

Rigid endoscopes

Visual inspection with excellent optical image quality



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Rigid endoscopes

Rigid endoscopes, also known as borescopes, are used for visual inspection of cavities and narrow boreholes, as well as for visual inspection of smaller components or assemblies. Rigid endoscopes transmit images through the optical lens system to the eyepiece.

The focus is on excellent image sharpness, which enables reliable diagnostic inspections. The metal shaft and special glass end make the endoscope durable and ensure optimal protection of the optics.

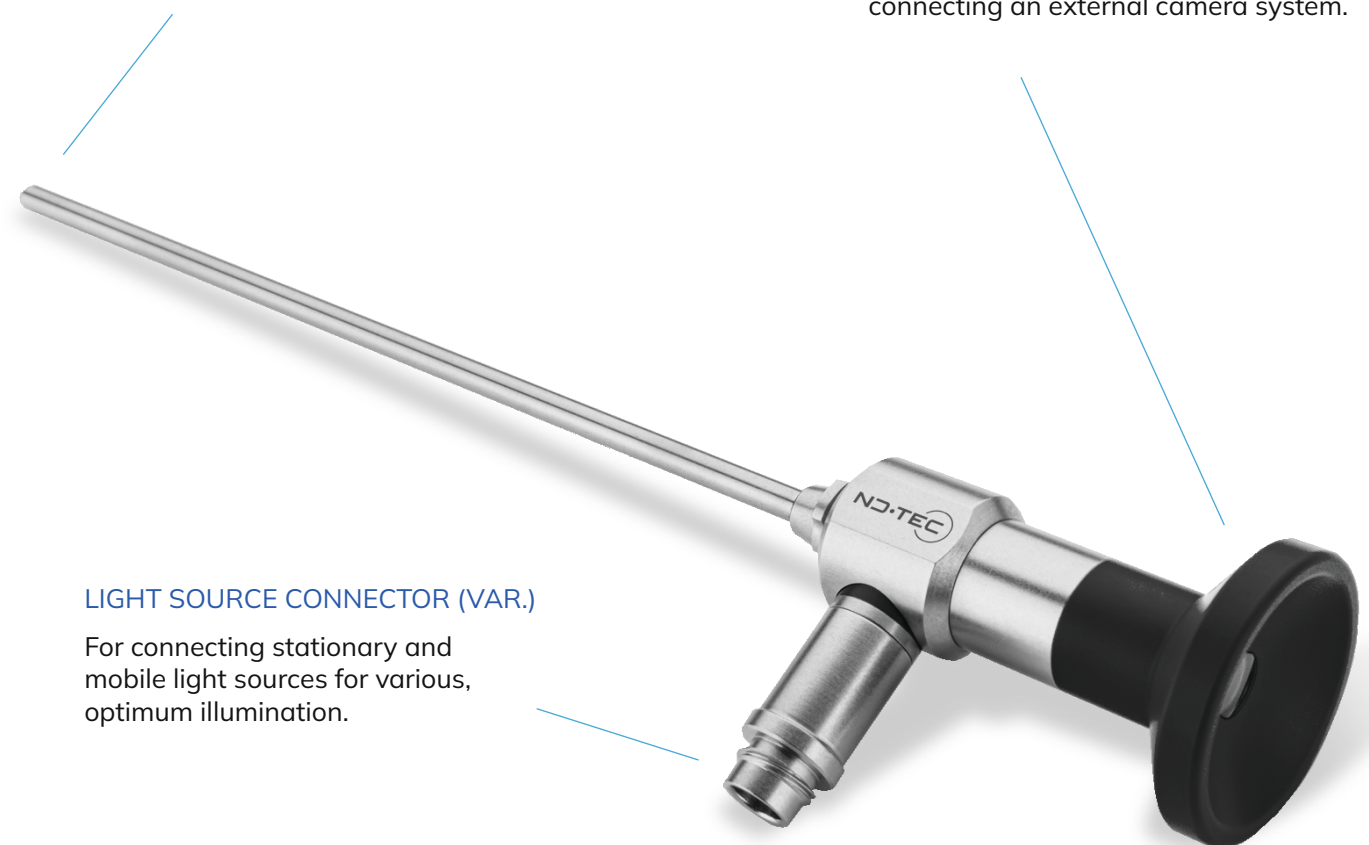
Rigid endoscopes

FRONT LENS

Shock and scratch resistant thanks to hardened and tempered special glass.

