

**VEQTRON™**



**VEQTRON™ – GUIDED SURGERY**



## VEQTRON™ NIR Imaging System 4K

**71-068-00 NIR** 4 CMOS 4K

with objective f = 23 mm

- Innovative 4 CMOS 4K technology
- Optional: 4K motorized camera head
- Ergonomic and lightweight camera head
- Super high fluorescence sensitivity
- Ultimate colour reproduction which brings true to life colour
- Wide dynamic range enhances the three-dimensionality and depth perception of the picture
- Technology which presents pictures rich in depth, texture and details
- Special technology for colour and detail enhancement
- Standard White Light Mode, Standard Fluorescence Mode, ISO Fluorescence Mode and Multi-Display Mode
- Switch mode by pressing the camera button, which is extremely convenient to use
- Integrated capture module (image and video)
- Applications:
  - Gastrointestinal surgery
  - Gynaecology surgery
  - Hepatobiliary surgery (Liver)
  - Laparocopy surgery
  - Thoracic surgery
  - Urinary surgery
  - Stomach enterochirurgia

### Technical Data:

|                        |                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Video system:          | Progressive Scan with 50 or 60 Hz                                                                                        |
| Image-sensor:          | 4 x CMOS                                                                                                                 |
| Pixels:                | 4K UHD 3840 x 2160 pixels                                                                                                |
| Horizontal resolution: | > 1,600 TV-Lines                                                                                                         |
| Aspect ratio:          | 16:9                                                                                                                     |
| Video output:          | 1 x HDMI 4K (3840 x 2160)<br>1 x HDMI Full HD (1920 x 1080)<br>1 x SDI 4K (3840 x 2160)<br>1 x SDI Full HD (1920 x 1080) |
| Other connections:     | 1 x USB<br>2 x RS232                                                                                                     |
| Power supply:          | 110-240 V (150 VA)                                                                                                       |
| Dimensions of unit:    | 370 x 150 x 403 mm (WxHxD)                                                                                               |
| Weight of unit:        | 7.86 kg                                                                                                                  |
| Weight of camera head: | 500 g                                                                                                                    |

### Included in delivery:

- Control unit
- Camera head with 3.0 m cable, objective
- Mains cable
- 2 pcs. Fuse (F3.15 AH 250 V)
- Rs232 cable
- Instruction manual

Camera control unit only

**71-068-05 NIR** 4K

Camera head with remote control (3 buttons), objective f = 23 mm and cable

**71-068-10 NIR** 4 CMOS 4K

Camera head with remote control (3 buttons), motorized zoom objective and cable

**71-068-20 NIR** 4 CMOS 4K

Footswitch, for capturing and recording

**71-096-50 NIR**

Objective f = 20 mm

**71-088-20 NIR**

Objective f = 23 mm

**71-088-23 NIR**

Objective f = 27 mm

**71-088-27 NIR**

Zoom objective f = 15-30 mm

**71-089-30 NIR**





## VEQTRON™ NIR Imaging System

**71-066-00 NIR** 4 CMOS

with objective f = 23 mm

- Innovative 4 CMOS technology
- Ergonomic and lightweight camera head
- Vividly coloured and high contrast images
- Progressive scan with high frame rate
- Wide dynamic range enhances the three-dimensionality and depth perception of the picture
- Special technology for colour and detail enhancement
- Standard White Light Mode, Standard Fluorescence Mode, ISO Fluorescence Mode and Multi-Display Mode
- Switch mode by pressing the camera button, which is extremely convenient to use
- Integrated capture module (image and video)
- Applications:
  - Gastrointestinal surgery
  - Gynaecology surgery
  - Hepatobiliary surgery (Liver)
  - Laparocopy surgery
  - Thoracic surgery
  - Urinary surgery
  - Stomach enterochirurgia

### Technical Data:

|                        |                                                                                         |
|------------------------|-----------------------------------------------------------------------------------------|
| Video system:          | Progressive Scan with 50 or 60 Hz                                                       |
| Image-sensor:          | 4 x CMOS                                                                                |
| Pixels:                | FULL HD 1920 x 1080 pixels                                                              |
| Horizontal resolution: | > 1,000 TV-Lines                                                                        |
| Aspect ratio:          | 16:9                                                                                    |
| Video output:          | 2 x SDI (FULL HD 1920x1080p)<br>2 x DVI (FULL HD 1920x1080p)<br>1 x CVBS<br>1 x S-Video |
| Other connections:     | 1 x USB<br>2 x RS232                                                                    |
| Power supply:          | 110-240 V (150 VA)                                                                      |
| Dimensions of units:   | 370 x 150 x 403 mm (WxHxD)                                                              |
| Weight of unit:        | 7.86 kg                                                                                 |
| Weight of camera head: | 500 g                                                                                   |
| Protection class:      | I (acc. to IEC 60601-1)                                                                 |
| Approval:              | CE                                                                                      |

