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</table>
LIGHT SOURCE
XENON LIGHT SOURCE 180W / 300W

- Low noise, low heat conduction
- Electronical light control via buttons
- Simple lamp replacement
- Waterproof touch control panel

Multi connector option: Wolf, Storz, Olympus, ACMI
## LIGHT SOURCE
### XENON LIGHT SOURCE 180W / 300W

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single Version:</strong></td>
<td></td>
</tr>
<tr>
<td>Xenon X 180-M</td>
<td>180 Watt xenon lamp, Storz adapter, manual light intensity control</td>
</tr>
<tr>
<td>Xenon X 180-A</td>
<td>180 Watt xenon lamp, Storz adapter, automatic light intensity control</td>
</tr>
<tr>
<td>Xenon X 300-M</td>
<td>300 Watt xenon lamp, Storz adapter, manual light intensity control</td>
</tr>
<tr>
<td>Xenon X 300-A</td>
<td>300 Watt xenon lamp, Storz adapter, automatic light intensity control</td>
</tr>
<tr>
<td>Xenon X 300-AT</td>
<td>300 Watt xenon lamp, turret adapter, automatic light intensity control</td>
</tr>
<tr>
<td><strong>Backup version:</strong></td>
<td></td>
</tr>
<tr>
<td>Xenon X300A-LED</td>
<td>300 Watt xenon lamp, Backup LED lamp, 2x Storz adapter</td>
</tr>
<tr>
<td></td>
<td>automatic light intensity control</td>
</tr>
<tr>
<td>Xenon X300M-LED</td>
<td>300 Watt xenon lamp, Backup LED lamp, 2x Storz adapter</td>
</tr>
<tr>
<td></td>
<td>manual light intensity control</td>
</tr>
<tr>
<td>Xenon X300AT-LED</td>
<td>300 Watt xenon lamp, Backup LED lamp, 2x turret adapter</td>
</tr>
<tr>
<td></td>
<td>automatic light intensity control</td>
</tr>
</tbody>
</table>

### Technical Data

| Lamp:                                                                 | Main:                                                                 | Backup (optional):                                      |
|                                                                      | · Xenon arc lamp: 180 W / 300 W                                        | · White LED lamp                                         |
|                                                                      | · Daylight quality, 5600 K                                            | · Daylight quality, 6500 K                              |
|                                                                      | · Lifetime: 500 hr (expected)                                          | · Lifetime: > 20.000 hr                                  |
| Light guide connection:                                              | · Storz, Wolf, Olympus or turret adapter                              |                                                         |
| Voltage range (current consumption):                                 | · 100-240 V (180W light source: 210 VA / 300W light source: 370 VA)  |                                                         |
| Frequency:                                                            | · 50-60 Hz                                                            |                                                         |
| Device protection:                                                   | · 2x T6,3 A                                                           |                                                         |
| Video In (optional):                                                 | · 1x BNC (Video) (automatic Version only)                              |                                                         |
| Protection class (acc.to IEC 60601-1):                               | · I                                                                   |                                                         |
| Safety class:                                                        | · BF                                                                  |                                                         |
| IP code:                                                             | · IP 20                                                               |                                                         |
| Standard:                                                            | · IEC 60601-1-2 / IEC 60601-1-1                                        |                                                         |
| Device classification (acc. to MDD 93/42/EEC):                        | · I                                                                   |                                                         |
| Dimensions (WxHxD):                                                 | · 355mm x 120mm x 340mm                                               |                                                         |
| Weight:                                                              | · approx. 11,0 kg (180W) / approx. 12,5 kg (300W)                       |                                                         |
| Delivery contains:                                                  | · Light source, mains cable, user manual, BNC cable (optional)        |                                                         |
| Options:                                                             | · Automatic light intensity control                                    |                                                         |
|                                                                      | · Backup LED lamp                                                     |                                                         |
|                                                                      | · Multi connector option, turret                                       |                                                         |

### Exclusively pictured version:

- **Wolf**
- **ACMI**
- **Olympus**
- **Storz**
  - Ø max. 5,9mm
  - min. 4mm
LIGHT SOURCE
LED 1000 - HIGH INTENSITY LIGHTSOURCE

- Low noise, low heat conduction
- Electronical light control via buttons
- Pure daylight quality
- Waterproof touch control panel
## LIGHT SOURCE

### LED 1000 - HIGH INTENSITY LIGHTSOURCE

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED 1000</td>
<td>Storz adapter, automatic light intensity control</td>
</tr>
<tr>
<td>LED 1000</td>
<td>Wolf adapter, automatic light intensity control</td>
</tr>
<tr>
<td>LED 1000</td>
<td>Olympus adapter, automatic light intensity control</td>
</tr>
</tbody>
</table>

### Technical Data

- **Lamp:**
  - Daylight quality, 6500 K
  - Lifetime: > 20,000 hr

- **Light guide connection:**
  - Storz, Wolf adapter

- **Voltage range (current consumption):**
  - 100-240 V (130 VA)

- **Frequency:**
  - 50-60 Hz

- **Device protection:**
  - 2x T3,15 A

- **Video In:**
  - 1x BNC (Video)

- **Protection class (acc.to IEC 60601-1):**
  - I

- **Safety class:**
  - BF

- **IP code:**
  - IP 20

- **Standard:**
  - IEC 60601-1-2 / IEC 60601-1-1

- **Device classification (acc. to MDD 93/42/EEC):**
  - I

- **Dimensions (WxHxD):**
  - 355mm x 103mm x 253mm

- **Weight:**
  - approx. 4.5 kg

- **Delivery contains:**
  - Light source, mains cable, user manual, BNC cable (optional)
LIGHT SOURCE
LED 3000 - HIGH INTENSITY LIGHTSOURCE

- PHASER® Technology Included
- Turret multi connector (optional)
- Low noise, low heat conduction
- Pure daylight quality

Multi connector option:
Wolf, Storz, Olympus, ACMI
## LIGHT SOURCE

**LED 3000 - HIGH INTENSITY LIGHTSOURCE**

### Series

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED 3000</td>
<td>Storz adapter, automatic light intensity control</td>
</tr>
<tr>
<td>LED 3000</td>
<td>Wolf adapter, automatic light intensity control</td>
</tr>
<tr>
<td>LED 3000</td>
<td>Olympus adapter, automatic light intensity control</td>
</tr>
<tr>
<td>LED 3000 T</td>
<td>Turret adapter, automatic light intensity control</td>
</tr>
</tbody>
</table>

### Technical Data

**Light guide connection:**
- Storz, (standard connection):

**· Turret, multi connector (optional):**

- Wolf
- ACMI
- Olympus
- Storz Ø max. 5.9mm
  - min. 4mm

Exclusively pictured version!