EYE PIECE WITH VARIOUS ADAPTERS

For transferring the real image to the human eye or digital display by connecting an external camera system.



LIGHT SOURCE CONNECTOR (VAR.)

For connecting stationary and mobile light sources for various, optimum illumination.

AREAS OF APPLICATION

- Mobile and stationary applications in conjunction with the VCam HD camera series
- Quality assurance
- Inspection of
 - cast parts
 - turned and milled parts
 - aircraft engines
 - large and small engines
 - and much more



Excellent image output, robust and durable

The three lines SE, SER, and SERH differ in design and function, but follow the same connection diagram for accessories. They are suitable for both stationary and

mobile use, e.g., for inspecting cast, turned, or milled parts. The endoscopes are available in various diameters, lengths, and viewing directions.



First-class image output

Rigid endoscopes are used for visual inspection of cavities, boreholes, or castings and offer excellent image output. They are available in many different diameters and lengths and with

different image apertures and viewing angles. An optional metal protective shaft is available to reliably protect the endoscope.

SE Direction of view 0° (Colour code: green) / Direction of view 30° (Colour code: red)

Length	Field of view at diameter					
	1.6 mm	1.9 mm	2.4 mm	2.7 mm	4.0 mm	5.5 mm
50 mm					80°	
50 mm					105°	
100 mm	40° 1,2	40° 1,2				
100 mm	65° 1	65° 1				
100 mm	90° 1	90° 1				
110 mm			70°	80°	80°	
110 mm					105°	
140 mm				80°		
175 mm	40° 1,2	40° 1,2			80°	
175 mm	65° 1	65° 1		80°		
175 mm	90° 1	90° 1			105°	
210 mm				80°		
240 mm				80°		
300 mm				80°	80°	80°
300 mm					105° 3	105°
430 mm						80°
430 mm						105°
690 mm					80°	80°
690 mm					105°	105°

- 1 supplied with plastic protective sheath
 - 2 Only available with 0° direction of view (green colour code)
 - 3 Also available in a version with the fiber optic connector installed rotated 180°
- A protective shaft is supplied with each configuration.

Status: August 2025. Specifications subject to change. For the latest product data, please visit our web-shop: www.shop.ndtec.net



SE Direction of view 70° / Colour code: yellow

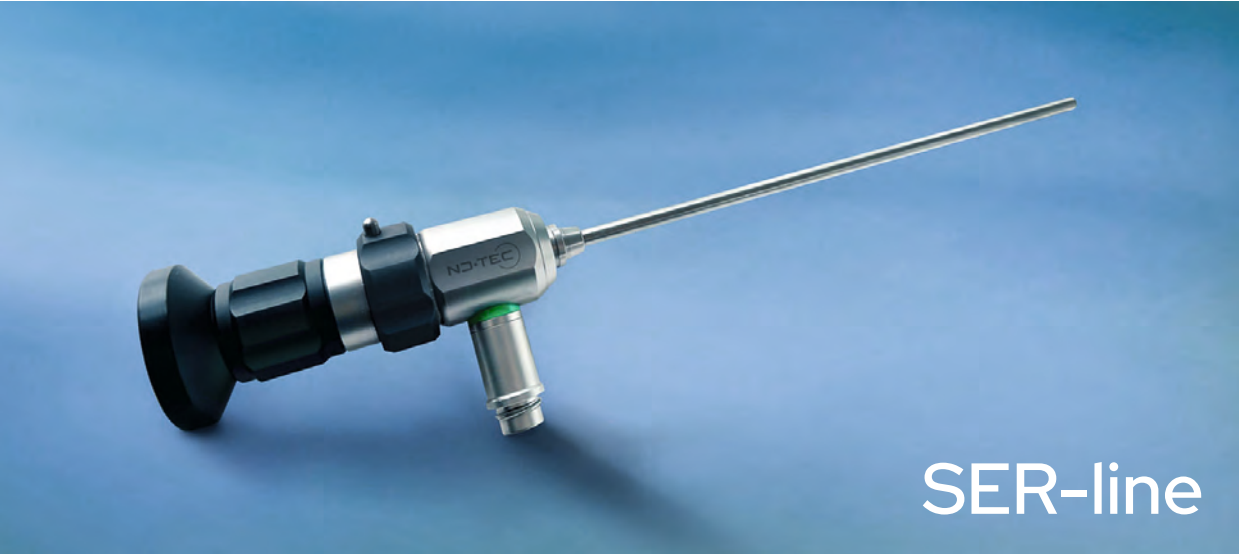
Length	Field of view at diameter			
	2.4 mm	2.7 mm	4.0 mm	5.5 mm
50 mm			80°	
50 mm			105°	
110 mm			80°	
110 mm	70°	80°	105°	
140 mm		80°		
175 mm			80°	
175 mm		80°	105°	
210 mm		80°		
240 mm		80°		
300 mm		80°	80°	80°
300 mm			105°	105°
430 mm				80°
430 mm				105°
690 mm			80°	80°
690 mm			105°	105°

