

Cameras and documentation systems

Excellent image quality with KARL STORZ cameras



STORZ
KARL STORZ — ENDOSKOPE
INDUSTRIAL GROUP



KARL STORZ cameras and documentation systems



Cameras

For over 45 years, KARL STORZ has been developing and producing camera solutions known for their excellent image quality. To optimize the quality of the overall system, we particularly strive to ensure proper plug & play compatibility when combining individual components such as monitors, light sources, etc.

However, our cameras offer more than excellent imaging properties. The ergonomic handpiece as well as the embedded function keys and functional control elements for optical zoom and focus ensure fatigue-free, efficient inspections.

With the easy-to-operate universal coupling, all standard endoscope eyepieces (including third-party endoscopes) can be firmly and securely connected.

The illumination control patented by KARL STORZ ensures lag-free brightness adjustment to different lighting conditions and reliably eliminates underexposure and overexposure on the monitor. As a result, light levels are optimally controlled even in dark or highly reflective applications.

In industrial endoscopy, the virtually unparalleled optical zoom of TELECAM SL II offers undreamt-of optical possibilities.

Once the image has been focused, the optical zoom allows zooming at will with consistent sharpness without requiring additional refocusing.

All camera types are perfectly suited for rugged industrial use that poses challenges such as splash water and dust. Solid workmanship guarantees a long useful life.



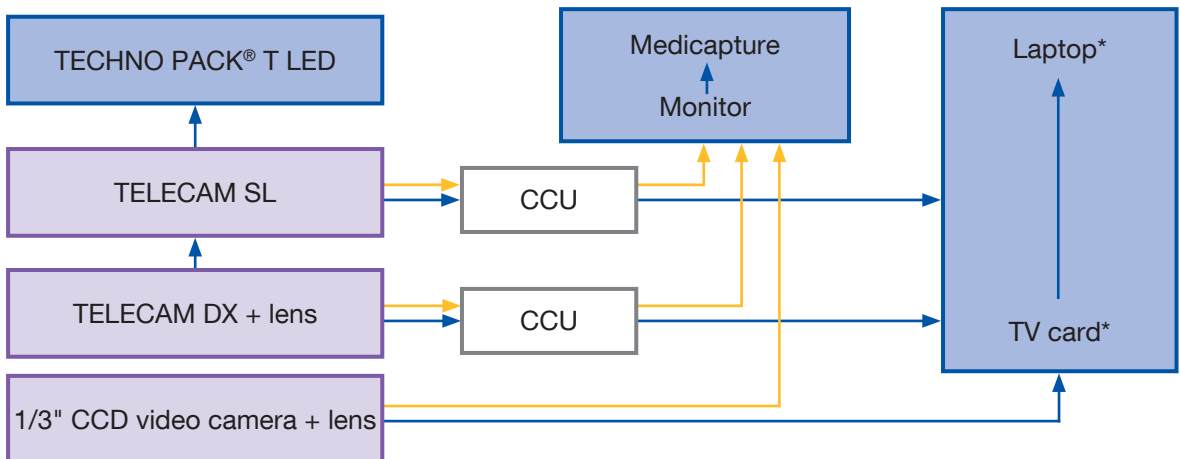
Documentation systems

Documenting inspection results is essential in many areas of industrial endoscopy today.

For this important part of maintenance and inspection, KARL STORZ offers you various options to individually respond to customer needs. The diagram below shows how the individual components of our camera and documentation systems work together.

TELECAM SL II and TELECAM DX can each be combined with a CCU and a monitor for display. To record the obtained image material, the digital image capturing device Medicapture can be connected between the monitor and the camera.

Additional documentation options are available with our compact unit TECHNO PACK® T LED or the combination of a TV card and a laptop.*



■ Documentation units ■ camera units

* TV card and laptop not offered by KARL STORZ.