### Included in delivery:

- Control unit
- Camera head with 3.0 m cable, objective
- Mains cable
- 2 pcs. Fuse (F3.15 AH 250 V)
- RS232 cable
- Instruction manual

Camera control unit only

**71-066-05 NIR**

Camera head with remote control (3 buttons), objective f = 23 mm and cable

**71-066-10 NIR** 4 CMOS

Footswitch, for capturing and recording

**71-096-50 NIR**

Objective f = 20 mm

**71-088-20 NIR**

Objective f = 23 mm

**71-088-23 NIR**

Objective f = 27 mm

**71-088-27 NIR**

Zoom objective f = 15-30 mm

**71-089-30 NIR**





For Open  
Surgery

## VEQTRON™ NIR FluorosQan

### **71-066-50 NIR** 4 CMOS

with integrated LED and NIR Light Source  
and **manual** focus

- Compatible with Camera Control Unit 71-066-05 NIR
- Latest 4 CMOS technology enhances visualization of tissue perfusion in real-time
- Standard White Light Mode, Standard Fluorescence Mode, ISO Fluorescence Mode and Multi-Display Mode
- Allowing real-time lymphatic system tracking, tissue perfusion observation and accurate tumor boundary mapping
- Applications:
  - Gastrointestinal surgery
  - Gynaecology surgery
  - Hepatobiliary surgery (Liver)
  - Laparocopy surgery
  - Thoracic surgery
  - Urinary surgery
  - Stomach enterochirurgia
  - Thyroid surgery

#### **Technical Data:**

|                        |                                   |
|------------------------|-----------------------------------|
| Video system:          | Progressive Scan with 50 or 60 Hz |
| Image-sensor:          | 4 x CMOS                          |
| Pixels:                | FULL HD 1920 x 1080 pixels        |
| Horizontal resolution: | > 1,000 TV-Lines                  |
| Weight of camera head: | 860 g                             |

#### **Included in delivery:**

- Camera head with 3.0 m cable
- Instruction manual
- 2 pcs. Silicone protective cover

### **71-066-55 NIR** 4 CMOS

with integrated LED and NIR Light Source  
and **automatic** focus

### **71-066-90 NIR**

Silicone protective cover, autoclavable





## VEQTRON™ NIR Twinlight LED-LASER

### 71-182-30 NIR

- More light with lower energy consumption
- Colour temperature of approx. 6,200 K corresponds to daylight and guarantees excellent illumination and colour rendering, especially in combination with our VEQTRON™ NIR imaging systems
- Light intensity is infinitely variable, guaranteeing a consistently high quality of light
- No downtime and costs due to time-consuming lamp changes
- Adaptive light adjustment (in White Light and NIR Mode) – Light intensity is adjusted automatically to the distance between endoscope and tissue

#### Technical Data:

|                     |                            |
|---------------------|----------------------------|
| Colour temperature: | 6,200 K                    |
| CRI:                | > 85                       |
| Laser:              | Yes                        |
| LED Lifetime:       | > 30,000 hrs               |
| Power supply:       | 110-240 V / 50-60 Hz       |
| Power consumption:  | 200 VA                     |
| Brightness control: | 0-100% stepless adjustable |
| Light exit:         | AMNOTECH                   |
| Input:              | 1 x RS232                  |
| Dimensions:         | 370 x 150 x 403 mm (WxHxD) |
| Weight:             | 11.44 kg                   |

#### Included in delivery:

- Control unit
- Mains cable
- 2 pcs. Fuse (F3.15AH 250V)
- Instruction manual





## VEQTRON™ NIR Twinlight LED-LASER

### 71-180-30 NIR

- More light with lower energy consumption
- Colour temperature of approx. 6,200 K corresponds to daylight and guarantees excellent illumination and colour rendering, especially in combination with our VEQTRON™ NIR imaging systems
- Light intensity is infinitely variable, guaranteeing a consistently high quality of light
- No downtime and costs due to time-consuming lamp changes
- Adaptive light adjustment (only in White Light Mode) – Light intensity is adjusted automatically to the distance between endoscope and tissue

