



FOR MORE  
INFORMATION



# CATALOGUE

REVISION 2.7

**VIDEOSCOPES & VIDEO ENDOSCOPES**

VIDEOSCOPES ▪ VIDEO ENDOSCOPES ▪ ACCESSORIES



# CHOOSE THE FITTING EQUIPMENT

This catalogue provides you with a wide range of videoscopes, video endoscopes and its accessories.



## 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 video endoscopes. Image processing happens in the optic of the probe head, enabling high image quality and stability.



**+49 7432 98375-0**

Call us with your specific requirements.



**INFO@VIZAAR.COM**

Write us your detailed application description.



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## Videoscopes & video endoscopes

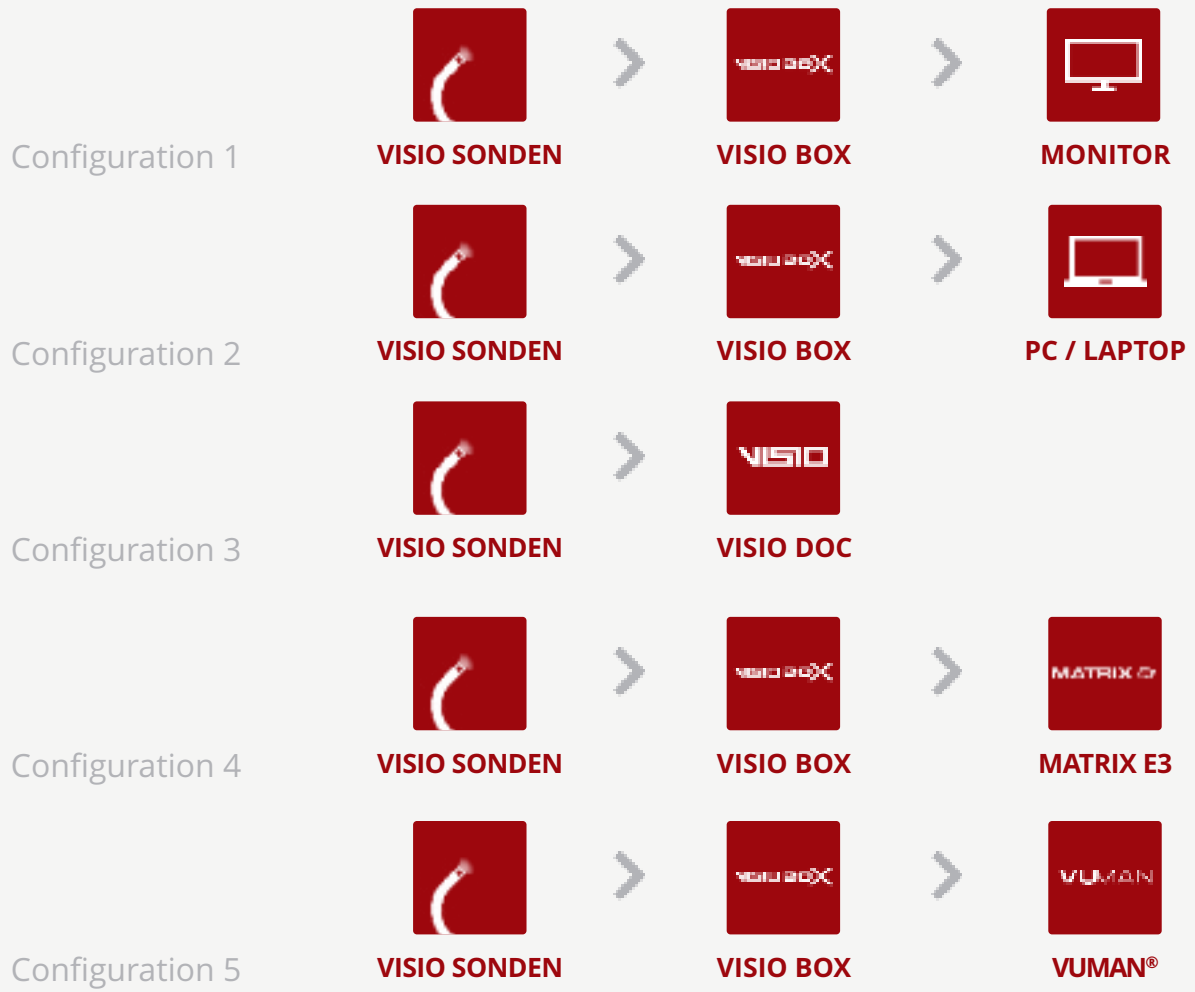
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# 1 VISIO







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 applications. 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 VISIO

## 1.1 VISIO system kits

## 1.1 VISIO system kits



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 system kits

Including:

- VISIO documentation system
- 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: min. 2 h).