**Lamp**
- Daylight quality, 6000 K (+/-500 K)
- Lifetime: ≥ 30,000 hr

**Voltage range (current consumption):**
- 100-240 V (130 VA)

**Frequency:**
- 50-60 Hz

**Device protection:**
- 2x T6,3 A

**Video In:**
- 1x BNC (Video)

**Protection class (acc.to IEC 60601-1):130 VA**
- I

**Safety class:**
- BF

**IP code:**
- IP 20

**Standard:**
- IEC 60601-1-2 / IEC 60601-1-1

**Device classification (acc. to MDD 93/42/EEC):**
- I

**Dimensions (WxHxD):**
- 355mm x 120mm x 340mm

**Weight:**
- approx. 10 kg

**Delivery contains:**
- Light source, mains cable, user manual, BNC cable
LIGHT SOURCE
LED 1800 / LED 2500 - HIGH INTENSITY LIGHTSOURCE

- Low noise, low heat conduction
- Electronical light control via buttons
- Pure daylight quality

Multi connector option:
Wolf, Storz, Olympus, ACMI
## Series Description

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED 1800 / 2500</td>
<td>Storz adapter, automatic light intensity control</td>
</tr>
<tr>
<td>LED 1800-T / 2500-T</td>
<td>Turret adapter, automatic light intensity control</td>
</tr>
</tbody>
</table>

## Technical Data

**LED module:**
- **LED 2500:**
  - LED CRI 70, Daylight quality, approx. 6500 K
  - Lifetime: > 20,000 hr
- **LED 1800:**
  - LED CRI 90, Daylight quality, approx. 5700 K
  - Lifetime: > 20,000 hr

**Light guide connection:**
- Storz, Wolf

**Voltage range (current consumption):**
- 100-240 V (130 VA)

**Frequency:**
- 50-60 Hz

**Device protection:**
- 2x T3,15 A

**Video In:**
- 1x Video, BNC

**Other connections:**
- Service (RJ45)

**Protection class (acc. to IEC 60601-1):**
- I

**Safety class:**
- BF

**IP code:**
- 20

**Standard:**
- IEC 60601-1-2

**Device classification (acc. to MDD 93/42/EEC):**
- I

**Dimensions (WxHxD):**
- (WxHxL) 360 x 125 x 251 mm

**Weight:**
- approx. 5 kg

**Delivery contains:**
- Light source, mains cable, user manual, BNC cable (optional)

**Options:**
- Multi connector option (Turret adapter)

---

**Wolf**

**ACMI**

**Olympus**

**Storz**
- Ø max. 5,9mm
- min. 4mm

Exclusively pictured version!
LIGHT SOURCE
HALOGEN HL 150

- Small compact design
- Exchangable lightguide adapter
- Mechanical diaphragm
- Low heat conduction
## Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamp</td>
<td>· 150 W (1 Halogen reflector lamp), 15 V</td>
</tr>
<tr>
<td>Light guide connection</td>
<td>· Storz, Wolf, Olympus, ACMI</td>
</tr>
<tr>
<td>Intensity control</td>
<td>· Stepless, mechanical diaphragm</td>
</tr>
<tr>
<td>System</td>
<td>· Power supply: 115/230 V (+/- 10%) switchable</td>
</tr>
<tr>
<td></td>
<td>· Fine fuses: 5x20mm (230 V: T1,6 A</td>
</tr>
<tr>
<td></td>
<td>· Power consumption: max. 190 VA</td>
</tr>
<tr>
<td>Protection class (acc.to IEC 60601-1):</td>
<td>· I</td>
</tr>
<tr>
<td>Safety class</td>
<td>· BF</td>
</tr>
<tr>
<td>IP code</td>
<td>· IP 20</td>
</tr>
<tr>
<td>Standard</td>
<td>· IEC 60601-1-2 / IEC 60601-1-1</td>
</tr>
<tr>
<td>Device classification (acc. to MDD 93/42/EEC):</td>
<td>· I</td>
</tr>
<tr>
<td>Dimensions (WxHxD):</td>
<td>· 175mm x 82,5mm x 202mm</td>
</tr>
<tr>
<td>Weight</td>
<td>· approx. 2,5 kg</td>
</tr>
<tr>
<td>Delivery contains</td>
<td>· Light source, mains cable, user manual</td>
</tr>
<tr>
<td>Illuminant</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ILO 300W 5H Xenon</td>
<td>300W Xenon lamp, 5-hole incl. heat transfer compound</td>
</tr>
<tr>
<td>ILO 180W</td>
<td>180W Xenon bulb, X 180 ILO standard</td>
</tr>
<tr>
<td>ILO 100W</td>
<td>100W Xenon bulb, X 100 ILO standard</td>
</tr>
<tr>
<td>Halogen 150W</td>
<td>Halogen lamp 150W, 15V, type: Xenophot HLX 64634, OSRAM</td>
</tr>
<tr>
<td>Halogen 250W</td>
<td>Halogen lamp 250W, 24V, type: Typ 13163 ILC, Philips</td>
</tr>
<tr>
<td>Halogen 75W</td>
<td>Halogen lamp 75W, 12V, type: Xenophot HLX 64615, OSRAM</td>
</tr>
<tr>
<td>Metal Halid bulb</td>
<td>Metal halid bulb X24, 24 Watt</td>
</tr>
<tr>
<td>X 50 Spare lamp</td>
<td>X 50 Spare lamp ofr XL50, XE50 eco, X50 with mounting ring</td>
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### LIGHT SOURCES - ACCESSORIES

