Headphone with integrated microphone
- Software-package with configuration software on USB stick

OUTER Ø	LENGTH	ARTICULATION	FOV	DOV	DEPTH OF VIEW	SYSTEM KIT
4.0 mm	1100 mm	4 x 160°	85°	0°	4 mm to ∞	VXX-10-001209
4.0 mm	2200 mm	4 x 160°	85°	0°	4 mm to ∞	VXX-10-001210
4.0 mm	3300 mm	4 x 160°	85°	0°	4 mm to ∞	VXX-10-001211
4.0 mm	6600 mm	4 x 160°	85°	0°	4 mm to ∞	VXX-10-001220

The VUCAM XF+ model offers you several enhanced soft- and hardware features. Benefit from the integrated video-out and audio-in/out connectivity. Paired with the enhanced pre-trigger recording, you will achieve an even better workflow. Furthermore, push-to-FTP allows you to save your recordings directly on an FTP server. Realtime broadcast via LAN is also possible.



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2.2.2 VUCAM® XF/XF+

Optional accessory - VUCAM® XF/XF+ accessory Kits

■ VUCAM® XF/XF+ accessory kit PRO

REM_30_000389

With the VUCAM accessory kits you are always well equipped for every inspection.

The VUCAM XF/XF+ Accessory Kit Pro includes the following accessories:

- Storage box for optical adapters
- Side view optic adapter 90° DOV, 85° FOV (1,5 18 mm)
- 32GB SD-Card
- Battery charging station
- VUCAM spare battery (LiFePo)
- Shoulder strap
- Display protection sheet



■ VUCAM® XF/XF+ accessory kit PREMIUM BEM-30-000469

Das VUCAM XF/XF+ Accessory Kit Premium includes the following accessories:

- Storage box for optical adapters
- Side view optic adapter 90° DOV, 85° FOV (1,5 18 mm)
- Side view optic adapter 90° DOV, 85° FOV (4 100 mm)
- 2x 32GB SD-Cards
- Battery charging station
- VUCAM spare battery (LiFePo)
- Shoulder strap
- 2x display protection sheets





2.2.3 VUCAM® XF/XF+



Side view optic adapter



Side view optic adapter



Battery charger



Shoulder strap



Spare battery



32GB SD card



Display protective foil



SIDE VIEW OPTICAL ADAPTER VUCAM® XF/XF+ 8 (CLOSE FOCUS)

BOX-70-000124

Optic adapter 90° DOV, 85° FOV, for 4 mm VUCAM probe, focus range 1.5 mm - 18 mm, color marking: red

SIDE VIEW OPTICAL ADAPTER VUCAM® XF/XF+ (FAR FOCUS)

BOX-70-000133

Optic adapter 90°DOV, 85° FOV, for 4 mm VUCAM probe, focus range 4 - 100 mm, color marking: brown

VUCAM® EXTERNAL INTELLIGENT BATTERY CHARGER

BEM-30-000220

While you are working with the first set of batteries, the second one is already charging. This means you are always ready for the next job and minimize downtime. The charging station synchronizes and optimizes the individual batteries for long life and operating times. The power pack can be used worldwide and is supplied with a car charger for maximum mobility.

SHOULDER STRAP FOR VUCAM®

FXX-90-000222

This high quality shoulder strap allowing hands free operation. Protect the unit and get your hands free to climb up a scaffolding. Reduce user fatigue.

SPARE BATTERY VUCA	M®	EXX-91-000114
Тур	Rechargeable LiFePo	
Power	3,2V DC / 3200 mAh	
Function	Integrated deep discharge Over charge protection Fast charge	Air transportable
Attention	Please always order 2 pcs and change them together.	

DXX-60-000262 SD CARD 32GB

Expand storage space for your inspection images and videos.

VUCAM® TOUCH DISPLAY PROTECTIVE FOIL

MXX-70-000392

This display cover will perfectly fit and protect your touch screen from any dirt, scratches and chemical substances. The antireflective coating will provide perfect image quality. The touch screen functions are guaranteed even with gloves on.

2 YEAR WARRANTY FOR VUCAM® SYSTEM

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VXX-90-000100

Containing a warranty extension to two years to the VUCAM® product. The warranty will apply for typical application and usage. It will not cover transport damage, misuse and typical wear and tear.