### VISIO BOX system kits

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 VISIO

## 1.2 VISIO probes (Ø 3.7 mm to 6.0 mm)

## 1.2 Ø 3.7 mm to 6.0 mm



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	Ø	ITEM-NO.
3.7 mm / 4.0 mm	15.0 mm	TBC
3.7 mm / 4.0 mm	30.0 mm	TBC
3.7 mm / 4.0 mm	60.0 mm	TBC
3.7 mm / 4.0 mm	80.0 mm	TBC
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

Centering devices are very helpful accessories lifting the camera optic off the ground. As the probe is pushed inside an application, 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 applications. 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 probes VUCAM® Fiberscopes	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 probes VUCAM® Fiberscopes	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® Fiberscopes	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 probes VUCAM® Fiberscopes	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 probes VUCAM® Fiberscopes	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 probes VUCAM® Fiberscopes	HVT-90-000152 HVT-90-000153 HVT-90-000154 HVT-90-000155





# 1 VISAIO

## 1.3 Accessories

## 1.3 Accessories

### Optional accessory

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

	<p><b>VISAIO DOCUMENTATION SYSTEM</b> <span style="float: right;">HVT-80-000100</span></p> <p>Desktop solution for the support of VISAIO probes. Image presentation via LCD display. Illumination control of VISAIO probes. Digital image and video recording on SD card. White balance. Video input/output. Battery operation time: 2 h. Power supply included.</p>
	<p><b>VISAIO BOX P2</b> <span style="float: right;">HVT-90-000180</span></p> <p>Desktop solution for the support of VISAIO probes. Illumination control of VISAIO probes. Video out (S-Video, BNC), white balance. Power supply included.</p>
	<p><b>VISAIO BOX TRANSPORT CASE</b> <span style="float: right;">HVT-90-000100</span></p> <p>All probes and accessories fit perfectly into the custom-fit interior of the light weight but robust transport case.</p>
	<p><b>VISAIO BOX TO MATRIX CABLE P2</b> <span style="float: right;">HVT-90-000181</span></p> <p>Power via MATRIX® and VUMAN® utilizing the MATRIX® power supply or battery pack. One single connection point for power and signals.</p>
	<p><b>SIDE VIEW OPTICAL ADAPTER DOV 90°, FOV 120° (WIDE ANGLE, CLOSE FOCUS)</b> <span style="float: right;">BOX-70-000118</span></p> <p>90° optical adapter for 6 mm VISAIO P2 probe, depth of view: 2 mm to 120 mm</p>
	<p><b>OPTICAL ADAPTER DOV 0°, FOV 120° (WIDE ANGLE, CLOSE FOCUS)</b> <span style="float: right;">BOX-70-000119</span></p> <p>0° optical adapter for 6 mm VISAIO P2 probe, depth of view: 3 mm to 120 mm</p>
	<p><b>SIDE VIEW OPTICAL ADAPTER DOV 90°, FOV 45° (FAR FOCUS)</b> <span style="float: right;">BOX-70-000120</span></p> <p>90° optical adapter for 6 mm VISAIO P2 probe, depth of view: 12 mm to ∞</p>
	<p><b>STORAGE BOX FOR OPTICAL ADAPTERS</b> <span style="float: right;">BMX-50-000364</span></p> <p>All your optical adapters are protected inside a custom-fit interior and a solid waterproof box.</p>
	<p><b>VIDEO MONITOR/LAPTOP SOLUTIONS</b></p> <p>Please contact viZaar for current models.</p>



## 2 VUCAM® XO/XO+

Portable industrial videoscope

NOW WITH  
**LIFETIME WARRANTY**  
ON  
CARBON FIBRE PARTS  
AND LED UNITS!



**BATTERY  
POWERED**



**FLASHBACK  
BUFFER  
RECORDING**



**ROBUST  
CONSTRUCTION**



**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 VUCAM® XO/XO+

### 2.1 VUCAM® XO/XO+ system kits

2.1 Ø 6 mm



#### VUCAM® XO

Including:

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

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 a SD card, use recording flashback and adjust brightness and contrast. The new features are an enhanced zoom-function and an all new full screen mode. Furthermore, you can rotate and mirror the image.

#### 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

Enhanced features offers the VUCAM XO+. An integrated video-out and audio-in/out connectivity ensure even better workflow. The most exciting highlight is the new video streaming function, allowing real time broadcast.











## 2 VUCAM® XO/XO+

### 2.2 VUCAM® XO Accessory Kits

2.2 Ø 6 mm

#### Optional accessory

- VUCAM® XO/XO+ accessory kit PRO

VUCAM® XO ACCESSORY KIT PRO		BEM-30-000194
	<b>Optical adapter DOV 90°, FOV 120° for VUCAM probes 6 mm (wide angle, close focus), depth of view: 2 mm to 120 mm</b>	BOX-70-000118
	<b>Optical adapter DOV 0°, FOV 120° for VUCAM probes 6 mm (wide angle, close focus), depth of view: 3 mm to 120 mm</b>	BOX-70-000119
	<b>VUCAM® external intelligent battery charger</b>	BEM-30-000220
	<b>Shoulder strap for VUCAM®</b>	FXX-90-000222
	<b>Spare battery VUCAM®</b> Attention: Always order 2 pcs and change them together	EXX-91-000114
	<b>SD card 32GB</b>	DXX-60-000262
	<b>Storage box for VUCAM® optical adapters</b>	BMX-50-000364
	<b>VUCAM® touch display protective foil</b>	MXX-70-000392

Be prepared and get most out of your VUCAM® set. Complete your system. Save money and benefit from the offer of this extensive set full of useful accessories.  
For detailed information about the accessories, please refer to the following chapter.