#### LIQUID & GLASS FIBRE LIGHT GUIDES

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<th>Glass fibre light guides</th>
<th>Diameter</th>
<th>Length</th>
<th>Color</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 LW 35</td>
<td>3,5 mm</td>
<td>1800 mm</td>
<td>grey</td>
<td>890-0003</td>
</tr>
<tr>
<td>18 LW 48</td>
<td>4,8 mm</td>
<td>1800 mm</td>
<td>grey</td>
<td>890-0004</td>
</tr>
<tr>
<td>23 LW 35</td>
<td>3,5 mm</td>
<td>2300 mm</td>
<td>grey</td>
<td>890-0005</td>
</tr>
<tr>
<td>23 LW 48</td>
<td>4,8 mm</td>
<td>2300 mm</td>
<td>grey</td>
<td>890-0006</td>
</tr>
<tr>
<td>18 LC 35</td>
<td>3,5 mm</td>
<td>1800 mm</td>
<td>grey</td>
<td>891-0003</td>
</tr>
<tr>
<td>18 LC 48</td>
<td>4,8 mm</td>
<td>1800 mm</td>
<td>grey</td>
<td>891-0004</td>
</tr>
<tr>
<td>23 LC 35</td>
<td>3,5 mm</td>
<td>2300 mm</td>
<td>grey</td>
<td>891-0005</td>
</tr>
<tr>
<td>23 LC 48</td>
<td>4,8 mm</td>
<td>2300 mm</td>
<td>grey</td>
<td>891-0006</td>
</tr>
<tr>
<td>23 LC 35</td>
<td>3,5 mm</td>
<td>3000 mm</td>
<td>grey</td>
<td>891-0007</td>
</tr>
<tr>
<td>30 LC 48</td>
<td>4,8 mm</td>
<td>3000 mm</td>
<td>grey</td>
<td>891-0008</td>
</tr>
<tr>
<td>18 HLC 35</td>
<td>3,5 mm</td>
<td>1800 mm</td>
<td>grey</td>
<td>892-0000</td>
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<tr>
<td>18 HLC 48</td>
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<td>grey</td>
<td>892-0001</td>
</tr>
<tr>
<td>23 HLC 35</td>
<td>3,5 mm</td>
<td>2300 mm</td>
<td>grey</td>
<td>892-0002</td>
</tr>
<tr>
<td>23 HLC 48</td>
<td>4,8 mm</td>
<td>2300 mm</td>
<td>grey</td>
<td>892-0003</td>
</tr>
<tr>
<td>30 HLC 35</td>
<td>3,5 mm</td>
<td>3000 mm</td>
<td>grey</td>
<td>892-0004</td>
</tr>
<tr>
<td>30 HLC 48</td>
<td>4,8 mm</td>
<td>3000 mm</td>
<td>grey</td>
<td>892-0005</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Liquid light guides</th>
<th>Diameter</th>
<th>Length</th>
<th>Color</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 FM 50</td>
<td>5,0 mm</td>
<td>1800 mm</td>
<td>grey</td>
<td>894-0000</td>
</tr>
<tr>
<td>23 FM 50</td>
<td>5,0 mm</td>
<td>2300 mm</td>
<td>grey</td>
<td>894-0001</td>
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<tr>
<td>30 FM 50</td>
<td>5,0 mm</td>
<td>3000 mm</td>
<td>grey</td>
<td>894-0002</td>
</tr>
<tr>
<td>18 FM 50</td>
<td>5,0 mm</td>
<td>1800 mm</td>
<td>stainless steel mantle</td>
<td>894-0008</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liquid light guides</th>
<th>Diameter</th>
<th>Length</th>
<th>Color</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 FM 50</td>
<td>5,0 mm</td>
<td>1800 mm</td>
<td>grey</td>
<td>894-0000</td>
</tr>
<tr>
<td>23 FM 50</td>
<td>5,0 mm</td>
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<td>grey</td>
<td>894-0001</td>
</tr>
<tr>
<td>30 FM 50</td>
<td>5,0 mm</td>
<td>3000 mm</td>
<td>grey</td>
<td>894-0002</td>
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<tr>
<td>18 FM 50</td>
<td>5,0 mm</td>
<td>1800 mm</td>
<td>stainless steel mantle</td>
<td>894-0008</td>
</tr>
<tr>
<td>Adapter source side</td>
<td>Description</td>
<td>Order number</td>
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<tr>
<td>---------------------</td>
<td>-------------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>input, Storz</td>
<td>Light guide adapter light source side, for LW-, LC-Type</td>
<td>896-0008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>input, Olympus</td>
<td>Light guide adapter light source side, for LW-, LC-Type</td>
<td>896-0009</td>
<td></td>
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<tr>
<td>input, Wolf</td>
<td>Light guide adapter light source side, for LW-, LC-Type</td>
<td>896-0010</td>
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<tr>
<td>input, ACMI</td>
<td>Light guide adapter light source side, for LW-, LC-Type</td>
<td>896-0011</td>
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<tr>
<td>input, Storz HLC</td>
<td>Light guide adapter light source side, for HLC-Type</td>
<td>896-0016</td>
<td></td>
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<tr>
<td>input, Olympus HLC</td>
<td>Light guide adapter light source side, for HLC-Type</td>
<td>896-0017</td>
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<td></td>
</tr>
<tr>
<td>input, Wolf HLC</td>
<td>Light guide adapter light source side, for HLC-Type</td>
<td>896-0018</td>
<td></td>
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<tr>
<td>input, ACMI HLC</td>
<td>Light guide adapter light source side, for HLC-Type</td>
<td>896-0019</td>
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<tr>
<td>Adapter instrument side</td>
<td>Description</td>
<td>Order number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------</td>
<td>-------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>output, Storz,</td>
<td>Light guide adapter instrument side, for LW-, LC-, HLC-, FM-type</td>
<td>896-0000</td>
<td></td>
<td></td>
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<tr>
<td>output, Olympus</td>
<td>Light guide adapter instrument side, for LW-, LC-, HLC-, FM-type</td>
<td>896-0001</td>
<td></td>
<td></td>
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<tr>
<td>output, Wolf</td>
<td>Light guide adapter instrument side, for LW-, LC-, HLC-, FM-type</td>
<td>896-0002</td>
<td></td>
<td></td>
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<tr>
<td>output, ACMI</td>
<td>Light guide adapter instrument side, for LW-, LC-, HLC-, FM-type</td>
<td>896-0003</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CAMERA
EcoCAM 750 - DIGITAL VIDEO CAMERA 1-CCD

- Natural colour reproduction
- Single chip
- Anti-moiree-filter
- High image quality
**Technical Data**

**Camera head:**
- Aspect ratio: 4:3
- Image sensor: 1/3” CCD
- Immersible (using the attached cap)

**Voltage range (current consumption):**
- 100-240 V (25 VA)

**Frequency:**
- 50-60 Hz

**Device protection:**
- 2x T3,15 A

**Video System:**
- PAL/NTSC
- Image resolution: PAL 752 x 582 / NTSC 768 x 494
- TV resolution: > 470 lines
- Sensitivity: < 1 lux (1/1.4)
- White balance automatically, with data hold
  shutter speed PAL (NTSC): 1/50 (1/60) to 1/100.000 sec