KARL STORZ TELECAM SL

Parfocal Zoom

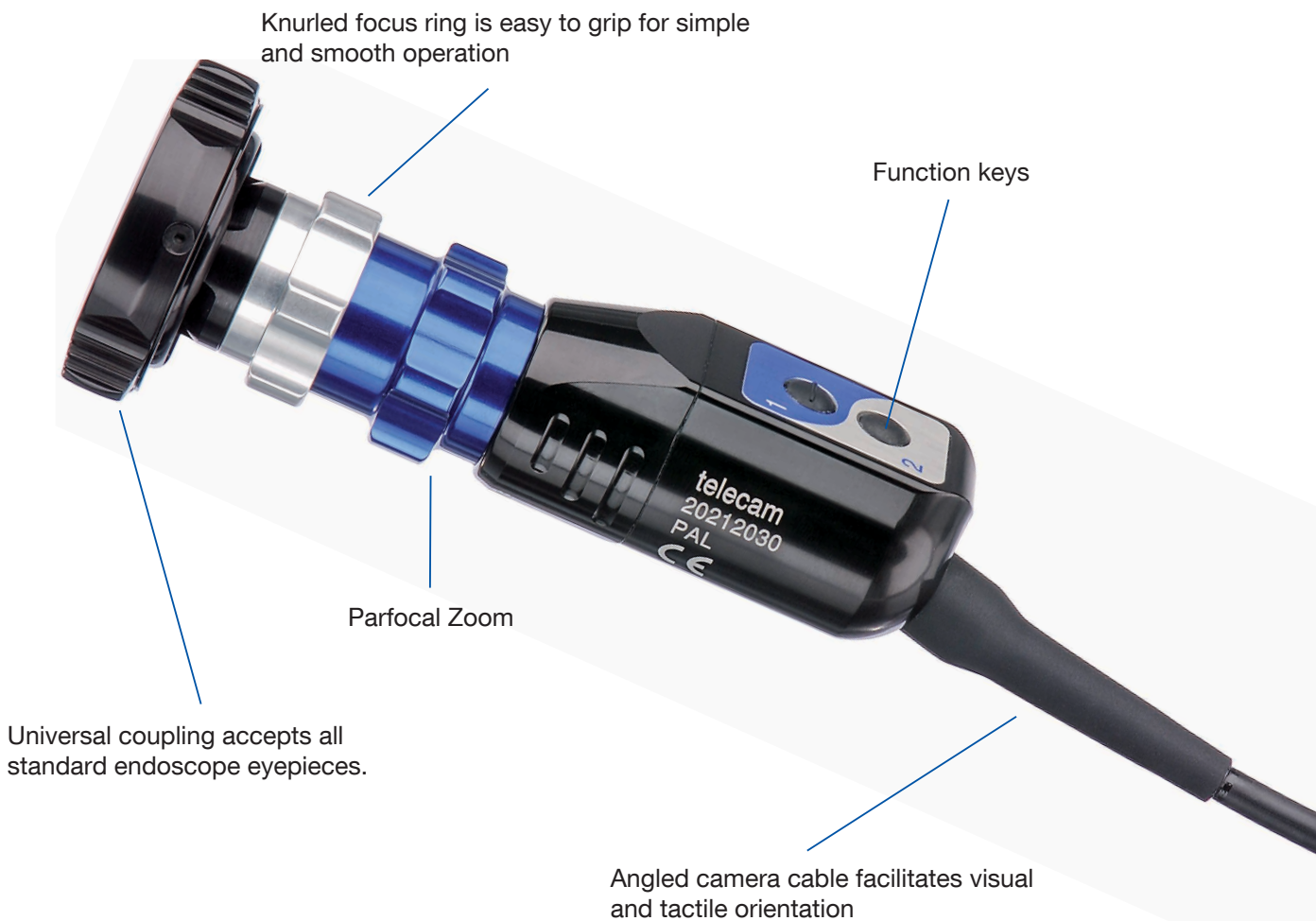


Product features

- High horizontal resolution of more than 450 lines
- Digital image processing through the integrated image processor module that includes a title generator
- Optional manual or automatic exposure control (patented) (1/50 s – 1/10000 s PAL, 1/60 s – 1/10000 s NTSC)
- Automatic white balance with memory function for 2 white balance values
- Integrated title generator
- Compatible with Composite, S-Video, and RGB
- Integrated universal power supply
- 2 function keys at the camera head for controlling the camera functions; depending on the device and camera control unit, they may be pre-programmed or freely selectable
- Includes parfocal zoom lens