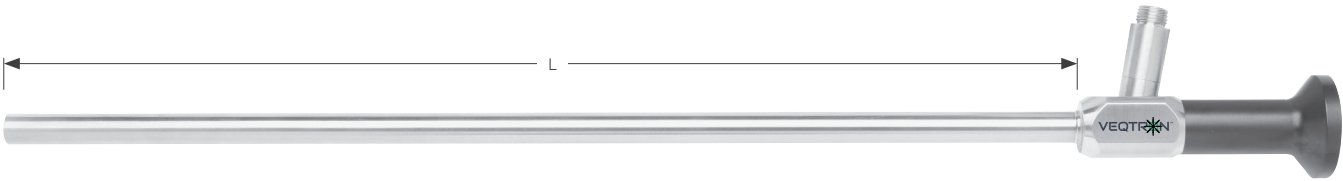
#### Technical Data:

|                     |                            |
|---------------------|----------------------------|
| Colour temperature: | 6,200 K                    |
| CRI:                | > 85                       |
| Laser:              | Yes                        |
| LED Lifetime:       | > 30,000 hrs               |
| Power supply:       | 110-240 V / 50-60 Hz       |
| Power consumption:  | 200 VA                     |
| Brightness control: | 0-100% stepless adjustable |
| Light exit:         | AMNOTEC                    |
| Input:              | 1 x RS232                  |
| Dimensions:         | 370 x 150 x 403 mm (WxHxD) |
| Weight:             | 11.44 kg                   |

#### Included in delivery:

- Control unit
- Mains cable
- 2 pcs. Fuse (F3.15AH 250V)
- Instruction manual





VEQTRON™ NIR 4K UHD Laparoscope

134° C  
18 min AUTOCLAVE  
273° F

| Length   | Ø       | 0°                                                                                | 30°                                                                               |
|----------|---------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|          |         |  |  |
| 300.0 mm | 5.5 mm  | 72-405-00 NIR                                                                     | 72-405-30 NIR                                                                     |
| 330.0 mm | 10.0 mm | 72-410-00 NIR                                                                     | 72-410-30 NIR                                                                     |



VEQTRON™ Sterilisation basket

54-540-50 NIR

VEQTRON™ NIR basket for laparoscope and light cable  
with racks and lid, 406 x 172 x 56 mm

Delivery without laparoscope and light cable





134° C  
18 min AUTOCLAVE  
273° F

Cold light cables for VEQTRON™ NIR Twinlight LED-LASER

|          | Cable, only   | Cable with 2 adapters |
|----------|---------------|-----------------------|
| Length   | Ø 4.8 mm      | Ø 4.8 mm              |
| 230.0 cm | 71-146-23 NIR | 71-146-23 NIR C ■     |
| 300.0 cm | 71-146-30 NIR | 71-146-30 NIR C ■     |
| 350.0 cm | 71-146-35 NIR | 71-146-35 NIR C ■     |