**Video out terminal**
- 2x Video; 2x S-Video; 1x Y-Pb-Pr (Component); 1x SDI; 1x USB 2.0

**Protection class (acc.to IEC 60601-1):**
- I

**Safety class:**
- BF

**IP code:**
- IP 20

**Device classification (acc. to MDD 93/42/EEC):**
- I

**Dimensions (WxHxD):**
- 355mm x 103mm x 253mm

**Weight:**
- approx. 4,4 kg

**Delivery contains:**
- CCU, camera head with 3,05m (10ft) cable, mains cable, User manual, Y/C cable, BNC cable

**Options**

**Freeze function:**
- Freeze the image via footswitch

**EcoCAM 750 camera head**

Weight: 80 g
Size: d= 29 mm; l= 55 mm
CAMERA
SWIFTCAM - DIGITAL VIDEO CAMERA 1-CCD

- Multilingual on-screen-menu
- Digital zoom
- Camera control with keyboard
- Character generator
Technical Data

Camera head:
- Aspect ratio: 4:3
- Image sensor: 1/3" CCD
- Immersible (using the attached cap)

Voltage range (current consumption):
- 100-240V (25 VA)

Frequency:
- 50-60 Hz

Device protection:
- 2x T3,15 A

Video system:
- PAL/NTSC
- Image resolution: PAL 752 x 582/ NTSC 768 x 494
- TV resolution: > 470 lines
- Sensitivity: < 1 lux (1/1.4)
- White balance automatically, with data hold
- Shutter speed PAL (NTSC): 1/50 (1/60) to 1/100.000 sec

Video out terminal:
- 2x Video; 2x S-Video; 1x Y-Pb-Pr (Component); 1x SDI; 1x USB 2.0

Protection class (acc.to IEC 60601-1):
- 1

Safety class:
- BF

IP code:
- IP 20

Standard:
- IEC 60601-1-2 / IEC 60601-1-1

Device classification (acc. to MDD 93/42/EEC):
- I

Dimensions (WxHxD):
- 355mm x 103mm x 253mm

Weight:
- 4.4 kg

Delivery contains:
- CCU, camera head with 3,05m (10ft) cable, mains cable, User manual, Y/C cable, BNC cable, HDMI - DVI cable (optional), HDMI cable (optional), USB Stick (optional)

Series

<table>
<thead>
<tr>
<th></th>
<th>SwiftCAM</th>
<th>SwiftCAM-C</th>
<th>SwiftCAM-D</th>
<th>SwiftCAM-CD</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-screen-display</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Menu</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Title generator option (USB)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Capture module (image, video)</td>
<td>-</td>
<td>x</td>
<td>-</td>
<td>x</td>
</tr>
<tr>
<td>HDMI out</td>
<td>-</td>
<td>-</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Zoom function</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Options

Freeze function:
- Freeze the image via push buttons

Remote camera head:
- With programmable push buttons (zoom, freeze)

Remote footswitch:
- With programmable push buttons

SwiftCAM camera head

Weight: 80 g
Size: d= 29 mm; l= 55 mm

Weight: 105 g
Size: d= 34 mm; l= 73 mm

Without push buttons

With push buttons
CAMERA
eco HD - HIGH DEFINITION CAMERA 1-MOS

- Full HD resolution
- High speed shutter
- Multilingual menu
- 3 user setting storable
Technical Data

Camera head:
- Aspect ratio: 16:9
- Image sensor: 1/3” MOS
- Immersible (using the attached cap)

Voltage range (current consumption):
- 100-240 V (25 VA)

Frequency:
- 50-60 Hz

Device protection:
- 2x T3,15 A

Video system:
- Image resolution: full HD 1920 x 1080
- TV resolution: > 1000 lines
- Sensitivity: < 3 lux (1/1.4)
- White balance automatically, with data hold shutter speed: 1/50 (1/60) to 1/100.000 sec

Connections

Video out terminal:
- 1x HDMI

Other connections:
- 1 x USB (A) (USB-keyboard)
- 1 x Remote IN (footswitch)
- 1 x Remote OUT (video printer, video recorder,...)
- 1 x RJ45 (Service)

Protection class (acc.to IEC 60601-1):
- I

Safety class:
- BF

IP code:
- IP 20

Standard:
- IEC 60601-1-2 / IEC 60601-1-1

Device classification (acc. to MDD 93/42/EEC):
- I

Features:
- White balance, boost function
- On-screen-menu
- 3 user settings storable
- 2.5 digital zoom
- Freeze function
- Character generator

Dimensions (WxHxD):
- 359,4mm x 106,2mm x 335,2mm

Weight:
- approx.4,7 kg

Delivery contains:
- CCU, camera head with 3,05m (10ft) cable, mains cable, HDMI - DVI cable, HDMI cable, user manual

Options

Optional accessories:
- Waterproof keyboard
- Footswitch

Swift 1HD camera head

Weight: approx. 150g
Diameter: 36,5mm
Length: 65,2mm (without grommet)
CAMERA
SWIFT 1HD - HIGH DEFINITION CAMERA 1-MOS

- Full HD resolution
- High speed shutter
- Multilingual menu
- Remote camera head
CAMERA

SWIFT 1HD - HIGH DEFINITION CAMERA 1-MOS

Technical Data

Camera head:
- Aspect ratio: 16:9
- Image sensor: 1/3” MOS
- Immerisible (using the attached cap)

Voltage range (current consumption):
- 100-240 V (25 VA)

Frequency:
- 50-60 Hz

Device protection:
- 2x T3,15 A

Video system:
- Image resolution: full HD 1920 x 1080
- TV resolution: > 1000 lines
- Sensitivity: < 3 lux (1/1.4)
- White balance automatically, with data hold
- Shutter speed: 1/50 (1/60) to 1/100.000 sec

Recording (optional):
- Image format: JPG 1920 x 1080
- Video format: Full HD 1920 x 1080; Mpeg-4 (H.264 Codec); Image rate 60fps
- Connection: USB (A)

Connections:
- Video out terminal:
  - 1x HDMI / DVI
  - 1x Y-Pb-Pr (Component)
  - 1x Video (PAL / NTSC)
  - 1x S-Video (PAL / NTSC)
  - 2x HD SDI (optional)

Other connections:
- 1 x USB (A) (USB-keyboard)
- 1 x Remote IN (footswitch)
- 1 x Remote OUT (videoprinter, videorecorder,...)
- 1 x RJ45 (Service)

Protection class (acc.to IEC 60601-1):
- I

Safety class:
- BF

IP code:
- IP 20

Standard:
- IEC 60601-1-2 / IEC 60601-1-1

Device classification (acc. to MDD 93/42/EEC):
- I

Features:
- White balance, boost function
- On-screen-menu
- 3 user settings storable
- 2.5 digital zoom
- Freeze function
- Character generator