+49 7432 98375-0



Zaar

VIDEOSCOPE FOR LONG RANGE INSPECTIONS

3.1 VUMAN® E3/E3+ (64)

> Interchangeable probe system for absolute variety: One base unit, 18 standard probes

> > Ø 6,1 mm to Ø 12,7 mm standard lengths from 5 - 30 m patented Remote Focus technology X-WAY probes with precise 4-way articulation orb weld probes with endless 360° rotation





Due to its diversity and performance, the VUMAN® video endoscope can be used in a wide variety of industrial sectors (nuclear, pharmaceutical, shipping, energy production, ...). The interchangeable probe system increases efficiency and reduces costs, as well as storage and transport expenses, since only one base unit is neede and to which you can connect the currently required probe.

For safe storage and also in use, a large part of the probe can remain on the patented probe drum without affecting the articulation of the camera head.



DUAL HIGH-POWER LED LIGHT SOURCE



CARBON DESIGN



DIGITAL DOCUMENTATION



MEASUREMENT FUNCTION



BATTERY POWERED



REMOTE FOCUS TECHNOLOGY



X-WAY **ARTICULATION**



PATENTED DRUM STORAGE

VUMAN® E3/E3+ (64)

The basic principle of the VUMAN E3



VUMAN® E3/E3+ base unit

- VUMAN® E3/E3+ base unit
- Optionally with or without articulation
- VUSCREEN control unit
- Transport case
- Accessories case
- Optional battery operation

Any V3 probe

- Working length: 5 30 m
- Diameter: 6.1 12.7 mm
- Field of View (FOV): 45° 120°
- Direction of View (DOV): 0° 90°/360°
- up to 160° articulation
- Mounting for centering devices
- Remote Focus

Customize your own inspection system

Combine the inspection system VUMAN® with the probes of your choice. Whether VUMAN E3 or VUMAN E3+, non-articulated or with even more sensitive articulation (64) - every VUMAN E3(+) system can be combined with every V3 probe (64).

18 standard probes, various optical adapters, centering and guiding aids create a versatile inspection system with which you are well equipped for every inspection.

Both basic device variants VUMAN® E3 and VUMAN® E3+ can optionally be equipped with an integrated micro-compressor: for perfect X-WAY deflection of a probe length of up to 30 meters. A system without a compressor can also be upgraded afterwards!

The modular design not only makes the VUMAN® particularly versatile, but also represents an extremely economical inspection solution. Probes can be bought individually, repaired or exchanged, software and hardware adjustments are usually also possible afterwards.

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Further configurations, spare probes and accessories are available in the following chapters.



3.3 VUMAN® E3/E3+ (64)

Software features

VUMAN E3







VUMAN E3+











	VUMAN® E3	VUMAN® E3+
	OO	© Ø
SOFTWARE KIT	STANDARD SOFTWARE KIT FOR VUMAN E3	ADVANCED SOFTWARE KIT FOR VUMAN E3+
SETUP	TOR VOIDARES	_
Default user	✓	~
Individual user 1-9	-	~
Multi language user interface	~	✓
Memory	10 GB SSD	80 GB SSD
OPERATION MENU		
Dual LED illumination balance 8x (left/right)*	-	•
Dual LED illumination boost*	✓	✓
White balance	✓	~
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	Absolute / relative
Video recording length	Max. 1 min. / video	Unlimited
Adjustable recording length	-	•
Video quality	Medium	Low / Medium / High
Video format	AVI	AVI / MPG
Continuous image capture*	-	✓
Image capture during video recording	~	~
Image quality	Medium	Low / Medium / High
Image format	JPG	BMP / JPG
TEXT GENERATOR	<u>.</u>	
Status bars	3	4
Free text	-	~
Text color	Black / white	7 colors
Text background color	Grey / Transparent	9 colors
Date & time	✓	~
Individual reference chart / customer logo	-	~
Displayed item positioning Save / load user settings	•	, , ,
FILE MANAGER		•
Copy files	,	~
Rename files		· ·
Delete files	~	•
Create folders	-	,
Create subfolders		·
Copy folders / subfolders		•
Rename folders / subfolders		· ·
Delete folders / subfolders	-	•
MEDIA PLAYER		
Video playlist	→	•
Image slide show	•	,
Play / pause	•	•
Forward / backward	•	•
MEASUREMENT MENU	·	
Distances (between two points)*		,
Circles (radius, diameter, circumference, circular area)*	-	•
Assistance (grid & reference quality)*	-	•
Save / move / zoom / delete measurements*		•
		•

^{*} Functions only in connection with V3 VUMAN® probes and base unit from E3.