SE Direction of view 90° Colour code: blue

Length	Field of view at diameter		
	2.7 mm	4.0 mm	6.0 mm
50 mm		80°	
110 mm	80°	80°	
175 mm	80°	80°	
190 mm			70°
210 mm	80°		
250 mm	80°		
300 mm		80°	
330 mm			70°
650 mm		80°	80°

SE Direction of view 120° Colour code: white

Length	Field of view at diameter		
	2.7 mm	4.0 mm	6.0 mm
190 mm			70°
330 mm			70°



Focusable, bright and high-resolution

Endoscopes in the SER-line feature a light guide/light source connection that can be rotated 340° for maximum ergonomics and flexibility during use. Light sources from common manufacturers can be connected directly or via a light guide to ensure optimal illumination. Manual diopter adjustment via a hand wheel allows the image sharpness to be adjusted to the user's needs. The lenses, made of hardened special glass, are available in diameters of 2.9 or 3.8 mm.

Ergonomic handle and rotatable optical shaft

Endoscopes from the SERH line feature a 340° rotatable optical shaft, focus capability, and a removable handle for optimal ergonomic working. Using the latest lens technology, these endoscopes deliver first-class image output, high resolution, and great depth of field with reliable and documentable results. Optimal illumination is ensured by the light source connection, which is compatible with all common manufacturers.

SER Direction of view 0° Colour code: green SER Direction of view 30° Colour code: red SER Direction of view 90° Colour code: blue

Length	Field of view at diameter		Length	Field of view at diameter		Length	Field of view at diameter	
	2.9 mm	3.8 mm		2.9 mm	3.8 mm		2.9 mm	3.8 mm
65 mm		100°	65 mm		100°	65 mm		100°
150 mm	80°	100°	150 mm	80°	100°	150 mm	80°	100°
220 mm	80°	100°	220 mm	80°	100°	220 mm	80°	100°
280 mm	80°	100°	280 mm	80°	100°	280 mm	80°	100°
340 mm		100°	340 mm		100°	340 mm		100°
470 mm		100°	470 mm		100°	470 mm		100°
630 mm		100°	630 mm		100°	630 mm		100°

SERH Direction of view 0° SERH Direction of view 45°

Length	Field of view at diameter					
	6.0 mm		8.0 mm		10.0 mm	
235 mm	56°	90°	56°	90°		
245 mm					56°	90°
435 mm	56°	90°	56°	90°		
445 mm					56°	90°
635 mm	56°	90°	56°	90°		
645 mm					56°	90°
835 mm	56°	90°	56°	90°		
845 mm					56°	90°
1033 mm	56°	90°	56°	90°		
1070 mm					56°	
1075 mm						90°
1235 mm	56°	90°	56°	90°	56°	
1245 mm					56°	90°
1435 mm	56°	90°	56°	90°		
1570 mm					56°	
1575 mm						90°

Length	Field of view at diameter		
	6.0 mm	8.0 mm	10.0 mm
235 mm	56°		
240 mm		56°	
250 mm			56°
435 mm	56°		
440 mm		56°	
450 mm			56°
635 mm	56°		
640 mm		56°	
650 mm			56°
835 mm	56°		
840 mm		56°	
850 mm			56°
1035 mm	56°		
1040 mm		56°	
1075 mm			56°
1250 mm			56°
1440 mm		56°	
1575 mm			56°
1650 mm			56°

SER Direction of view 70° / Colour code: yellow

Length	Field of view at diameter	
	2.9 mm	3.8 mm
65 mm		100°
150 mm	80°	100°
220 mm	80°	100°
280 mm	80°	100°
340 mm		100°
470 mm		100°
630 mm		100°