## 2 VUCAM® XO/XO+

### 2.2 VUCAM® XO Accessory Kits

2.2 Ø 6 mm

#### Optional accessory

- VUCAM® XO/XO+ accessory kit PREMIUM

VUCAM® XO ACCESSORY KIT PREMIUM		BEM-30-000362
	<b>Optical adapter DOV 90°, FOV 120°, for VUCAM probes 6 mm (wide angle, close focus), depth of view: 2 mm to 120 mm</b>	BOX-70-000118
	<b>Optical adapter DOV 0°, FOV 120°, for VUCAM probes 6 mm (wide angle, close focus), depth of view: 3 mm to 120 mm</b>	BOX-70-000119
	<b>Optical adapter DOV 90°, FOV 45°, for VUCAM probes 6 mm (far focus), depth of view: 12 mm to ∞</b>	BOX-70-000120
	<b>VUCAM® external intelligent battery charger</b>	BEM-30-000220
	<b>Shoulder strap for VUCAM®</b>	FXX-90-000222
	<b>Spare battery VUCAM®</b> Attention: Always order 2 pcs and change them together	EXX-91-000114
	<b>SD card 32GB (2 pcs)</b>	DXX-60-000262
	<b>Storage box for VUCAM® optical adapters</b>	BMX-50-000364
	<b>VUCAM® touch display protective foil (2 pcs)</b>	MXX-70-000392

Be prepared and get most out of your VUCAM® set. Complete your system. Save money and benefit from the offer of this extensive set full of useful accessories.

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



## 2 VUCAM® XO/XO+

### 2.3 Accessories

### 2.3 Accessories



Side view optical adapter  
(close focus)



Straight view optical  
adapter (wide angle)



Side view optical adapter  
(far focus)



Centering devices



Guide tubes



Battery charger



Spare battery

#### SIDE VIEW OPTICAL ADAPTER DOV 90°, FOV 120° 6 MM (WIDE ANGLE, CLOSE FOCUS) BOX-70-000118

This side view optical adapter is an excellent help in narrow space applications, where probe articulation is not possible. It changes the direction of view of your system 90° to the side, widens the field of view to over 120° and shortens the minimum focus to very close (depth of field: 2 mm to 120 mm). The two step thread connection prevents any risk of losing the adapter inside your application. The overall design is optimized to maintain the total rigid camera head section at the smallest, thus still passing, tight bend radii.

#### OPTICAL ADAPTER DOV 0°, FOV 120° 6 MM (WIDE ANGLE, CLOSE FOCUS) BOX-70-000119

This optical adapter is changing the systems optical parameter to more than 120° wide angle, setting the focus distance close (depth of field: 3 mm to 120 mm). This optical adapter will provide very good results in narrow spaces such as small tubes and orbital weld inspections. The two step thread connection prevents any risk of losing the adapter inside your application. The overall design is optimized to maintain the total rigid camera head section at the smallest, thus still passing, tight bend radii.

#### SIDE VIEW OPTICAL ADAPTER DOV 90°, FOV 45° 6 MM (FAR FOCUS) BOX-70-000120

This side view optical adapter is changing the systems optical parameter to 90° side view, while keeping the known standard optical parameters. Applications in far distance from the camera optic, where articulation is not delivering the desired results, are perfectly solved with this accessory (depth of field: 12 mm to ∞). The two step thread connection prevents any risk of losing the adapter inside your application. The overall design is optimized to maintain the total rigid camera head section at the smallest, thus still passing, tight bend radii.

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	FOR PRODUCTS	ITEM-NO.
8.0 mm	6.0 mm	500 mm	Rigid	VUCAM® VUMAN® VISIO probes Fiberscopes	HVT-90-000137
12.0 mm	6.0 mm	500 mm	Semi-rigid	VUCAM® VUMAN® VISIO probes Fiberscopes	HVT-90-000141

#### VUCAM® EXTERNAL INTELLIGENT BATTERY CHARGER BEM-30-000220

Maximum flexibility, optimal battery management & lifetime. This intelligent, external and small charging unit is delivered with an international power supply & a car charger. Charge a second set of batteries while using the system. Connected to any mains or your car, it takes max. 2h to fully recharge your battery set. The charger synchronizes and maximizes the individual battery capacity, thus maximizing the overall total battery operation time.

#### SPARE BATTERY VUCAM® EXX-91-000114

Type	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 VUCAM® XO/XO+

## 2.3 Accessories

## 2.3 Accessories



Shoulder strap

### 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.



32GB SD card

### SD CARD 32GB DXX-60-000262

A second SD card is nice to have. Protect and share data, 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 your optical adapters 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 anti-reflective coating will provide perfect image quality. The touch screen functions are guaranteed even with gloves on.