3.4 VUMAN® E3/E3+ (64)

Base units









BASE UNIT	VUMAN® E3	VUMAN® E3 (64)* X-WAY	VUMAN® E3+	VUMAN® E3+ (ANALOG OUT)	
ITEM NO.	VXX-10-001196	VXX-10-001227	VXX-10-001198	VXX-10-001200	
X-WAY articulation	-	•	-	-	
X-WAY drive	-	Integrated compressor, maintenance free.	-	-	
High power dual LED light source	✓	•	•	•	
Probe lengh	max. 20m	max. 20m	max. 20m	max. 20m	
Color temperature	6.1 mm: 5.500 K 8.4 mm: 5.000 K				
Memory	10GB SSD	10GB SSD	80GB SSD	80GB SSD	
Video input	-	-	PAL / NTSC Composite, S-Video	PAL / NTSC Composite, S-Video	
Video output	HDMI	HDMI	HDMI,	HDMI, Analog Out (Composite, S-Video	
Connectors	USB 3.0 12V(DC) / 750mA Aux-Out Optional external compressed air Rechargeable battery	USB 3.0 12V(DC) / 750mA Aux-Out Optional external compressed air Rechargeable battery	USB 3.0 12V(DC) / 750mA Aux-Out Optional external compressed air Rechargeable battery	USB 3.0 12V(DC) / 750mA Aux-Out Optional external compressed a Rechargeable battery	
Dimensions	(W) 340 x (H) 425 x (D) 280 mm	(W) 340 x (H) 425 x (D) 280 mm	(W) 340 x (H) 425 x (D) 280 mm	(W) 340 x (H) 425 x (D) 280 mn	
Weight in kg / lbs	8.5 / 18.7	10 / 22	8.5 / 18.7	8.5 / 18.7	
Construction	Aluminum–Carbon fiber with elastomer bumpers	Aluminum–Carbon fiber with elastomer bumpers	Aluminum–Carbon fiber with elastomer bumpers	Aluminum–Carbon fiber with elastomer bumpers	
AC input	100 - 240V(AC) 50Hz - 60Hz max. 240 Watt				
Environmental specifications	Operation: -10°C to +48°C Storage: -25°C to +65°C Relative humidity: max. 95%, non condensing	Operation: -10°C to +48°C Storage: -25°C to +65°C Relative humidity: max. 95%, non condensing	Operation: -10°C to +48°C Storage: -25°C to +65°C Relative humidity: max. 95%, non condensing	Operation: -10°C to +48°C Storage: -25°C to +65°C Relative humidity: max. 95%, non condensing	
LCD TOUCH SCREEN CONTROL PANEL	✓	~	~	~	
Display size	10.4"	10.4"	10.4"	10.4"	
Resolution	1440 x 1080 px				
Contrast	1600:1	1600:1	1600:1	1600:1	
Brightness	850 cd/m²	850 cd/m²	850 cd/m²	850 cd/m²	
Backlight	LED	LED	LED	LED	
Colors	True Color	True Color	True Color	True Color	
Operation	Touch screen Joystick Direct access buttons				
Mounting on base unit / Shoulder strap	✓	✓	✓	✓	
Dimensions LCD	(W) 320 x (H) 30 x (D) 230 mm	(W) 320 x (H) 30 x (D) 230 mm	(W) 320 x (H) 30 x (D) 230 mm	(W) 320 x (H) 30 x (D) 230 mm	
Weight in kg / lbs	1.6 / 3.5	1.6 kg / 3.5	1.6 kg / 3.5	1.6 kg / 3.5	
Construction	Carbon fiber design with all around elastomer bumper	Carbon fiber design with all around elastomer bumper	Carbon fiber design with all around elastomer bumper	Carbon fiber design with all around elastomer bumper	
	Power cable 2.5 m				

^{*}Please note: VUMAN E3/E3+ (64) versions are fully compatible with all VUMAN V3 probes.