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SERH Direction of view 70°

Length	Field of view at diameter		
	6.0 mm	8.0 mm	10.0 mm
142 mm	70°	70°	
200 mm			56°
202 mm			90°
275 mm	70°	70°	
340 mm	70°	70°	
350 mm			56°
445 mm	70°	70°	
540 mm	70°	70°	
550 mm			56°
606 mm			90°
610 mm	70°	70°	
940 mm	70°	70°	

SERH Direction of view 90°

Length	Field of view at diameter			
	6.0 mm		8.0 mm	
140 mm	56°	90°	56°	90°
205 mm				56° 90°
275 mm			56°	90°
340 mm	56°	90°	56°	90°
355 mm				56° 90°
445 mm			56°	90°
455 mm				56° 90°
540 mm	56°	90°	56°	90°
555 mm				56° 90°
605 mm				56° 90°
700 mm				56° 90°
740 mm	56°	90°	56°	90°
805 mm				56° 90°
940 mm	56°	90°	56°	90°
955 mm				56° 90°
1140 mm			56°	90°
1205 mm				56° 90°
1340 mm			56°	90°
1455 mm				56° 90°
1540 mm			56°	90°
1702 mm			56°	90°
2220 mm				56° 90°

SERH Direction of view 110°

Length	Field of view at diameter		
	6.0 mm	8.0 mm	10.0 mm
270 mm	56°		
275 mm		56°	
335 mm	56°		
340 mm		56°	
355 mm			56°
440 mm	56°	56°	
535 mm	56°		
555 mm			56°
619 mm		56°	