Additional warranty

### 2 YEAR WARRANTY FOR VUCAM® SYSTEM 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.



### 3 VUCAM® XF/XF+

Portable industrial videoscope



NOW WITH  
**LIFETIME WARRANTY**  
ON  
CARBON FIBRE PARTS  
AND LED UNITS!



**BATTERY  
POWERED**



**FLASHBACK  
BUFFER  
RECORDING**



**ROBUST  
CONSTRUCTION**



**CARBON  
DESIGN**

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.



### 3 VUCAM® XF/XF+

#### 3.1 VUCAM® XF/ XF+ system kits

3.1 Ø 4 mm



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	LENGTH	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 a SD card, use recording flashback and adjust brightness and contrast. The new features are an enhanced zoom-function and an all new full screen mode. Furthermore, you can rotate and mirror the image.

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

Enhanced features offers the VUCAM XF+. An integrated video-out and audio-in/out connectivity ensure even better workflow. The most exciting highlight is the new video streaming function, allowing real time broadcasts.










# 3 VUCAM® XF/XF+

## 3.2 VUCAM® XF/XF+ accessory kit

3.2 Ø 4 mm









### Optional accessory

- VUCAM® XF/XF+ accessory kit PRO

VUCAM® XF/XF+ ACCESSORY KIT PRO		BEM-30-000389
	<b>Optic adapter 90° DOV, 85° FOV, for 4 mm VUCAM probe, focus range 1.5 mm - 18 mm, color marking: red</b>	BOX-70-000124
	<b>VUCAM® external intelligent battery charger</b>	BEM-30-000220
	<b>Shoulder strap for VUCAM®</b>	FXX-90-000222
	<b>Spare battery VUCAM®</b> Attention: Always order 2 pcs and change them together	EXX-91-000114
	<b>SD card 32GB</b>	DXX-60-000262
	<b>Storage box for VUCAM® optical adapters</b>	BMX-50-000364
	<b>VUCAM® touch display protective foil</b>	MXX-70-000392

### Optional accessory

- VUCAM® XF/XF+ accessory kit PREMIUM

VUCAM® XF/XF+ ACCESSORY KIT PREMIUM		BEM-30-000469
	<b>Optic adapter 90° DOV, 85° FOV, for 4 mm VUCAM probe, focus range 1.5 mm - 18 mm, color marking: red</b>	BOX-70-000124
	<b>Optic adapter 90° DOV, 85° FOV, for 4 mm VUCAM probe, focus range 4 - 100 mm, color marking: brown</b>	BOX-70-000133
	<b>VUCAM® external intelligent battery charger</b>	BEM-30-000220
	<b>Shoulder strap for VUCAM®</b>	FXX-90-000222
	<b>Spare battery VUCAM®</b> Attention: Always order 2 pcs and change them together	EXX-91-000114
	<b>SD card 32GB ( 2 piece)</b>	DXX-60-000262
	<b>Storage box for VUCAM® optical adapters</b>	BMX-50-000364
	<b>VUCAM® touch display protective foil ( 2 piece)</b>	MXX-70-000392



# 3 VUCAM® XF/XF+

## 3.3 Accessories

## 3.3 Accessories



Optic adapter

### 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



Optic adapter

### 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



Battery charger

### VUCAM® EXTERNAL INTELLIGENT BATTERY CHARGER BEM-30-000220

Maximum flexibility, optimal battery management & lifetime. This intelligent, external and small charging unit is delivered with an international power supply & a car charger. Charge a second set of batteries while using the system. Connected to any mains or your car, it takes max. 2h to fully recharge your battery set. The charger synchronizes and maximizes the individual battery capacity, thus maximizing the overall total battery operation time.



Shoulder strap

### 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

### SPARE BATTERY VUCAM® EXX-91-000114

<b>Typ</b>	Rechargeable LiFePo
<b>Power</b>	3,2V DC / 3200 mAh
<b>Function</b>	Integrated deep discharge   Over charge protection   Fast charge   Air transportable
<b>Attention</b>	Please always order 2 pcs and change them together.



32GB SD card

### SD CARD 32GB DXX-60-000262

Erweitern Sie den Speicherplatz für Ihre Inspektionsbilder und -videos.



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.



Additional warranty

### 2 YEAR WARRANTY FOR VUCAM® SYSTEM 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.



## 4 VUMAN® E3 / E3+

High end, interchangeable long range video endoscope system



The VUMAN® industrial videoscope system is the choice for professionals. Image quality is the most prominent feature for visual inspection systems. VUMAN® offers unique patented features such as the worlds only Remote Focus optical system, providing instantly focused images in your application. The interchangeable video probes are connected to the patented reel system. Pulling just as much probe as needed from the reel, you're avoiding risks like trip hazard or probe damage. The unique pneumatic camera articulation operates smoothly without the typical performance drop of long range probes, even with most of the probe stored on the reel. System operation and high quality images presentation are managed by the high quality touch screen. All video probes are exchangeable. All hard- and software functions can be retrofitted. A very compact system offering long probe lengths with inspection quality at no compromise.