71-128-00

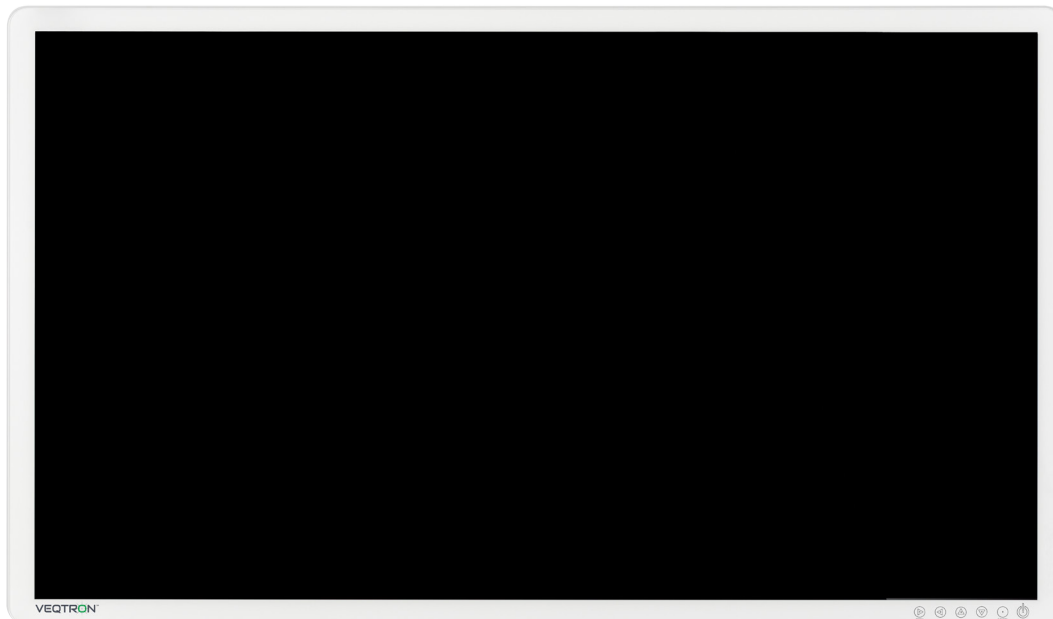
Adapter unit side



71-129-00

Adapter endoscope side





## 71-322-55 UHD 55" 4K

4K UHD LCD Colour Monitor, Compact Display System, without stand

- Specially developed for viewing radiological, endoscopic and microscopic images
- Completely closed aluminium housing
- Extremely scratch-proof aluminosilicate glass with anti-reflection-coating
- Special zone cooling system without any mechanically moving parts and maintenance-free
- Engineered for permanent 24/7 operation
- Internal 55" UHD display with all-round viewing angle
- Superior image quality
- Hygienic design

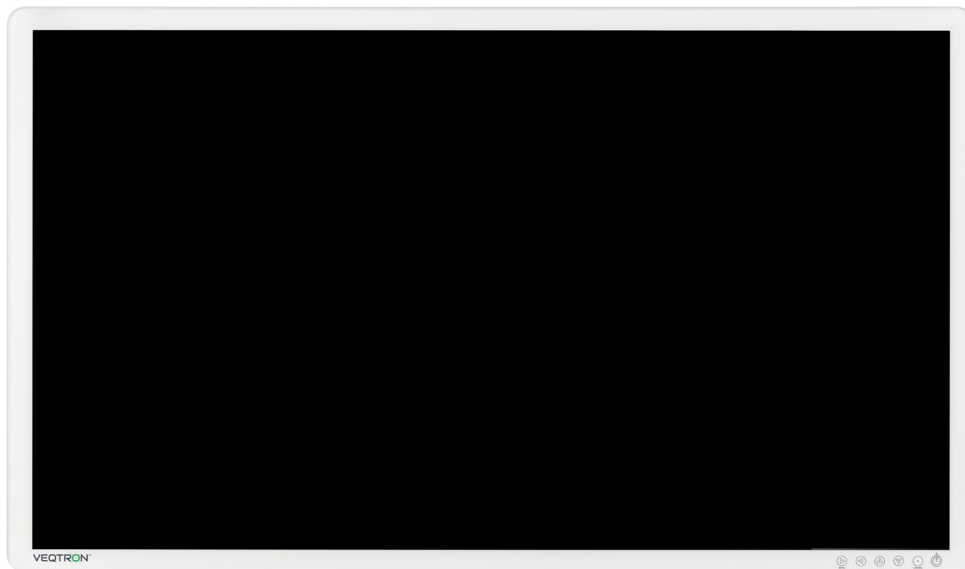
### Technical Data:

|                    |                            |
|--------------------|----------------------------|
| Panel size:        | 55" LCD                    |
| Pixels:            | 3840 (H) x 2160 (V)        |
| Response time:     | 8 ms                       |
| Aspect ratio:      | 16:9                       |
| Viewing angle:     | 178°                       |
| Brightness:        | 500 cd/m²                  |
| Dimensions:        | 1263 x 753 x 64 mm (WxHxD) |
| Weight:            | approx. 33.0 kg            |
| Colours:           | 1.07 Billion               |
| Contrast ratio:    | 4000:1                     |
| Video input:       | 2 x DP<br>2 x HDMI         |
| Power requirement: | 100-240 V / 50/60 Hz       |
| Power consumption: | 200 VA max.                |
| Regulations:       | IEC 60601-1, IEC 60601-1-2 |

### Included in delivery

- Monitor
- Mains cable
- DP cable
- HDMI cable
- Instruction manual
- Optional: HDMI-DVI Adapter





## 71-322-43 UHD 43" 4K

4K UHD LCD Colour Monitor, Compact Display System, without stand

- Specially developed for viewing radiological, endoscopic and microscopic images
- Completely closed aluminium housing
- Extremely scratch-proof aluminosilicate glas with anti-reflection-coating
- Special zone cooling system without any mechanically moving parts and maintenance-free
- Engineered for permanent 24/7 operation
- Internal 43" UHD display with all-round viewing angle
- Superior image quality
- Hygienic design