Parfocal zoom lens

Outstanding optical zoom without loss of image information



Knurled focus ring is easy to grip for simple and smooth operation

Function keys

Parfocal Zoom

Universal coupling accepts all standard endoscope eyepieces.

Angled camera cable facilitates visual and tactile orientation

KARL STORZ TELECAM SL

Parfocal Zoom



TELECAM One-Chip Camera Head



20 2120 30 **TELECAM One-Chip Camera Head**, color system **PAL**, soakable, gas-sterilizable, with integrated Parfocal Zoom Lens, $f = 25 - 50$ mm (2x), 2 freely programmable camera head buttons

20 2121 30 **Same**, color system **NTSC**

Compatible with all camera control units of the KARL STORZ product lines TELECAM DX II, TELECAM SL II, and TECHNO PACK® T LED

Technical data

| | |
|----------------------|--|
| Image sensor: | ½" CCD chip |
| Pixels: | 752 (H) x 582 (V) pixels per chip (PAL) 768 (H) x 494 (V) pixels per chip (NTSC) |
| Resolution: | > 450 lines (horizontal) |
| Lens: | Parfocal zoom lens (optical zoom) |
| Instrument coupling: | For all rigid and flexible endoscopes with standard eyepiece |
| Video output: | Composite signal to BNC connector Y/C signal to S-Video connector (2x) RGB signal to BNC connector |

Camera head

| | |
|---------------|--|
| Dimensions: | Ø 28-43 mm, length 51 mm (without lens) weight 0.08 kg |
| Camera cable: | Length 300 cm |

Control unit (CCU)

| | |
|-------------|-------------------------------|
| Dimensions: | 305 x 89 x 335 mm (w x h x d) |
| Weight: | 2.95 kg |

Design corresponds to IEC 6011, 601218, CSA 22.2 No. 601, UL 2601 and CE according to MDD, protection class 1

TELECAM SL II Camera Control Unit



20 2130 11U* **TELECAM SL II Camera Control Unit (CCU)**, color systems **PAL/NTSC**, with integrated digital Image Processing Module, power supply 100 – 240 VAC, 50/60 Hz

including:

Mains Cord

2x **Connecting Cable**, for controlling peripheral devices

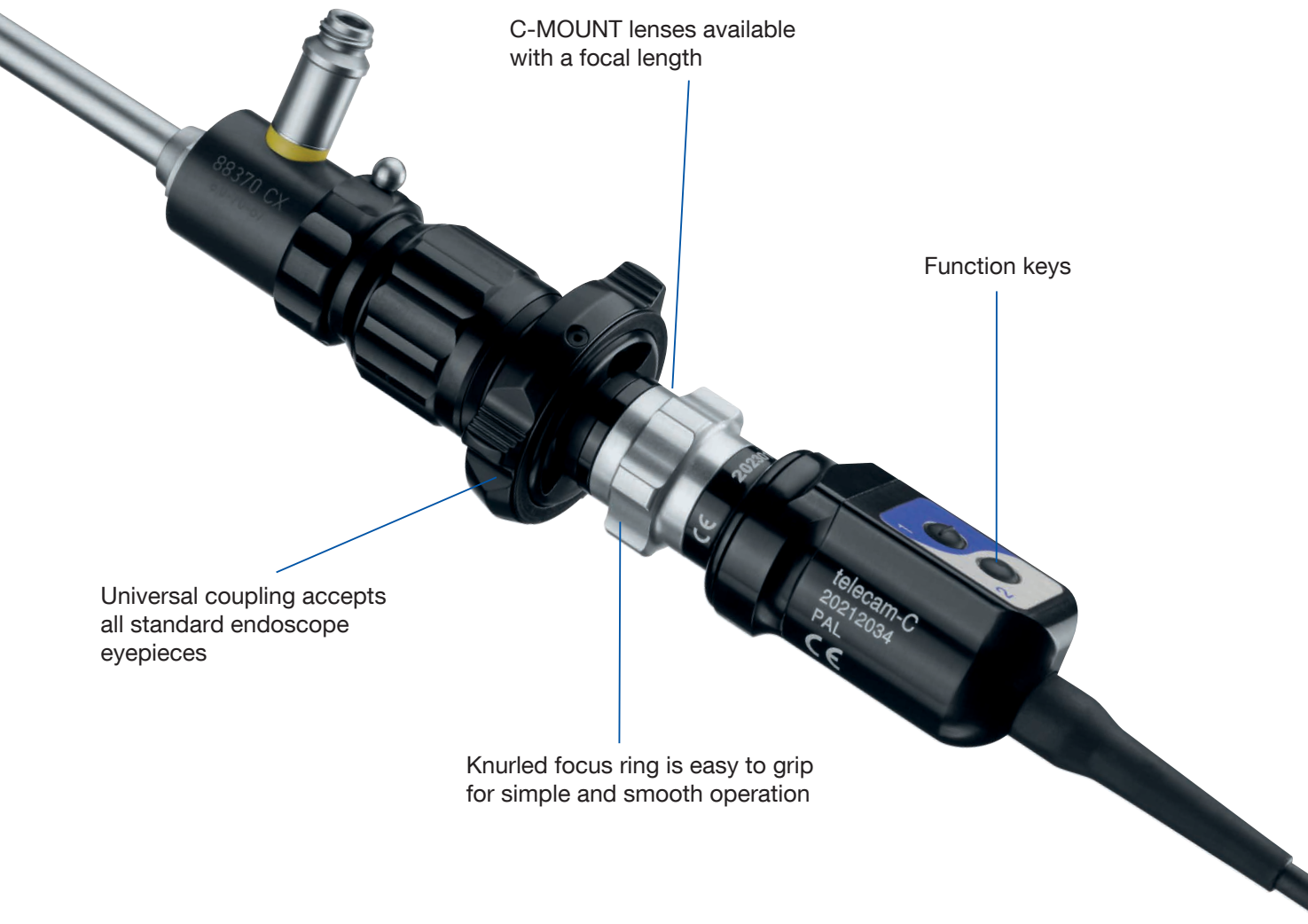
BNC Video Cable

S-Video (Y/C) Connecting Cable

Keyboard, with US English character set

* Country-specific mains cords upon request.

TELECAM C-MOUNT, TELECAM DX



C-MOUNT lenses available with a focal length

Function keys

Universal coupling accepts all standard endoscope eyepieces

Knurled focus ring is easy to grip for simple and smooth operation



Product features

- High horizontal resolution of more than 450 lines
- Includes optional (patented) automatic exposure control (1/50 s – 1/10000 s PAL, 1/60 s – 1/10000 s NTSC)
- Automatic white balance with memory function for 20 white balance values
- Compatible with Composite and S-Video
- Integrated universal power supply
- Can be directly adapted to a microscope
- 2 function keys at the camera head for controlling the camera functions; depending on the employed device and camera control unit, they may be preprogrammed or freely selectable
- Large zone of sharp focus
- Very bright image
- Low weight

TELECAM C-MOUNT, TELECAM DX



TELECAM C-MOUNT One-Chip Camera Head



20 2120 34 **TELECAM C-MOUNT One-Chip Camera Head,**
color system **PAL**

20 2121 34 **Same,** color system **NTSC**

Compatible with all camera control units of the KARL STORZ
product lines TELECAM DX II, TELECAM SL II, and
TECHNO PACK® T LED