**DUAL  
HIGH-POWER  
LED LIGHT  
SOURCE**



**CARBON  
DESIGN**



**DIGITAL  
DOCUMENTATION**



**MEASUREMENT  
FUNCTION**



**BATTERY  
POWERED**



**REMOTE  
FOCUS  
TECHNOLOGY**



**X-WAY  
ARTICULATION**



**PATENTED  
DRUM  
STORAGE**





## 4 VUMAN® E3 / E3+

### 4.1 Individual customized inspection system

#### 4.1 Base Unit + Probes



VUMAN® E3/E3+  
Base Unit

- VUMAN® E3/E3+ base unit
- optionally with or without X-WAY
- VUSCREEN control unit
- Transport case
- Accessories case
- Short Guide



VIDEO PROBES

- Working length: 5 - 30 m
- Diameter: 6.1 - 12.7 mm
- Field of View (FOV): 45° - 130°
- Direction of View (DOV): 0° - 90°/360°
- Mounting for centering devices
- Remote Focus

### Customize your own inspection system

Combine the inspection system VUMAN® with the probes of your choice. This gives you all the features and benefits needed for multiple visual inspection and documentation challenges encountered.

Both of the two base units can be adjusted with an integrated micro air compressor. This ensures perfect X-WAY articulation up to a working length of 30 meters.

Easy to use graphic interface with an outstanding image presentation. Excellent image analysis and documentation tools ease the daily workload.

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



# 4 VUMAN® E3 / E3+

## 4.1 Individual customized inspection system

### 4.1 Base Unit + Probes



VUMAN® E3



VUMAN® E3+



### Choose the right system for your application

VUMAN® is available in two base units. They differ in matters of memory, size and software features. Each of them can be equipped with a compressor for full X-Way articulation. The standard video output is HDMI. Analogue TV-Out is an additional option for the VUMAN E3+.



# 4 VUMAN® E3 / E3+

## 4.2 VUMAN® E3 / E3+ base units

## 4.2 Base units



BASE UNIT	VUMAN® E3	VUMAN® E3 X-WAY	VUMAN® E3+	VUMAN® E3+ (ANALOG OUT)
ITEM NO.	VXX-10-001196	VXX-10-001197	VXX-10-001198	VXX-10-001200
X-WAY articulation	-	✓	-	-
X-WAY drive	-	Integrated compressor, maintenance free.	-	-
High power dual LED light source	✓	✓	✓	✓
Probe length	max. 20m	max. 20m	max. 20m	max. 20m
Color temperature	6.1 mm: 5.500 K 8.4 mm: 5.000 K	6.1 mm: 5.500 K 8.4 mm: 5.000 K	6.1 mm: 5.500 K 8.4 mm: 5.000 K	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 air 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 mm
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	100 - 240V(AC) 50Hz - 60Hz max. 240 Watt	100 - 240V(AC) 50Hz - 60Hz max. 240 Watt	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	1440 x 1080 px	1440 x 1080 px	1440 x 1080 px
Contrast	1600:1	1600:1	1600:1	1600:1
Brightness	850 cd/m <sup>2</sup>	850 cd/m <sup>2</sup>	850 cd/m <sup>2</sup>	850 cd/m <sup>2</sup>
Backlight	LED	LED	LED	LED
Colors	True Color	True Color	True Color	True Color
Operation	Touch screen Joystick Direct access buttons	Touch screen Joystick Direct access buttons	Touch screen Joystick Direct access buttons	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 Power cable 2.5 m	Carbon fiber design with all around elastomer bumper Power cable 2.5 m	Carbon fiber design with all around elastomer bumper Power cable 2.5 m	Carbon fiber design with all around elastomer bumper Power cable 2.5 m
Software Kit	E3	E3	E3+	E3+