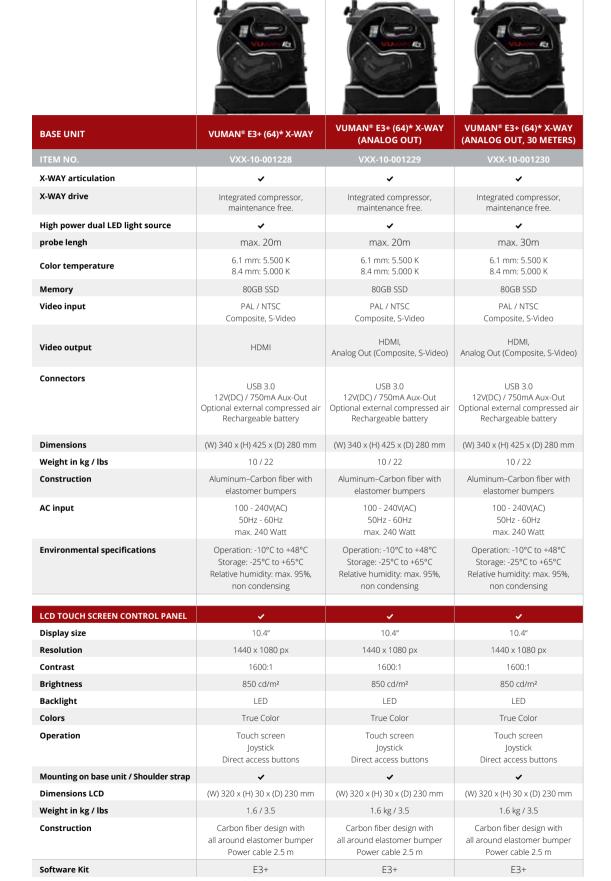


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VUMAN® E3/E3+ (64)

Base units



^{*}Please note: VUMAN E3/E3+ (64) versions are fully compatible with all VUMAN V3 probes.







Interchangeable video probes

Ø 6.1 mm



interchangeable video probes



Dual high power LED light source (H) 795 x (V) 596, 470.000 px





OUTER Ø	LENGTH	X-WAY*	FOV**	DOV**	REMOTE FOCUS	ITEM NO.
6.1 mm	5 m	~	45°	0°	~	BEM-30-000413
6.1 mm	8 m	~	45°	0°	✓	BEM-30-000399
6.1 mm	8 m	-	45°	0°	~	BEM-30-000419
6.1 mm	12 m	~	45°	0°	~	BEM-30-000411
6.1 mm	15 m	~	45°	0°	~	BEM-30-000409
6.1 mm	15 m	-	45°	0°	~	BEM-30-000420
6.1 mm	20 m	~	45°	0°	~	BEM-30-000408
6.1 mm	30 m	~	45°	0°	~	BEM-30-000412

^{*} X-WAY articulation up/down +/-120°, left/right +/-100°

Ø 8.4 mm



interchangeable video probes



Dual high power LED light source (H) 752 x (V) 582, 440.000 px



1.5 bar / 14 psi



^{*} X-WAY articulation up/down +/- 160°, left/right +/-140°

Ø 12.7 mm



Revolver 12.7 video probes



Dual high power LED light source (H) 752 x (V) 582, 440.000 px

(1) 360°

OUTER Ø	LENGTH	EXTENSION	FOV**	DOV**	FOCUS	ITEM NO.
12.7 mm	8 m	Up to 30 m*	60°	90°/360°	manual	VXX-10-001143
12.7 mm	15 m	Up to 30 m*	60°	90°/360°	manual	VXX-10-001142

This probe has a 360° endlessly rotating camera head which makes it most productive and cost efficient at pipe wall and orbital weld seam inspections. User controlled inspection speed and position of the rotating side view mirror deliver fast and optimal inspection results.

^{**}Fastener for optical adapters are additionally available

^{**}Fastener for optical side view adapter are additionally available

^{*} Custom solution

^{**} Fastener for optical side view adapter are additionally available



Wide angle adapter 6.1 mm



90° side view adapter 6.1 mm



90° side view adapter 6.1 mm



90° side view prism 8.4 mm



90° side view adapter 12.7 mm



Centering device kit 8.4 mm



Centering device kit 8.4 mm

WIDE ANGLE ADAPTER FOR Ø 6.1 MM VUMAN® PROBES

BOX-70-000129

Straight view wide angle optical adapter: DOV 0°, FOV 120°, DOF 4 mm - ∞ for VUMAN 6.1 mm probes. The design allows the use of centering tools.