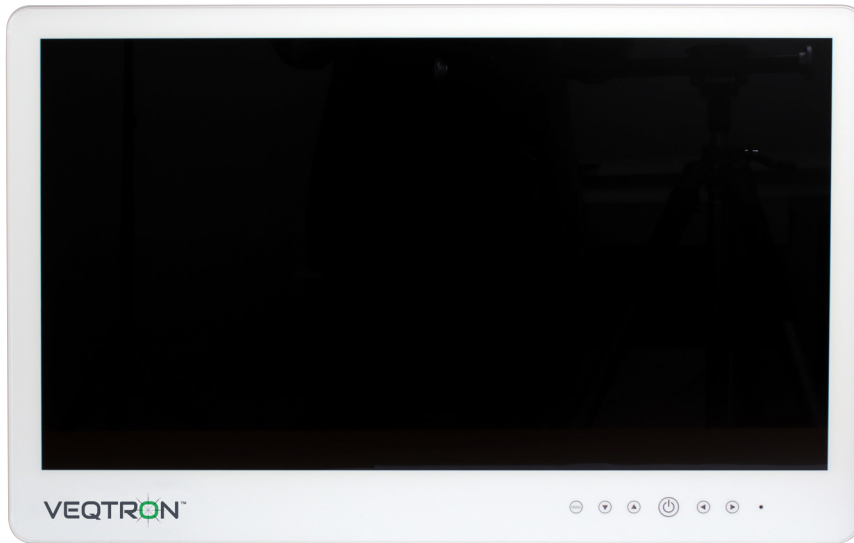
### Technical Data:

|                    |                            |
|--------------------|----------------------------|
| Panel size:        | 43" LCD                    |
| Pixels:            | 3840 (H) x 2160 (V)        |
| Response time:     | 8 ms                       |
| Aspect ratio:      | 16:9                       |
| Viewing angle:     | 178°                       |
| Brightness:        | 700 cd/m²                  |
| Dimensions:        | 997 x 588 x 73 mm (WxHxD)  |
| Weight:            | approx. 24.0 kg            |
| Colours:           | 1.07 Billion               |
| Contrast ratio:    | 3000:1                     |
| Video input:       | 2 x DP<br>2 x HDMI         |
| Power requirement: | 100-240 V / 50/60 Hz       |
| Power consumption: | 200 VA max.                |
| Regulations:       | IEC 60601-1, IEC 60601-1-2 |

### Included in delivery

- Monitor
- Mains cable
- DP cable
- HDMI cable
- Instruction manual
- Optional: HDMI-DVI Adapter





## 71-322-32 UHD 32" 4K

4K UHD LCD Colour Monitor, Compact Display System, without stand

- Specially developed for viewing radiological, endoscopic and microscopic images
- Completely closed aluminium housing
- Extremely scratch-proof aluminosilicate glass with anti-reflection-coating
- Special zone cooling system without any mechanically moving parts and maintenance-free
- Engineered for permanent 24/7 operation
- Internal 32" UHD display with all-round viewing angle
- Superior image quality
- Hygienic design

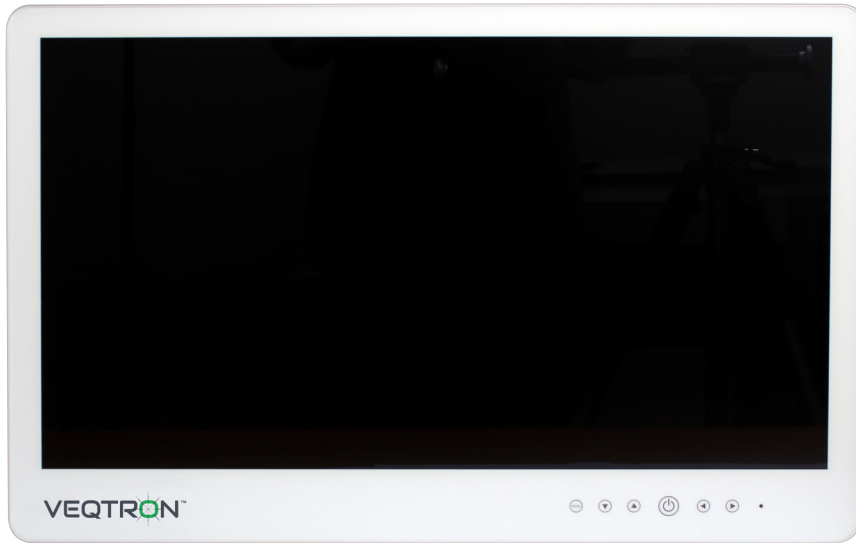
### Technical Data:

|                    |                            |
|--------------------|----------------------------|
| Panel size:        | 32" LCD                    |
| Pixels:            | 3840 (H) x 2160 (V)        |
| Response time:     | 8 ms                       |
| Aspect ratio:      | 16:9                       |
| Viewing angle:     | 178°                       |
| Brightness:        | 300 cd/m²                  |
| Dimensions:        | 760 x 460 x 63 mm (WxHxD)  |
| Weight:            | approx. 13.0 kg            |
| Colours:           | 1.07 Billion               |
| Contrast ratio:    | 1000:1                     |
| Video input:       | 2 x DP<br>2 x HDMI         |
| Power requirement: | 90-240 V / 50/60 Hz        |
| Power consumption: | 110 VA max.                |
| Regulations:       | IEC 60601-1, IEC 60601-1-2 |

### Included in delivery

- Monitor
- Mains cable
- DP cable
- DVI-D cable
- Instruction manual
- Optional: HDMI-DVI Adapter





## VEQTRON™ PC System Touch

**71-324-32 HD NIR 32"**

HD PC-Monitor with touch-screen, Compact Display System, without stand

- Serves as an input terminal or workstation for:
  - HIS (Hospital Information System)
  - ePR/ PDMS (Patient Data Management System)
  - Anaesthesia Documentation System
  - RIS (Radiology Information System)
  - PACS (Picture Archiving and Communication System)
  - Digital video and endoscopy System
  - Automated data transfer from medical devices
- Completely closed aluminum housing
- Extremely scratch-proof aluminosilicate glass with anti-reflection-coating
- Special zone cooling system without any mechanically moving parts and maintenance-free
- Engineered for permanent 24/7 operation
- Internal 32" HD display with all-round viewing angle
- Superior image quality
- Hygienic design

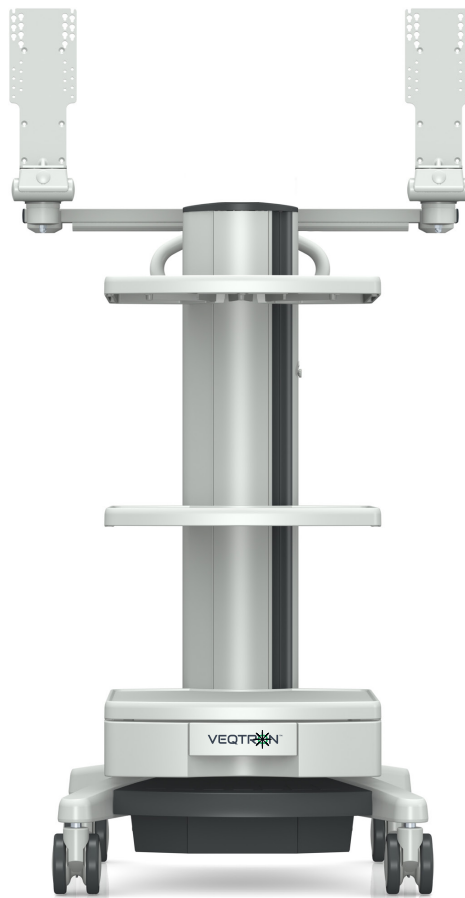
### Technical Data:

|                          |                                                          |
|--------------------------|----------------------------------------------------------|
| Panel size:              | 32" LCD                                                  |
| Pixels:                  | 1920 (H) x 1080 (V)                                      |
| Response time:           | 25 ms                                                    |
| Aspect ratio:            | 16:9                                                     |
| Viewing angle:           | 178°                                                     |
| Brightness:              | 500 cd/m2                                                |
| Dimensions:              | 748 x 479 x 64 mm (WxHxD)                                |
| Weight:                  | approx. 13.0 kg                                          |
| Colours:                 | 16.7 Millions                                            |
| Contrast ratio:          | 1300:1                                                   |
| Processor                | Intel® Core™ i5 8. Generation                            |
| Network access Ethernet: | 2x 10/100/1000 MBit with RJ45 connection (not decoupled) |
| Interfaces:              | 2 x HDMI, 1x RS23, 4x USB 3.1                            |
| Hard disc:               | 128 GB M.2 NVMe SSD                                      |
| Power requirement:       | 90-240 V / 50/60 Hz                                      |
| Power consumption:       | 110 VA max.                                              |
| Regulations:             | IEC 60601-1, IEC 60601-1-2                               |