Dimensions:
- Control unit: 355mm x 103mm x 253mm (WxHxD); Weight: approx. 4.5 kg

Delivery contains:
- CCU, camera head with 3,05m (10ft) cable, Y/C cable, BNC cable, HDMI - DVI cable, HDMI cable, user manual

Options

Features:
- Image capture, video capture

Optional accessories:
- Waterproof keyboard
- Footswitch

Swift 1HD camera head

Weight: 105 g
Size: d= 34 mm; l= 73 mm

With push buttons
CAMERA
TRISTAR HD - HIGH DEFINITION CAMERA 3-MOS

- Full HD resolution
- High speed shutter
- Multilingual menu
- Remote camera head
CAMERA
TRISTAR HD - HIGH DEFINITION CAMERA 3-MOS

Technical Data

Camera head:
- Aspect ratio: 16:9
- Image sensor: 3x 1/3” MOS
- Immerisible (using the attached cap)

Voltage range (current consumption):
- 100-240 V (40 VA)

Frequency:
- 50-60 Hz

Device protection:
- 2x T3,15 A

Video system:
- Image resolution: full HD 1920 x 1080
- TV resolution: > 1000 lines
- Sensitivity: < 3 lux (1/1.4)
- White balance automatically, with data hold
- Shutter speed: 1/50 (1/60) to 1/100,000 sec

Recording (optional):
- Image format: JPG 1920 x 1080
- Video format: Full HD 1920 x 1080; Mpeg-4 (H.264 Codec); Image rate 60fps
- Connection: USB (A)

Connections

Video out terminal:
- 2x HD SDI
- 1x HDMI / DVI
- 1x Y-Pb-Pr (Component)
- 1x Y/C (PAL / NTSC)
- 1x CVBS (PAL / NTSC)

Other connections:
- 1 x USB (A) (USB-keyboard)
- 1 x Remote IN (footswitch)
- 1 x Remote OUT (videoprinter, videorecorder,...)
- 1 x RJ45 (Service)

Protection class (acc.to IEC 60601-1):
- I

Safety class:
- BF

IP code:
- IP 20

Standard:
- IEC 60601-1-2 / IEC 60601-1-1

Device classification (acc. to MDD 93/42/EEC):
- I

Features:
- White balance, boost function
- On-screen-menu
- 3 user settings storable
- 2.5 digital zoom
- Freeze function
- Character generator

Dimensions:
- Control unit: 355mm x 103mm x 253mm (WxHxD); 4,5 kg

Delivery contains:
- CCU, camera head with 3,05m (10ft) cable, mains cable, Y/C cable, BNC cable, HDMI - DVI cable, HDMI cable, user manual

Camera head with push buttons

Options

Features
- Image capture, video capture

Optional accessories
- Waterproof keyboard
- Footswitch

Weight: 145 g
Size: d= 38,5 mm; l= 81 mm
CAMERA
TRIstar 4K - ULTRA HIGH DEFINITION CAMERA 3-MOS

- 4K UHD resolution
- Zoom, freeze, fog reduction
- Image enhancement of colour and structure
- 10 USER Presets for surgical application
- Multilingual menu
CAMERA
TRIstar 4K - ULTRA HIGH DEFINITION CAMERA 3-MOS

Technical Data

Camera head:  
- Aspect ratio: 16:9  
- Image sensor: 3x 1/3'' MOS  
- Immersible (using the attached cap)

Voltage range (current consumption):  
- 100-240 V (60 VA)

Frequency:  
- 50-60 Hz

Device protection:  
- 2x T3,15 A

Video system:  
- Image resolution: UHD 3840 x 2160  
- TV resolution: 1600 lines  
- White balance automatically, with data hold

Video output:  
- 1 x HDMI 4K (3840 x 2160)  
- 1 x HDMI Full HD (1920 x 1080)  
- 1 x SDI 4K (4 x BNC) (3840 x 2160)  
- 1 x SDI Full HD (1 x BNC) (1920 x 1080)

Video format:  
- HDMI output: 3840x2160/59.94p, 3840x2160/50p, 1920x1080/59.94p, 1920x1080/50p, 1920x1080/59.94i, 1920x1080/50i  
- SDI output: 3840x2160/59.94p, 3840x2160/50p, 1080/59.94p, 1080/59.94i, 1080/50p, 1080/50i

Protection class (acc.to IEC 60601-1):  
- I

Safety class:  
- BF

IP code:  
- IP 20

Standard:  
- IEC 60601-1-2 / IEC 60601-1-1

Device classification (acc. to MDD 93/42/EEC):  
- I

Dimensions (WxHxD):  
- 355mm x 103mm x 350mm

Weight:  
- approx. 6.2kg

Delivery contains:  
- CCU, camera head with 3,05m cable (10ft), mains cable, HDMI cable, User manual

Options

- Image capture, video capture

TRIstar 4K camera head

Weight: approx. 200g  
Diameter: 43mm  
Length: 85.7mm (without grommet)

With 4 push buttons

Colour space

The camera is able to reproduce the extended color space BT.2020 in addition to the BT.709 color space for HDTV. (Prerequisite is a BT.2020 compatible monitor)
## TV ADAPTER