90° SIDE VIEW ADAPTER FOR Ø 6.1 MM VUMAN® PROBES

BOX-70-000131

Side-view optical adapter: DOV 90°, FOV 45°, DOF 1 mm - ∞ for VUMAN 6.1 mm probes. The design allows the use of centering tools.

90° SIDE VIEW ADAPTER FOR Ø 6.1 MM VUMAN® PROBES

BOX-70-000128

Side-view wide angle optical adapter: DOV 90°, FOV 120°, DOF 2 mm - ∞ for VUMAN 6.1 mm probes. The design allows the use of centering tools.

90° SIDE VIEW PRISM FOR Ø 8.4 MM VUMAN® PROBES

BMX-50-000129

The side-view adapter changes the viewing direction to 90° and maintains the field of view of 70°. Optimized for use with centering tools. Focus range from 2 mm to ∞

90° SIDE VIEW ADAPTER FOR REVOLVER 12.7 VUMAN® PROBES

BMX-50-000277

The side-view adapter changes the viewing direction to 90° with homogeneous illumination. An anti-reflective, metal-coated glass surface minimizes image disturbances.

CENTERING DEVICE TO	DL KIT FOR Ø 8.4 MM VUMAN® X-WAY PROBES	BMX-50-000197
Centering discs	5 weight optimized centering discs.	
Diameter	60 mm, 44 mm, 34 mm, 24 mm, 17 mm	
Mounting	Probe Mounting tools and adapters included	
Function	These tools offer simple maneuvering inside tubes and keep the came. The camera head can still be articulated. Positioned in the center they e distance to the tube wall resulting in repetetive high quality images. The disks are fixed with a split adapter behind the bending neck of Therefore, usage is also possible with other videoscopes with the same.	nsure continous focal and faster workflow. ection on the probe.

CENTERING DEVICE TO	OL KIT FOR NON-ARTICULATING Ø 8.4 MM VUMAN® PROBES BMX-50-000302
Centering discs	5 weight optimized centering discs.
Diameter	60 mm, 44 mm, 34 mm, 24 mm, 17 mm
Mounting	Camera head Mounting tools and adapters included
Function	These tools offer simple maneuvering inside tubes and keep the camera safe from residue. They also ensure continous focal distance to the tube wall resulting in repetetive high quality images and faster workflow.



3.6 Accessories and upgrades

Accessories



CENTERING DEVICE KIT	FOR Ø 6.1 MM VUMAN® X-WAY PROBES	BMX-50-000493
Centering discs	5 weight optimized centering discs.	
Diameter	60 mm, 44 mm, 34 mm, 24 mm, 17 mm	
Mounting	Probe Mounting tools and adapters included	
Function	These tools offer simple maneuvering inside tubes and keep the came The camera head can still be articulated. Positioned in the center th focal distance to the tube wall resulting in repetetive high quality images. The disks are fixed with a split adapter behind the bending neck set Therefore, usage is also possible with other videoscopes with the same	ey ensure continous and faster workflow. ection on the probe.



Centering device kit 6.1 mm

CENTERING DEVICE KI	T FOR NON-ARTICULATING Ø 6.1 MM VUMAN® PROBES	BMX-50-000503
Centering discs	2 weight optimized centering discs.	
Diameter	44 mm, 19 mm	
Mounting	Camera head Mounting tools and adapters included	
Function	These tools offer simple maneuvering inside tubes and keep the came Furthermore, they keep continous focal distance to the tube / tube wall. adapter and mounting groove on endoscope camera head to pre application.	Works with mounting



CENTERING DEVICE KIT FOR VUMAN® REVOLVER 12.7 BMX-50-00				
Centering discs	5 weight optimized centering discs.			
Diameter	80 mm, 60 mm, 46 mm, 36 mm, 26 mm			
Mounting	Probe Mounting tools and adapters included			
Function	These tools offer simple maneuvering inside tubes and keep the camera safe from residue. Furthermore, using centering tools ensures continous focal distance to the tube / tube wall.			