# 4 VUMAN® E3 / E3+

## 4.2 VUMAN® E3 / E3+ base units

## 4.2 Base units



BASE UNIT	VUMAN® E3+ X-WAY	VUMAN® E3+ X-WAY (ANALOG OUT)	VUMAN® E3+ X-WAY (ANALOG OUT, 30 METERS)
ITEM NO.	VXX-10-001199	VXX-10-001201	VXX-10-001202
X-WAY articulation	✓	✓	✓
X-WAY drive	Integrated compressor, maintenance free.	Integrated compressor, maintenance free.	Integrated compressor, maintenance free.
High power dual LED light source	✓	✓	✓
probe length	max. 20m	max. 20m	max. 30m
Color temperature	6.1 mm: 5.500 K 8.4 mm: 5.000 K	6.1 mm: 5.500 K 8.4 mm: 5.000 K	6.1 mm: 5.500 K 8.4 mm: 5.000 K
Memory	80GB SSD	80GB SSD	80GB SSD
Video input	PAL / NTSC Composite, S-Video	PAL / NTSC Composite, S-Video	PAL / NTSC Composite, S-Video
Video output	HDMI	HDMI, Analog Out (Composite, S-Video)	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
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
Weight in kg / lbs	10 / 22	10 / 22	10 / 22
Construction	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	100 - 240V(AC) 50Hz - 60Hz max. 240 Watt	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
<b>LCD TOUCH SCREEN CONTROL PANEL</b>	✓	✓	✓
Display size	10.4"	10.4"	10.4"
Resolution	1440 x 1080 px	1440 x 1080 px	1440 x 1080 px
Contrast	1600:1	1600:1	1600:1
Brightness	850 cd/m <sup>2</sup>	850 cd/m <sup>2</sup>	850 cd/m <sup>2</sup>
Backlight	LED	LED	LED
Colors	True Color	True Color	True Color
Operation	Touch screen Joystick Direct access buttons	Touch screen Joystick Direct access buttons	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
Weight in kg / lbs	1.6 / 3.5	1.6 kg / 3.5	1.6 kg / 3.5
Construction	Carbon fiber design with all around elastomer bumper Power cable 2.5 m	Carbon fiber design with all around elastomer bumper Power cable 2.5 m	Carbon fiber design with all around elastomer bumper Power cable 2.5 m
Software Kit	E3+	E3+	E3+



# 4 VUMAN® E3 / E3+

## 4.3 VUMAN® E3 / E3+ software kits

## 4.3 Software Features

	VUMAN® E3	VUMAN® E3+
SOFTWARE KIT	STANDARD SOFTWARE KIT FOR VUMAN E3	ADVANCED SOFTWARE KIT FOR VUMAN E3+
<b>SETUP</b>		
Default user	✓	✓
Individual user 1-9	-	✓
Multi language user interface	✓	✓
Memory	10 GB SSD	80 GB SSD
<b>OPERATION MENU</b>		
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
<b>TEXT GENERATOR</b>		
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	-	✓
<b>FILE MANAGER</b>		
Copy files	✓	✓
Rename files	✓	✓
Delete files	✓	✓
Create folders	-	✓
Create subfolders	-	✓
Copy folders / subfolders	-	✓
Rename folders / subfolders	-	✓
Delete folders / subfolders	-	✓
<b>MEDIA PLAYER</b>		
Video playlist	✓	✓
Image slide show	✓	✓
Play / pause	✓	✓
Forward / backward	✓	✓
<b>MEASUREMENT MENU</b>		
Distances (between two points)*	-	✓
Circles (radius, diameter, circumference, circular area)*	-	✓
Assistance (grid & reference quality)*	-	✓
Save / move / zoom / delete measurements*	-	✓

\* Features only available for VUMAN® E3 base units and V3 probes



# 4 VUMAN® E3 / E3+

## 4.4 interchangeable video probes

4.4 Ø 6.1 mm



interchangeable video probes



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



1.5 bar / 14 psi

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°

Fastener for optical adapters

4.4 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

OUTER Ø	LENGTH	X-WAY*	FOV	DOV	REMOTE FOCUS	WEIGHT	ITEM NO.
8.4 mm	5 m	✓	70°	0 / 90°	✓	920 g	BEM-30-000286
8.4 mm	8 m	✓	70°	0 / 90°	✓	990 g	BEM-30-000271
8.4 mm	8 m	-	70°	0 / 90°	✓	870 g	BEM-30-000285
8.4 mm	12 m	✓	70°	0 / 90°	✓	1175 g	BEM-30-000283
8.4 mm	15 m	✓	70°	0 / 90°	✓	1360 g	BEM-30-000282
8.4 mm	15 m	-	70°	0 / 90°	✓	1240 g	BEM-30-000281
8.4 mm	20 m	✓	70°	0 / 90°	✓	2330 g	BEM-30-000279
8.4 mm	30 m	✓	70°	0 / 90°	✓	3300 g	BEM-30-000277

\* X-WAY articulation up/down +/- 160°, left/right +/-140°

Fastener for optical side view adapter

Hard wearing stainless steel braid on polyurethan probe.  
Fastener for optical centering tools.





# 4 VUMAN® E3 / E3+



## 4.4 interchangeable video probes

4.4 Ø 12.7 mm



### Revolver 12.7 video probes



Dual high power LED light source



(H) 752 x (V) 582, 440.000 px



OUTER Ø	LENGTH	EXTENSION	FOV	DOV	REMOTE FOCUS	WEIGHT	ITEM NO.
12.7 mm	8 m	Up to 30 m*	60°	90° / 360°	-	1120 g	VXX-10-001143
12.7 mm	15 m	Up to 30 m*	60°	90° / 360°	-	1520 g	VXX-10-001142

This 360° endless revolving probe is most productive and cost efficient at pipe wall and weld inspections. User controlled inspection speed and position of the side view revolving mirror deliver fast and perfect 100% inspection results.

Fastener for optical side view adapter.

\* Custom solution

Hard wearing stainless steel braid on polyurethan probe.  
Fastener for optical centering tools.