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV-ILO 21 WP</td>
<td>Adapter f = 21.0 mm, c-mount, soakable</td>
<td>870-0000</td>
</tr>
<tr>
<td>TV-ILO 28 WP</td>
<td>Adapter f = 28.0 mm, c-mount, soakable</td>
<td>870-0001</td>
</tr>
<tr>
<td>TV-ILO 35 WP</td>
<td>Adapter f = 35.0 mm, c-mount, soakable</td>
<td>870-0002</td>
</tr>
<tr>
<td>TV-ILO 15 WP</td>
<td>Adapter f = 15.0 mm, c-mount, soakable</td>
<td>870-0003</td>
</tr>
<tr>
<td>TV-ILO 40 WP</td>
<td>Adapter f = 40.0 mm, c-mount, soakable</td>
<td>870-0006</td>
</tr>
<tr>
<td>TV-Zoom 1535 PWP</td>
<td>Adapter, vario-zoom, f = 15.0 - 35.0 mm, c-mount, soakable</td>
<td>870-0016</td>
</tr>
<tr>
<td>TV-Zoom 1525 WP</td>
<td>Adapter, f = 15.0 - 25.0 mm, c-mount, soakable</td>
<td>870-0004</td>
</tr>
<tr>
<td>TV-Zoom 2540 WP</td>
<td>Adapter, f = 25.0 - 40.0 mm, c-mount, soakable</td>
<td>870-0005</td>
</tr>
<tr>
<td>TV-28 HDWP</td>
<td>Adapter f = 28.0 mm, S-design, c-mount, soakable</td>
<td>870-0027</td>
</tr>
<tr>
<td>TV-25 HDWP</td>
<td>Adapter f = 25.0 mm, S-design, c-mount, soakable</td>
<td>870-0029</td>
</tr>
<tr>
<td>TV-14 HDWP</td>
<td>Adapter f = 14.0 mm, S-design, c-mount, soakable</td>
<td>870-0029</td>
</tr>
<tr>
<td>TV-21 HDWP</td>
<td>Adapter f = 21.0 mm, S-design, c-mount, soakable</td>
<td>870-0031</td>
</tr>
<tr>
<td>TV-Adapter angled</td>
<td>Adapter, angled 90°, f = 30.0 mm, c-mount, soakable</td>
<td>870-0008</td>
</tr>
<tr>
<td>TV-Adapter angled</td>
<td>Adapter, angled 90°, f = 25.0 mm, c-mount, soakable</td>
<td>870-0009</td>
</tr>
<tr>
<td>TV-Adapter angled</td>
<td>Adapter, angled 90°, f = 18.0 mm, c-mount, soakable</td>
<td>870-0010</td>
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<tr>
<td>TS-ILO 30 WP</td>
<td>Beamsplitter TV-Adapter, f = 30.0 mm c-mount, soakable</td>
<td>873-0000</td>
</tr>
<tr>
<td>TS-ILO 25 WP</td>
<td>Beamsplitter TV-Adapter, f = 25.0 mm c-mount, soakable</td>
<td>873-0001</td>
</tr>
<tr>
<td>TS-ILO 18 WP</td>
<td>Beamsplitter TV-Adapter, f = 18.0 mm c-mount, soakable</td>
<td>873-0002</td>
</tr>
<tr>
<td>TS-ILO 35 WP</td>
<td>Beamsplitter TV-Adapter, f = 35.0 mm c-mount, soakable</td>
<td>873-0003</td>
</tr>
</tbody>
</table>
COMBINATION
XE-50 SERIES

- Multifunctional system
- Compact & efficient
- Camera and light source
- Documentation system
Technical Data

Camera head:
- Aspect ratio: 4:3
- Image sensor: 1/3” CCD
- Immersible (using the attached cap)

Voltage range (current consumption):
- 100-240 V (120 VA)

Frequency:
- 50-60 Hz

Device protection:
- 2x T3,15 A

Video system:
- Video resolution: 470 lines
- Sensitivity: < 1 lux (1/1.4)
- PAL/NTSC

Monitor:
- 10,4” TFT, 800 x 600 dots resolution

Shutter range:
- PAL 1/50 - 1/100.000 sec; NTSC 1/60 - 1/100.000 sec

Lamp:
- Xenon metal halide short arc Lamp, 50 W, 5500 K

Light guide connection:
- Storz

Video out terminal:
- 2x Video; 2x S-Video; 1x Y-Pb-Pr (Component); 1x SDI; 1x USB 2.0 HDMI (optional)

Protection class (acc.to IEC 60601-1):
- I

Safety class:
- BF

IP code:
- IP 20

Standard:
- IEC 60601-1-2 / IEC 60601-1-1

Device classification (acc. to MDD 93/42/EEC):
- I

Features:
- White balance, window functions, boost function, anti-moiree-filter
- Freeze function
- Video & image capture

Dimensions:
- Control unit: 295mm x 128mm x 278mm (WxHxD); Weight: approx. 6 kg

Delivery contains:
- CCU, mains cable, user manual, Y/C cable, BNC cable, USB Stick (optional)

Housing

Collapsible TFT Monitor:

XE-50 Motion camera head

Weight: 80 g
Size: d= 29 mm; l= 55 mm
Without push buttons

Weight: 105 g
Size: d= 34 mm; l= 73 mm
With push buttons

<table>
<thead>
<tr>
<th>Series</th>
<th>XE 50 USB</th>
<th>XE 50 MOTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image capture</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Video capture</td>
<td>-</td>
<td>x</td>
</tr>
</tbody>
</table>
COMBINATION
LED-50 SERIES

- Multifunctional system
- Compact & efficient
- Camera and light source
- Documentation system
**Technical Data**

**Camera head:**
- Aspect ratio: 4:3
- Image sensor: 1/3” CCD
- Immersible (using the attached cap)

**Voltage range (current consumption):**
- 100-240 V (95 VA)

**Frequency:**
- 50-60 Hz

**Device protection:**
- 2x T3,15 A

**Video system:**
- Video resolution: 470 lines
- Sensitivity: < 1 lux (1/1.4)
- PAL/NTSC

**Monitor:**
- 10,4” TFT, 800 x 600 dots resolution

**Shutter range:**
- PAL 1/50 - 1/100.000 sec; NTSC 1/60 - 1/100.000 sec

**Lamp:**
- LED lamp, comparable 50 W, 5500 K

**Light guide connection:**
- Storz

**Video out terminal:**
- 2x Video; 2x S-Video; 1x Y-Pb-Pr (Component); 1x SDI; 1x USB 2.0; HDMI (optional)

**Protection class (acc.to IEC 60601-1):**
- I

**Safety class:**
- BF

**IP code:**
- IP 20

**Standard:**
- IEC 60601-1-2 / IEC 60601-1-1

**Device classification (acc. to MDD 93/42/EEC):**
- I

**Features:**
- White balance, window functions, boost function, anti-moiree-filter
- Freeze function
- Documentation system

**Dimensions:**
- Control unit: 295mm x 128mm x 278mm (WxHxD); Weight: approx. 5 kg

**Delivery contains:**
- CCU, mains cable, user manual, Y/C cable, BNC cable, USB Stick (optional)

**Housing**

**Collapsible TFT Monitor:**
- Series LED-50 USB
- LED-50 MOTION
  - Image capture x x
  - Video capture - x

**LED-50 series camera head**

**Series**

<table>
<thead>
<tr>
<th></th>
<th>LED-50 USB</th>
<th>LED-50 MOTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMI</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

**Weight:**
- Without push buttons: 80 g
- Size: d= 29 mm; l= 55 mm
- With push buttons: 105 g
- Size: d= 34 mm; l= 73 mm
INSUFFLATOR

CO₂-INSUFFLATOR D-FLOW

- Full automatic
- Filter system for sterility
- Up to 45 liters/minute
- Microprocessor controlled
### Series Description