Glass fiber pushing aid 15 m

GLASS FIBER PUSHING AID SET FOR Ø 6.1 MM PROBE, ONLY VUMAN® 15 M

BMX-50-000504

To be mounted 10" / 25 cm before distal scope end

Small reel containing 15 meter / 4.5 mm PE-coated glass fibre push rod and one spherical adapter including clamps and clockwise / counterclockwise thread-connector. Unique tool to move longer \emptyset 6 mm probes to hard to reach positions. Change of clamps allows to use same set with different scope diameters. Includes mounting wrench.



Glass fiber pushing aid 20 m

GLASS FIBER PUSHING AID SET FOR Ø 6.1 MM PROBE, ONLY VUMAN® 20 M $\,$

BMX-50-000505

To be mounted 10" / 25 cm before distal scope end

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Small reel containing 20 meter / 4.5 mm PE-coated glass fibre push rod and one spherical adapter including clamps and clockwise / counterclockwise thread-connector. Unique tool to move longer \emptyset 6 mm probes to hard to reach positions. Change of clamps allows to use same set with different scope diameters. Includes mounting wrench.

Accessories and upgrades

Accessories



Glass fiber pushing aid 30 m

GLASS FIBER PUSHING AID SET FOR Ø 6.1 MM PROBE, ONLY VUMAN® 30 M

BMX-50-000506

To be mounted 10" / 25 cm before distal scope end

Small reel containing 30 meter / 4.5 mm PE-coated glass fibre push rod and one spherical adapter including clamps and clockwise / counterclockwise thread-connector. Unique tool to move longer Ø 6 mm probes to hard to reach positions. Change of clamps allows to use same set with different scope diameters. Includes mounting wrench.

GLASS FIBER PUSHING AID SET FOR Ø 8.4 MM PROBE, ONLY VUMAN® 15 M

BMX-50-000281

To be mounted 10" / 25 cm before distal scope end

Small reel containing 15 meter / 4.5 mm PE-coated glass fibre push rod and one spherical adapter including clamps and clockwise /counterclockwise thread-connector. Unique tool to move longer Ø 8 mm probes to hard to reach positions. Change of clamps allows to use same set with differnt scope diameters. Includes mounting wrench.



Glass fiber pushing aid 15 m

GLASS FIBER PUSHING AID SET FOR Ø 8.4 MM PROBE, ONLY VUMAN® 20 M

BMX-50-000349

To be mounted 10" / 25 cm before distal scope end

Small reel containing 20 meter / 4.5 mm PE-coated glass fibre push rod and one spherical adapter including clamps and clockwise /counterclockwise thread-connector. Unique tool to move longer Ø 8 mm probes to hard to hard to reach positions. Change of clamps allows to use same set with different scope diameters. Includes mounting wrench.



Glass fiber pushing aid 20 m

GLASS FIBER PUSHING AID SET FOR Ø 8.4 MM PROBE ONLY VUMAN® 30 M

BMX-50-000348

To be mounted 10" / 25 cm before distal scope end

Small reel containing 30 meter / 4.5 mm PE-coated glass fibre push rod and one spherical adapter including clamps and clockwise /counterclockwise thread-connector. Unique tool to move longer Ø 8 mm probes to hard to hard to reach positions. Change of clamps allows to use same set with differnt scope diameters. Includes mounting wrench.



Glass fiber pushing aid 30 m

GLASS FIBER PUSHING AID SET FOR Ø 10 MM PROBE, ONLY VUMAN® 15 M

BMX-50-000285

Only for VUMAN® Revolver 12.7

To be mounted 10" / 25 cm before distal scope end

Small reel containing 15 meter / 4.5 mm PE-coated glass fibre push rod and one spherical adapter inlcuding clamps and clockwise /counterclockwise thread-connector. Unique tool to move longer Ø 10 mm probes to hard to reach positions. Change of clamps allows to use same set with different scope diameters. Includes mounting wrench.



Glass fiber pushing aid 15 m

Accessories and upgrades



X-WAY articulation upgrade

BASE UNIT X-WAY UPGRADE

VXX-10-001115

Micro compressor included for usage of articulating RF video probes. Hardware upgrade (micro compressor and boards).

TRANSPORT CASE VUMAN® BASE UNIT FOR PROBE LENGTH UP TO 20 M

FXX-80-000119

Light-weight, compact and splash water proof HPX® high performance transport, storage and operation case for VUMAN® base unit and accessories. Product taylored interior for ideal protection during transport, storage and out-of-the-box operation. Integrated wheels and large pull-out handle. Press & Pull closing latches, reinforced hinges.