TELECAM DX II Camera Control Unit



20 2330 11* **TELECAM DX II Camera Control Unit,**
color systems **PAL/NTSC**, with integrated digital
fiberscope filters, power supply 100 – 240 VAC,
50/60 Hz

including:

Mains Cord

2x **Connecting Cable**, for controlling peripheral
devices

BNC/BNC Video Cable

S-Video (Y/C) Connecting Cable

* Country-specific mains cords upon request.

Technical data

| | |
|---------------|---|
| Image sensor: | 1/2" CCD chip |
| Pixels: | 752 H x 582 V per chip (PAL) 768 H x 494 V per chip (NTSC) |
| Resolution: | > 450 lines (horizontal) |

Lens

| | |
|-----------------|--|
| C-MOUNT: | integrated special lens, C-MOUNT |
| Video output: | Composite signal to BNC connector, S-Video to 4-pin Mini-DIN connector (2x) |
| Control output: | 3.5 mm stereo jack (ACC 1, ACC 2) |

Spare Parts



| | |
|------------|--|
| 20 2000 42 | C-MOUNT Lens , f = 30 mm, soakable |
| 20 2000 43 | C-MOUNT Lens , f = 38 mm, soakable |
| 20 2301 41 | C-MOUNT Lens , f = 25 mm, soakable |
| 20 2301 45 | C-MOUNT Lens , f = 12 mm, soakable |

Lenses for Video Cameras



| | |
|---------|--|
| 80591 C | KARL STORZ Special Lens , with rapid coupling to endoscope eyepiece and C-MOUNT connection, focal length f = 35 mm |
|---------|--|

Color video camera



Product features

- Excellent for heavy-duty industrial use thanks to its robust, compact construction and design
- This color video camera can be used for a large variety of applications since it generates images of outstanding quality, even in poor lighting or outdoor conditions.
- The color video camera features a combined signal and power cable

Technical data

Image sensor: Super HAD II 1/3 type IT CCD
Pixels: 752 H x 582 V per chip
Resolution: > 460 lines (horizontal)

Lens

Coupling: NF-mount
Adaptor: NF-C-MOUNT
Video output: S-Video

Color Video Camera



88 0030 18

1/3" CCD Color Video Camera, PAL,
size: 22 x 22 x 64, weight: 50 g,
white balance, Y/C output signal
including:

Power Supply and Mains Cord 88 0030 18 A
C-MOUNT Adaptor 88 0030 18 B

Note:

Only in conjunction with lenses
for video cameras.

Spare Parts



88 0030 18 A

Power Supply and Mains Cord



88 0030 18 B

C-MOUNT Adaptor

LCD color monitor

Digital image processing at the PC, LCD monitor



Product features

- High image quality: The new LCD monitors are equipped with VGA LCD panels with 1280 x 1024 pixel resolution that enable precise image display of numerous video signals, including Composite and Y/C.
- Wide viewing angle: LCD panel offers a horizontal and vertical viewing angle of 170° with only minimally reduced contrast, so that images can be viewed from various positions and angles.
- Selection between several inputs: Color monitors are equipped with three selectable video inputs – analog Composite, Y/C (S-Video) and RGB/Component – and therefore accept signals from multiple cameras and recorders.



69275 N **LCD Color Monitor, NeovoX-17B**, desktop version, color systems **PAL/NTSC**, max. resolution 1280 x 1024, screen diagonal 17", 1x S-Video in, 1x DVI-D, VGA input, power supply 100 – 240 V



80406 **Color Monitor TFT/LCD X-15**, 15" monitor, black metal, 2.3 kW, screen resolution 1024 x 768 pixels, available with following connectors: VGA, FBAS, Y/C, DVI-D

Medicapture is a digital image capture device. The simple digital storage unit with USB 2.0 port is installed between the camera and the monitor.