<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF-315</td>
<td>Maximum gasflow: 15 l/min</td>
</tr>
<tr>
<td>DF-320</td>
<td>Maximum gasflow: 20 l/min</td>
</tr>
<tr>
<td>DF-330</td>
<td>Maximum gasflow: 30 l/min</td>
</tr>
<tr>
<td>DF-345</td>
<td>Maximum gasflow: 45 l/min</td>
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</tbody>
</table>

### Options

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>With gas heater</td>
</tr>
<tr>
<td>V</td>
<td>With OSD - On-Screen-System</td>
</tr>
<tr>
<td></td>
<td>(only available with connected ILO OSD Camera)</td>
</tr>
</tbody>
</table>

### Technical Data

- **Insufflator pressure:** 0 - 30 mmHg
- **Power supply:** 100 - 240 VAC, 50 - 60 Hz
- **Power consumption:** 25 - 40 VA (25-105 VA with gas heating)
- **Protection class (acc.to IEC 60601-1):** I
- **Safety class:** BF
- **IP code:** IP 31
- **Standard:** IEC 60601-1-2 / IEC 60601-1-1
- **Device classification** (acc. to MDD 93/42/EEC): IIb
- **Gas:** Carbon dioxide (medical)
- **Gas connection:** UNF 7/16*
- **Dimensions:** Control unit: 355mm x 105mm x 253mm (WxHxD); 6,5 kg
- **Delivery contains:** Insufflator, mains cable, CO2 high pressure tube UNF to German gas connection, wrench set: SW14/ SW30, sterile filter, standard silicone tube (not H version), system gas heater with tube set (only H version), user manual
- **Features:**
  - Flexible gas supply: The device can be used with gas bottles or central gas supply systems. The gas supply mode can be changed very easily by integrated software.
  - System gas heater: For reduction of post surgery problems the DF Series is available with a high efficient gas heater. The gas heater is preadjusted and works on a plug and play base full automatically. The heat exchanger can be autoclaved with the tube set.
  - OSD: The On-Screen-Display gives the surgeon the possibility to display the important values on the monitor.
  - ACF: The DF Series stands for Advance-Continuous-Flow-Insufflation. That means no more disruption between gasflow and pressure reading phases.
  - Safety: The automatic self check is activated each time the unit is switched on to ensure that all electronic and pneumatic components are in good running order. This safety feature carries a guarantee for lifetime of the unit. The changeable sterile filter prevents reflux of liquids and contamination of the gas way.
  - Differential pressure indicator: A colored LED array shows the actual-setpoint pressure difference between setted value and factual value in the patient.
## INSUFFLATOR

### ACCESSORIES

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<tr>
<th>Insufflator Accessories</th>
<th>Description</th>
<th>Order Number</th>
</tr>
</thead>
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<tr>
<td>Heating Device</td>
<td>Heater source for insufflators with heating, autoclavable</td>
<td>952-0012</td>
</tr>
<tr>
<td>Filter</td>
<td>single sterilized filter for insufflator, single use</td>
<td>952-0009</td>
</tr>
<tr>
<td>Filter</td>
<td>50 sterilized filter for insufflator, single use</td>
<td>952-0007</td>
</tr>
<tr>
<td>Filter</td>
<td>100 sterilized filter for insufflator, single use</td>
<td>952-0005</td>
</tr>
<tr>
<td>Filter</td>
<td>250 sterilized filter for insufflator, single use</td>
<td>952-0006</td>
</tr>
<tr>
<td>Filter</td>
<td>500 sterilized filter for insufflator, single use</td>
<td>952-0008</td>
</tr>
<tr>
<td>High-pressure-tube</td>
<td>DIN GER/ DIN GER, 1m</td>
<td>952-1020</td>
</tr>
<tr>
<td>High-pressure-tube</td>
<td>UNF/ UNF, 1m</td>
<td>952-1022</td>
</tr>
<tr>
<td>High-pressure-tube</td>
<td>UNF/ PIN Index, 1m</td>
<td>952-1025</td>
</tr>
<tr>
<td>High-pressure-tube</td>
<td>UNF/ ISO, 1m</td>
<td>952-1026</td>
</tr>
<tr>
<td>High-pressure-tube</td>
<td>UNF/ GER, 1m</td>
<td>952-1021</td>
</tr>
<tr>
<td>Tubing</td>
<td>For laparoscopy insufflator without heating, 8mm x 2,5m</td>
<td>952-0004</td>
</tr>
<tr>
<td>Tubing</td>
<td>For laparoscopy insufflator with heating, 8mm x 2,5m</td>
<td>952-0003</td>
</tr>
</tbody>
</table>
· Minimally invasive technique of transporting fluid to and from a surgical site
· Easy in use
· Acoustic and visual warning in case of incorrect tubing placement
· Remote control option
PUMP
SUCTION IRRIGATION PUMP - LAPAROSCOPY

Technical Data

Max. flow rate in the irrigation channel: 1,8 l/min (+/- 10%)
Max. flow rate in the suction channel: 1,8 l/min (+/- 10%)
Max. pressure in the irrigation channel: 400 mmHg (+/- 50mmHg)
Suction pressure: -50 kPa to -60 kPa
Dimensions: 306mm x 330mm x 120mm (DxWxH), 8,0 kg
System: Power supply: 100-240 V AC, 50/60 Hz
Class of protection: Application part: Type BF
Casing safety standard: IP X1
Ambient temperature / Max. relative humidity:
- During operation: +10°C to +40°C / 70%
- During storage and transport: -20°C to +45°C / 70%
CE Standard EN60601-1; EN60601-1-2

Features

- Autonomous suction and irrigation channels
- Irrigation based on the peristaltic pump module
- Suction based on the high quality vacuum pump module
- Predefined suction and irrigation parameters
- Working parameters controlled by suction-irrigation laparoscopic instrument
- Compatibility with various models of laparoscopic suction-irrigation instrumentst

REMOTE CONTROL

ACCESSORIES FOR THE SUCTION CHANNEL

- Single-use hydrophobic filters protects the pump against contamination from an operating area
- Silicone connection tube for hydrophobic filters
- Silicone tubing to connect the pump, suction jar and suction-irrigation instrument
- Various types of suction-irrigation instruments and suction jars
PUMP
UNIVERSAL FLUID PUMP (arthroscopy, hysteroscopy, urology)

- Three working modes (arthroscopy, hysteroscopy, urology)
- A very precise calibration of the measuring system through LEVEL function
- FLUSH function for an efficient rinsing
- Non-volatile memory of recent settings
- Acoustic and visual signals ensuring correct tubing installation
Technical Data