Transport case



Transport case

TRANSPORT CASE VUMAN® BASE UNIT FOR PROBE LENGTH UP TO 30 M

FXX-80-000136

The outer size and physical dimensions of this case are the same as the ones of the standard case. The interior is designed to fit the extra long probe on the probe extension. Light-weight, compact and splash water proof HPX® high performance transport, storage and operation case for VUMAN® base unit and accessories. Product taylored interior for perfect protection during transport, storage and out-of-the-box operation. Integrated wheels and large pull-out handle. Press & Pull closing latches, reinforced hinges.



Transport case

TRANSPORT CASE SPARE PROBE

BMX-50-000225

Light-weight, compact and splash water proof HPX® high performance transport case for spare probes. Product taylored interior for ideal scope protection during transport and storage. The non-slip material of the transport case spare probes enables transport and storage on the transport case VUMAN base unit (FXX-80-000119 and FXX-80-000136).



Camera head protection ring

CAMERA HEAD PROTECTION FOR VUMAN® 8.4 MM RF

BMX-50-000299

Spare protection ring for VUMAN® 8.4 mm video probe. This protective ring is used for applications without side-view adapter and protects the fine thread on the camera head.



Camera head protection ring

CAMERA HEAD PROTECTION FOR VUMAN® 6.1 MM RF

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MXX-10-001231

Spare protection ring for VUMAN® 6.1 mm video probe. This protective ring is used for applications without side-view adapter and protects the fine thread on the camera head.

3.6 Accessories and upgrades

Accessories



Battery pack



VUSCREEN control unit

VUMAN® E3/E3+ BATTERY PACK

BEM-30-000342

Maximum operation time: up to three hours. Battery charging with VUMAN® E3/E3+ base unit or external charging unit. Provides full mobility and retains capacity and performance even under the harshest conditions. Operating environment: -25°C to +45°C (-13°F to +113°F).

Safe NiMH battery technology. Delivery includes external charging system. Weight 2,5kg.

VUSCREEN CONTR	BEM-30-000257	
Display size	10.4"	
Resolution	1440 x 1080 px	
Contrast	1600:1	
Brightness	850 cd/m²	
Backlight	LED	
Colors	True Color	
Operation	Touch screen Joystick Direct access buttons	
Dimensions	(W) 320 x (H) 30 x (D) 230 mm	
Weight	1.6 kg	
Construction	Carbon fiber design with all around elastomer bumper	



LENGTH	CONNECTION ANGLE (LCD CONTROL UNIT)	CONNECTION ANGLE (BASE UNIT)	ITEM NO.
2.5 m	60°	60°	EXX-70-000273
5.0 m	60°	60°	EXX-70-000297
8.0 m	60°	60°	EXX-70-000298
10.0 m	60°	60°	EXX-70-000306

Remote operation extension cable for the LCD control unit.



Display protection sheet

LCD DISPLAY PROTECTION SHEET

MXX-70-000274

This display cover will perfectly fit and protect your touch screen from any dirt, scratches, chemical substances, corrosion, destruction or deterioration caused by sea water. It is easy to place and replace from the screen and highly transparent. The antireflective coating will provide perfect image quality. The touch screen functions are guaranteed even with gloves on.



Customization

CUSTOMER LOGO/REFERENCE CHARTS DISPLAY

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EXX-99-000101

Your VUMAN® can be used with your individual reference charts or company logo. When chosen, these can be end positioned as overlay anywhere in your active picture for reference or documentation. Reference pictures and logos need to be provided after the order date by the customer within the first two weeks after order.



Accessories and upgrades

Accessories



CUSTOM TRANSPORT CASE LABEL

MXX-70-000404

Make your case show your brand. When ordering FXX-80-000119 / FXX-80-000136, you can order it to come with the customer logo on it.



Product training

INOUSE VUMAN® TRAINING IN ALBSTADT/WOLFENHAUSEN

SXX-20-000111

Up to max. 6 persons in one session.

Inhouse training includes working with the VUMAN®. First start-up of the system, quick start, handling the X-WAY probe, correct file management, working with the text generator, copying files on a USB device, changing centering discs, safe storage of the system/spare probe and much more.

Upon request, product trainings are also possible at the customer's location.

XPANDING YOUR V



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