88 0031 15 **Medicapture M-USB-170**, with USB flash drive 256 MB, 240 x 200 x 63 mm

Camera adaptors

Adaptor for attaching the KARL STORZ cameras to products from other manufacturers



Adaptors for use with KARL STORZ cameras



20 2000 32

KARL STORZ Special Beamsplitter, for use with IMAGE1, TRICAM® and TELECAM camera heads for simultaneous viewing through the endoscope and on the monitor. The connector for the camera head is angled 120° and is rotatable.



9530 BD

Integral-Rotating Beamsplitter, for use with IMAGE1, TRICAM® and TELECAM camera heads for simultaneous viewing through the endoscope and on the monitor. The connector for the camera head is angled 90° and rotatable.

The beamsplitter is designed as such that the camera head – irrespective of the telescope movement – is always in the 6'clock position. The monitor image thus corresponds exactly to the image the user would have under direct vision.

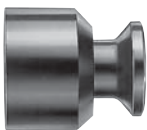
It is also possible to lock the camera in the 6 o'clock position with the coupler.



29020 GM **Adaptor**, for Machida fiberscopes, for use with IMAGE1, TRICAM® and TELECAM camera heads



29020 GN **Adaptor**, for Olympus fiberscopes, new model, for use with IMAGE1, TRICAM® and TELECAM camera heads



29020 GO **Adaptor**, for Olympus fiberscopes, old models, for use with IMAGE1, TRICAM® and TELECAM camera heads



29020 GP **Adaptor**, for Pentax and Fujinon fiberscopes, for use with IMAGE1, TRICAM® and TELECAM camera heads



81490 Q **Adaptor**, for Richard Wolf endoscopes to KARL STORZ camera adaptor

Camera adaptor



Digital camera accessories

Note: The digital camera should have a small zoom range.



80590

Rapid Coupling, to mount endoscopes to existing camera lenses. Coupling is screwed into the filter thread of the camera lens. When ordering, please indicate the thread diameter

Note:

e.g. 590-01 = filter thread M19 x 0.5 mm

KARL STORZ TECHNO PACK® T LED



As discussed above, the TECHNO PACK® T LED is another compact unit that can be used for your comprehensive inspection work.

Additional information on this topic is available in our TECHNO PACK® T LED brochure, on our website www.karlstorz.com, or through one of our expert consultants.

Special features:

- Large 15" LCD monitor for greater detail
- Powerful LED light source
- Simple and user-friendly user interface
- Text overlay option
- New, user-friendly MULTIPOINT 3.0 software with measuring function
- Excellent price/performance ratio
- Compatible with the entire product range

Additional documentation units



- Portable
- Robust
- Brilliant imaging
- Universal solution

The KARL STORZ solutions listed here can be used as additional documentation units for your comprehensive inspection work.

Additional information on this topic is available in our product brochures, on our website www.karlstorz.com, or from one of our expert consultants.

T-SCOPE



- 7" TFT monitor
- Compact design with a battery runtime of about 2 hours
- Intuitive handling and interface
- Comprehensive functions and interfaces



MOVEO™



- 5" TFT LCD color monitor
- Ergonomic handle
- 4-way deflection
- Interchangeable lenses
- Exchangeable high performance lithium-ion rechargeable batteries