Dimensions: 306mm x 330mm x 120mm (DxWxH), 7.5 kg
System: Power supply: 100-240 V AC, 50/60 Hz
Class of protection: Application part: Type BF
Casing safety standard: IP X1
Ambient temperature / Max. relative humidity: During operation: +10°C to +40°C / 70%
                                                        During storage and transport: -20°C to +45°C / 70%
CE Standard: EN60601-1; EN60601-1-2

Features

- Universal model for arthroscopy / urology / hysteroscopy
- Three modes in one device
- LEVEL function
- Memory of recent settings
- Big and clear display
- Intuitive menu
- Remote control (optional)
- Tubing starter set (3xDUPP; 10xSUPP)

The universal pump provides three working modes:

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Arthroscopy</th>
<th>Urology</th>
<th>Hysteroscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td>10-150 mmHg</td>
<td>10-150 mmHg</td>
<td>10-200 mmHg</td>
</tr>
<tr>
<td>Flow</td>
<td>0.1-2.0 l/min</td>
<td>0.1-1.0 l/min</td>
<td>0.1-0.5 l/min</td>
</tr>
</tbody>
</table>

REMOTE CONTROL

- Control the fluid flow and pressure
FLUID PUMP - ARTHROSCOPY

- LEVEL function allows a very precise calibration of the measuring system
- FLUSH function for an efficient rinsing
- Non-volatile memory of recent settings
- Acoustic and visual signals ensuring correct tubing installation
Technical Data

Dimensions: 306mm x 330mm x 120mm (DxWxH), 7.5 kg
System: Power supply: 100-240 V AC, 50/60 Hz
Class of protection: Application part: Type BF
Casing safety standard: IP X1
Ambient temperature / Max. relative humidity: During operation: +10°C to +40°C / 70%
CE Standard: During storage and transport: -20°C to +45°C / 70%

Features

- LEVEL function
- Pressure 10 - 150 mmHg
- Flow 0.1 - 2.0 l/min
- Memory of recent settings
- Big and clear display
- Intuitive menu
- Remote control (optional)
- Tubing starter set (3xDUPP; 10xSUPP)

REMOTE CONTROL

- Control the fluid flow and pressure
PUMP
FLUID PUMP - UROLOGY

- LEVEL function allows a very precise calibration of the measuring system
- FLUSH function for an efficient rinsing
- Non-volatile memory of recent settings
- Acoustic and visual signals ensuring correct tubing installation
Technical Data

Dimensions: 306mm x 330mm x 120mm (DxWxH), 7.5 kg
System:
- Power supply: 100-240 V AC, 50/60 Hz
Class of protection:
- Application part: Type BF
Casing safety standard:
- IP X1
Ambient temperature / Max. relative humidity:
- During operation: +10°C to +40°C / 70%
- During storage and transport: -20°C to +45°C / 70%
CE Standard
- EN60601-1; EN60601-1-2

Features

- LEVEL function
- Pressure 10 - 150 mmHg
- Flow 0.1 - 1.0 l/min
- Memory of recent settings
- Big and clear display
- Intuitive menu
- Remote control (optional)
- Tubing starter set (3xDUPP; 10xSUPP)

REMOTE CONTROL

- Control the fluid flow and pressure
PUMP
FLUID PUMP - HYSTEROSCOPY

- LEVEL function allows a very precise calibration of the measuring system
- FLUSH function for an efficient rinsing
- Non-volatile memory of recent settings
- Acoustic and visual signals ensuring correct tubing installation
Technical Data

Dimensions: 306mm x 330mm x 120mm (DxWxH), 7,5 kg
System: Power supply: 100-240 V AC, 50/60 Hz
Class of protection: Application part: Type BF
Casing safety standard: IP X1
Ambient temperature / Max. relative humidity: During operation: +10°C to +40°C / 70%
                                      During storage and transport: -20°C to +45°C / 70%
CE Standard: EN60601-1; EN60601-1-2

Features

· LEVEL function
· Pressure 10 - 200 mmHg
· Flow 0,1 - 0,5 l/min
· memory of recent settings
· big and clear display
· intuitive menu
· remote control (optional)
· tubing starter set (3xDUPP; 10xSUPP)

REMOTE CONTROL

· Control the fluid flow and pressure
SHAVER
ARTHROSCOPY

- Wide range of rotational speed
- Window calibration feature
- Clockwise, counterclockwise and oscillation handpiece rotation modes
- Nine oscillation modes
- Automatic handpiece detection
- Controlled by a footswitch or directly by buttons present on a shaver handpiece
- Fully autoclavable, light and ergonomic shaver handpiece
SHAVER
ARTHROSCOPY

Strengths

- Easy, efficient and reliable cleaning and desinfection process resulting from unique head design
- Sophisticated oscillation modes to meet requirements of the most demanding operator
- Smooth and stable work in all range of rotational speed
- Single-use and reusable shaver blades with uniquely designed hub eliminating problematic articulation effect
- Large and clearly visible user interface facilitates reading of essential parameters of the device
- Remote interface enables presentation of significant parameters on the medical monitor
- Convenient manipulation by means of the manually controlled buttons available on the shaver handpiece

Shaver control unit

Dimensions: 250mm x 330mm x 96mm (DxWxH), 4,8 kg
System: Power supply: 100-240 V AC; 50/60 Hz
Power consumption: 65 VA
Class of protection: Class I
Ambient temperature / Max. relative humidity:
- During operation: +10°C to +40°C / 70%
- During storage and transport: -20°C to +45°C / 70%
CE Standard
- EN60601-1; EN60601-1-2

Shaver hand piece

Dimensions: Length: 164 mm; 325 g
System: Power supply: 100-240 V AC; 50/60 Hz
Shaver blade chuck: Automatic / Barracuda type
Speed range:
- FWD / REV: 500 - 8000 RPM (+/-10%)
- OSC: 500 - 3500 RPM (+/-10%)
Oscillation modes: 9 different modes
Cable length: 3,2 m
Sterilization method: Steam sterilization 134 °C
Ambient temperature / Max. relative humidity:
- During operation: +10°C to +40°C / 100%
- During storage and transport: -20°C to +45°C / 90%
Class of protection: Application part: BF type

Shaver footswitch

Dimensions: 215mm x 280mm x 28mm (DxWxH), 2,1 kg
Cable length: 3,2 m
Casing savety standard: IP X7
Functions: Speed up, speed down, start/stop, window size, direction
Ambient temperature / Max. relative humidity:
- During operation: +10°C to +40°C / 100%
- During storage and transport: -20°C to +45°C / 90%
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