### Included in delivery

- PC
- Mains cable
- Instruction manual





## VEQTRON™ NIR Workstation

### 71-700-50 NIR

- High torsional stiffness & stability due to the constructive design of the base
- Max. load capacity 80.0 kg
- High-quality, antistatic dual wheels with locking brakes
- Easy and direct manoeuvring of the fully-stocked equipment cart with the help of the handle
- Secure grip of the devices due to the increased circumferential spill edge
- Easy to access and therefore easy to clean

#### Technical Data:

- 2 x Shelves 45 x 40 cm, adjustable, max. load capacity 20.0 kg
- 1 x Drawer
- 1 x Keyboard drawer
- 1 x Transverse crossbar with two monitor holder up to 14 kg (each)  
VESA75/100, rotatable and inclinable
- 1 x Multiple socket with 6 plug-boxes Schuko and power cable L. 5 m

Dimensions: 117 x 61 x 62 cm (HxWxD)  
Colour surface: RAL 7035 light grey, powder-coated  
Decor elements: RAL 7035 light grey

! Camera head holder and further accessories available on request

## VEQTRON™ NIR Workstation

### 71-700-50 NIR TT

with transformer

- High torsional stiffness & stability due to the constructive design of the base
- Max. load capacity 80.0 kg
- High-quality, antistatic dual wheels with locking brakes
- Easy and direct manoeuvring of the fully-stocked equipment cart with the help of the handle
- Secure grip of the devices due to the increased circumferential spill edge
- Easy to access and therefore easy to clean
- With isolating transformer

#### Technical Data:

- 2 x Shelves 45 x 40 cm, adjustable, max. load capacity 20.0 kg
- 1 x Drawer
- 1 x Keyboard drawer
- 1 x Transverse crossbar with two monitor holder up to 14 kg (each)  
VESA75/100, rotatable and inclinable
- 1 x Isolating transformer with multiple socket, 6 plug-boxes Schuko and power cable L. 5 m

Dimensions: 117 x 61 x 62 cm (HxWxD)  
Colour surface: RAL 7035 light grey, powder-coated  
Decor elements: RAL 7035 light grey

! Camera head holder and further accessories available on request





## VEQTRON™ NIR WORKSTATION

### 71-700-52 NIR

- High torsional stiffness & stability due to the constructive design of the base
- Max. load capacity 80.0 kg
- Space-saving integration of an isolating transformer (optional) possible
- High-quality, antistatic dual wheels with locking brakes
- Easy and direct manoeuvring of the fully-stocked equipment cart with the help of the handle
- Secure grip of the devices due to the increased circumferential spill edge
- Easy to access and therefore easy to clean

#### Technical Data:

2 x Shelves 45 x 40 cm, adjustable, max. load capacity 20.0 kg  
 1 x Drawer  
 1 x Keyboard drawer  
 1 x TFT-monitor holder up to 14 kg VESA75/100, rotatable and inclinable  
 1 x Multiple socket with 6 plug-boxes Schuko and power cable L. 5 m

Dimensions: 117 x 61 x 62 cm (HxWxD)  
 Colour surface: RAL 7035 light grey, powder-coated  
 Decor elements: RAL 7035 light grey

! Camera head holder and further accessories available on request

## VEQTRON™ NIR WORKSTATION

### 71-700-52 NIR TT

with transformer

- High torsional stiffness & stability due to the constructive design of the base
- Max. load capacity 80.0 kg
- Space-saving integration of an isolating transformer (optional) possible
- High-quality, antistatic dual wheels with locking brakes
- Easy and direct manoeuvring of the fully-stocked equipment cart with the help of the handle
- Secure grip of the devices due to the increased circumferential spill edge
- Easy to access and therefore easy to clean
- With isolating transformer

#### Technical Data:

2 x Shelves 45 x 40 cm, adjustable, max. load capacity 20.0 kg  
 1 x Drawer  
 1 x Keyboard drawer  
 1 x TFT-monitor holder up to 14 kg VESA75/100, rotatable and inclinable  
 1 x Isolating transformer with multiple socket, 6 plug-boxes Schuko and power cable L. 5 m