# 4 VUMAN® E3 / E3+

## 4.5 Accessories and Upgrades

## 4.5 Accessories and Upgrades



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 6.1 MM RF FOR VUMAN®	BOX-70-000129
Optical adapter, wide angle: DOV 0°, FOV 120°, DOF 4 mm - ∞ for VUMAN 6.1mm probes	

90° SIDE VIEW ADAPTER 6.1 MM RF FOR VUMAN®	BOX-70-000131
Optical adapter, side view: DOV 90°, FOV 45°, DOF 1 mm - ∞ for VUMAN 6.1mm probes	

90° SIDE VIEW ADAPTER 6.1 MM RF FOR VUMAN®	BOX-70-000128
Optical adapter, side view with wide angle: DOV 90°, FOV 120°, DOF 2 mm - ∞ for VUMAN 6.1mm probes	

90° SIDE VIEW PRISM 8.4 MM RF PROBE FOR VUMAN®	BMX-50-000129
Provides 90° side viewing image, easy focusing to achieving over 100 viewing/illumination positions. Optimized for usage with option centering device kit. Focus range from 2 mm to ∞.	

90° SIDE VIEW ADAPTER FOR REVOLVER 12.7	BMX-50-000277
<b>Only for operation with VUMAN® Revolver 12.7</b>	
Provides 90° side viewing image at homogeneous illumination. Anti-reflex, metal coated glass surface minimizes image disturbance.	

VUMAN® CENTERING DEVICE TOOL KIT FOR 8.4 MM RF X-WAY PROBES		BMX-50-000197
<b>Centering discs</b>	5 weight optimized centering discs.	
<b>Diameter</b>	60 mm, 44 mm, 34 mm, 24 mm, 17 mm.	
<b>Mounting</b>	Insertion tube	
<b>Function</b>	These tools offer premium scope handling inside tubes and keep the camera clean of potential bottom remains. The camera head can still be articulated. Positioned in the center they ensure continuous focal distance to the tube wall resulting in repetitive high quality images and faster workflow. The disks are fixed with a split adapter behind the bending neck section at the insertion tube. Incl. a split locking adapter and mounting wrench.	

VUMAN® CENTERING DEVICE TOOL KIT FOR 8.4 MM RF NON ARTICULATION PROBES		BMX-50-000302
<b>Centering discs</b>	5 weight optimized centering discs.	
<b>Diameter</b>	60 mm, 44 mm, 34 mm, 24 mm, 17 mm.	
<b>Mounting</b>	Camera head	
<b>Function</b>	These tools offer premium scope handling inside tubes and keep the camera clean of potential bottom remains. They too ensure continuous focal distance to the tube wall resulting in repetitive high quality images and faster workflow. Incl. a locking adapter and mounting wrench.	



## 4 VUMAN® E3 / E3+

### 4.5 Accessories and Upgrades

### 4.5 Accessories and Upgrades



Centering device kit 6.1 mm

VUMAN® CENTERING DEVICE KIT FOR 6.1 MM X-WAY PROBES		BMX-50-000493
<b>Centering discs</b>	5 weight optimized centering discs.	
<b>Diameter</b>	60 mm, 44 mm, 34 mm, 24 mm, 17 mm	
<b>Mounting</b>	Camera head	
<b>Function</b>	These tools offer premium scope handling inside tubes, keeps camera away from tube or pipe bottom, keeps continuous focal distance to the tube / tube wall. Works with mounting adapter and mounting groove on endoscope camera head to prevent tool lost inside application. Includes mounting adapter, adapter-can for usage without 90° side viewing device and mounting wrench.	



Centering device kit 6.1 mm

VUMAN® CENTERING DEVICE KIT FOR 6.1 MM NON ARTICULATING PROBES		BMX-50-000503
<b>Centering discs</b>	2 weight optimized centering discs.	
<b>Diameter</b>	44 mm, 19 mm	
<b>Mounting</b>	Camera head	
<b>Function</b>	These tools offer premium scope handling inside tubes, keeps camera away from tube or pipe bottom, keeps continuous focal distance to the tube / tube wall. Works with mounting adapter and mounting groove on endoscope camera head to prevent tool lost inside application. Includes mounting adapter, adapter-can for usage without 90° side viewing device and mounting wrench.	



Centering device kit 12.7 mm

VUMAN® CENTERING DEVICE KIT FOR REVOLVER 12.7		BMX-50-000457
<b>Centering discs</b>	5 weight optimized centering discs.	
<b>Diameter</b>	80 mm, 60 mm, 46 mm, 36 mm, 26 mm.	
<b>Mounting</b>	Camera head	
<b>Function</b>	This tools offer premium scope handling inside tubes, keeps camera away from tube or pipe bottom, keeps continuous focal distance to the tube / tube wall.	