SMART SCOPE



- Plug & play
- Record and transmit
- Compatible with a variety of cell phones

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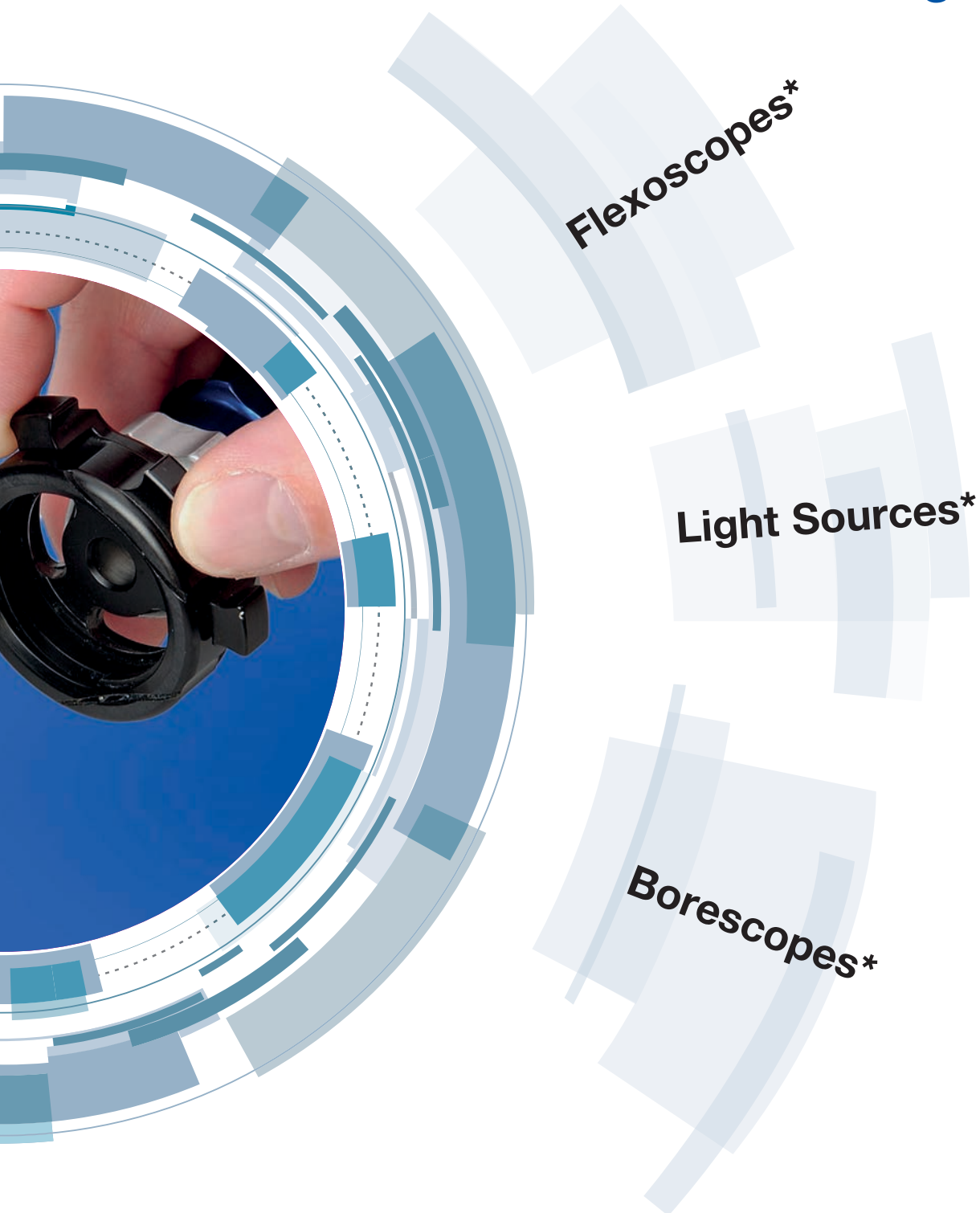
**Measurement
Systems and
Documentation***

Videoscopes*

**Portable
Systems***



Product groups



At KARL STORZ, we are constantly advancing all of our products. For that reason, please understand that changes may be made to the scope of supply, design, equipment, and technology. Therefore, the information, illustrations, and descriptions contained herein cannot be made the basis for any claims whatsoever.

*For an up-to-date overview of the individual product groups, please refer to the product brochures of the KARL STORZ Industrial Group.



Your Focus – Our Scope

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