Dimensions: 117 x 61 x 62 cm (HxWxD)  
 Colour surface: RAL 7035 light grey, powder-coated  
 Decor elements: RAL 7035 light grey

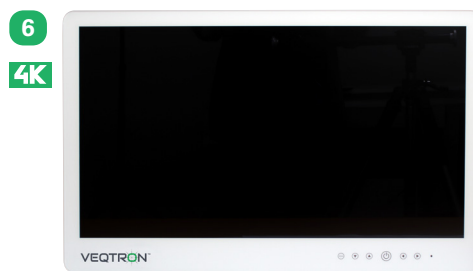
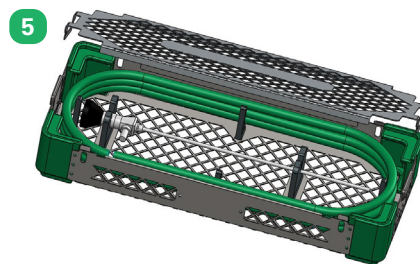
! Camera head holder and further accessories available on request



## VEQTRON™ NIR Laparoscopy Basic Set I

73-999-50 NIR

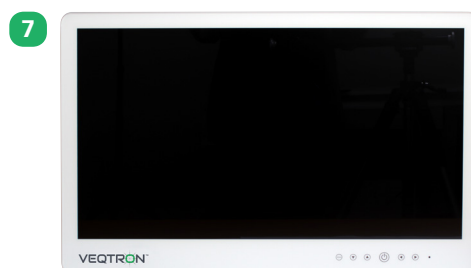
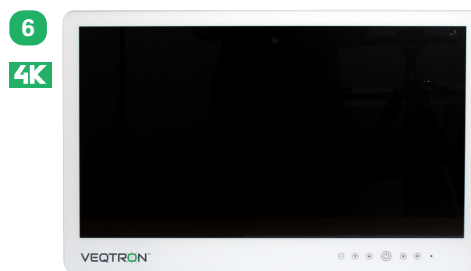
|   |                 |                                      |        |
|---|-----------------|--------------------------------------|--------|
| 1 | 71-066-00 NIR   | VEQTRON™ NIR Imaging System          |        |
| 2 | 71-180-30 NIR   | VEQTRON™ NIR Twinlight LED-LASER     |        |
| 3 | 72-410-30 NIR   | VEQTRON™ NIR 4K UHD Laparoscope, 30° | 2 pcs. |
| 4 | 71-146-23 NIR C | VEQTRON™ NIR light cable L. 2.3 mm   | 2 pcs. |
| 5 | 54-540-50 NIR   | VEQTRON™ Sterilisation basket        | 2 pcs. |
| 6 | 71-322-32 UHD   | 4K UHD LCD Colour Monitor, 32"       |        |
| 7 | 71-700-52 NIR   | VEQTRON™ NIR WORKSTATION             |        |
| 8 | 71-705-31       | Camera head holder                   |        |



## VEQTRON™ NIR Laparoscopy Basic Set II

73-999-52 NIR

|   |                 |                                             |
|---|-----------------|---------------------------------------------|
| 1 | 71-066-00 NIR   | VEQTRON™ NIR Imaging System                 |
| 2 | 71-180-30 NIR   | VEQTRON™ NIR Twinlight LED-LASER            |
| 3 | 72-410-30 NIR   | VEQTRON™ NIR 4K UHD Laparoscope, 30° 2 pcs. |
| 4 | 71-146-23 NIR C | VEQTRON™ NIR light cable L. 2.3 mm 2 pcs.   |
| 5 | 54-540-50 NIR   | VEQTRON™ Sterilisation basket 2 pcs.        |
| 6 | 71-322-32 UHD   | 4K UHD LCD Colour Monitor, 32"              |
| 7 | 71-324-32       | LCD Colour Monitor, 32"                     |
| 8 | 71-700-50 NIR   | VEQTRON™ NIR WORKSTATION                    |
| 9 | 71-705-31       | Camera head holder                          |





**VEQTRON Technologies GmbH**

a company of AMNOTECH International Medical GmbH

take-off GewerbePark 11

78579 Neuhausen ob Eck, Germany

Phone: +49 7467 42297-0

Mail: [info@veqtron.de](mailto:info@veqtron.de)

[www.VEQTRON.de](http://www.VEQTRON.de)

**VEQTRON™** – GUIDED SURGERY