Glass fiber pushing aid 15 m

GLASS FIBER PUSHING AID SET FOR 6.1 MM INSERTION TUBE, ONLY VUMAN® 15 M		BMX-50-000504
<b>To be mounted 10" / 25 cm before distal scope end</b>		
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 insertion tubes of any 6mm scope into 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 6.1 MM INSERTION TUBE, ONLY VUMAN® 20 M		BMX-50-000505
<b>To be mounted 10" / 25 cm before distal scope end</b>		
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 insertion tubes of any 6mm scope into hard to reach positions. Change of clamps allows to use same set with different scope diameters. Includes mounting wrench.		



# 4 VUMAN® E3 / E3+

## 4.5 Accessories and Upgrades

## 4.5 Accessories and Upgrades



Glass fiber pushing aid 30 m

**GLASS FIBER PUSHING AID SET FOR 6.1 MM INSERTION TUBE, 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 insertion tubes of any 6mm scope into 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

**GLASS FIBER PUSHING AID SET FOR 8.4 MM INSERTION TUBE, 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 insertion tubes of any 8mm scope into 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 8.4 MM INSERTION TUBE, 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 insertion tubes of any 8mm scope into hard to reach positions. Change of clamps allows to use same set with different scope diameters. Includes mounting wrench.



Glass fiber pushing aid 30 m

**GLASS FIBER PUSHING AID SET FOR 8.4 MM INSERTION TUBE, 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 insertion tubes of any 8mm scope into 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

**GLASS FIBER PUSHING AID SET FOR 10 MM INSERTION TUBE / VUMAN® / REVOLVER 12.7** | **BMX-50-000285**

**Only VUMAN®**

**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 insertion tubes of any 10 mm scope into hard to reach positions. Change of clamps allows to use same set with different scope diameters. Includes mounting wrench.



# 4 VUMAN® E3 / E3+

## 4.5 Accessories and Upgrades

## 4.5 Accessories and Upgrades



X-WAY articulation upgrade

<b>BASE UNIT X-WAY UPGRADE</b>	<b>VXX-10-001115</b>
Micro compressor included for usage of articulating RF video probes. Hardware upgrade (micro compressor and boards).	



Transport case

<b>TRANSPORT CASE VUMAN® BASE UNIT FOR PROBE LENGTH UP TO 20 M</b>	<b>FXX-80-000119</b>
Light-weight, compact and splash water proof HPX® high performance transport, storage and operation case for VUMAN®/RA-Y/RA base unit and accessories. Product tailored 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

<b>TRANSPORT CASE VUMAN® BASE UNIT FOR PROBE LENGTH UP TO 30 M</b>	<b>FXX-80-000136</b>
<b>We recommend this item for probe working lengths over 20 m</b>	
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 tailored 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

<b>TRANSPORT CASE SPARE PROBE</b>	<b>BMX-50-000225</b>
Light-weight, compact and splash water proof HPX® high performance transport case for spare probes. Product tailored 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

<b>CAMERA HEAD PROTECTION FOR VUMAN®/TUBE 8.4 MM RF</b>	<b>BMX-50-000299</b>
Spare head guard ring for 8.4mm VUMAN® probe head. Always to be used when no side view adapter is present. This ring is to protect the integrity of the fine thread provided at the camera head.	



Camera head protection ring

<b>CAMERA HEAD PROTECTION FOR VUMAN®/TUBE 6.1 MM RF</b>	<b>MX-10-001231</b>
Spare head guard ring for 6.1mm VUMAN® probe head. Always to be used when no optic adapter is present. This ring is to protect the integrity of the fine thread provided at the camera head.	



Battery pack

VUMAN® E3/E3+ BATTERY PACK	BEM-30-000342
<p>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.</p>	



VUSCREEN control unit

VUSCREEN CONTROL UNIT FOR VUMAN®/ MATRIX	BEM-30-000257
<b>Display size</b>	10.4"
<b>Resolution</b>	1440 x 1080 px
<b>Contrast</b>	1600:1
<b>Brightness</b>	850 cd/m <sup>2</sup>
<b>Backlight</b>	LED
<b>Colors</b>	True Color
<b>Operation</b>	Touch screen   Joystick   Direct access buttons
<b>Dimensions</b>	(W) 320 x (H) 30 x (D) 230 mm
<b>Weight</b>	1.6 kg
<b>Construction</b>	Carbon fiber design with all around elastometer bumper



VUSCREEN Link cable

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 protective foil

LCD DISPLAY PROTECTIVE FOIL	MXX-70-000274
<p>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.</p>	



Customization

CUSTOMER LOGO/REFERENCE CHARTS DISPLAY	EXX-99-000101
<p>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. File format: EPS or high resolution JPEG format.</p>	





## 4 VUMAN® E3 / E3+

### 4.5 Accessories and Upgrades

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Customization

#### CUSTOM TRANSPORT CASE LABEL

MX-70-000404

Make your case show your brand. When ordering FX-80-000119 / FX-80-000136, you can order it to come with the customer logo on it. The logo needs to be provided by the customer within the first two weeks after order. File format: EPS or high resolution JPEG format.



Product training

#### INHOUSE 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 and safe storage of the system/spare probe.



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