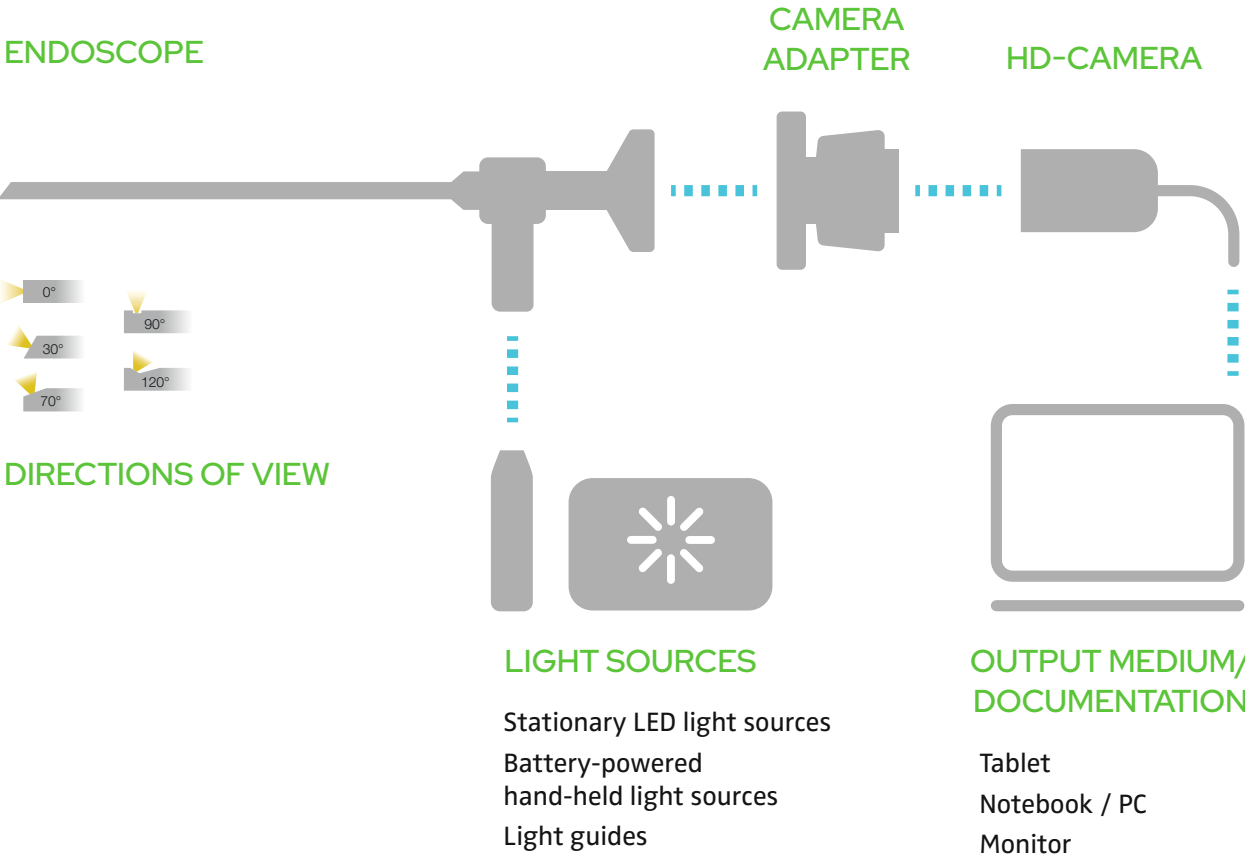


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Example of a system combination

SYSTEM OVERVIEW



Accessories

CAMERAS AND DOCUMENTATION SYSTEMS

	VCam HD HD camera available with USB 3.0 or USB-C connection, incl. white light LED light source
	VCam HD system Suitable for all C-mount connections Power 60 W Color temperature 5,700 Kelvin 17.3" 4K monitor
	VCam HD+-documentation system HD camera with camera head with 3.5" system monitor, including white light LED light source
	VCam HD+ system light source Includes docking function
	VCam HD Mobile Mobile add-on camera
	HD camera lens adapter Suitable for all C-mount threads, focal lengths 14 mm / 18 mm / 22 mm / 25 mm / 28 mm / 35 mm / zoom (18–35 mm)

UNIVERSAL LIGHT SOURCES

	LQ-LED-200 Stationary LED light source Illuminance 900,000 lux Color temperature 5,500 K Power supply via separate power supply unit, robust metal housing
	LQ-LED-10 Battery-powered handheld light source - 5 watts Power 3-10 W (3 levels) Color temperature 5,700 K Illuminance 200,000 lux
	LQ-LED-10i Inductive handheld light source - 5 watts Power 3-10 W (4 levels) Color temperature 6,000 K Illuminance 120,000 lux

	LQ-UV-I04 Compact AC ultra-high-performance light source Switchable between UVA and white light UVA spectrum: 320 – 400 nm White spectrum: 400 – 700 nm Light socket: Lumatec D
	LQ-UV-I06 Compact AC LED ultra-high-performance light source Switchable between UV LED and separate white light LED UV LED spectrum: 365 ± 5 nm White light LED: 5,700°K

FIBER OPTICS

	LG-GF-1800 Fiber optic cable Length 180 cm Outer diameter 10 mm, active fiber 3.5 mm
	LG-GF-2500 Fiber optic cable Length 250 cm Outer diameter 10 mm, active fiber 3.5 mm
	LG-FL-1800 Fluid light guide cable UV light transmission length 180 cm Outer diameter 10 mm, active light guide 5 mm Available with stainless steel or PVC sheathing
	LG-FL-2000 Fluid light guide cable UV light transmission length 200 cm Outer diameter 10 mm, active light guide 5 mm Available with stainless steel or PVC sheathing
	LG-FL-3000 Fluid light guide cable UV light transmission length 300 cm Outer diameter 10 mm, active light guide 5 mm Available with stainless steel or PVC sheathing

MONITORS

	13" Industrial HD monitor, metal housing
	15" Industrial HD monitor, metal housing
	17" Industrial HD monitor, metal housing
	19" Industrial HD monitor, metal housing

CASE

	For 1 rigid endoscope up to 200mm working length and one camera head incl. adapter
	For 3 rigid endoscopes up to 200 mm working length and accessories such as hand-held light source
	For 4 rigid endoscopes up to 350 mm working length and accessories

NDTec: Quality products and service – customer-oriented

Know-how and quality, for safe inspections

For over 25 years we have been involved in non-destructive visual material testing. With this experience, we have created a wide range of endoscopes that are now used in almost all industries worldwide. The mechanic in an aircraft hangar trusts the quality of ND Tec endoscopes just as much as the technician maintaining a wind turbine or inspecting a technical component.

Service you can rely on

Proximity to our customers is our top priority. Through personal exchange and advice, we build a strong partnership – as your reliable solution provider.

ND Tec also supports you after the purchase with its own repair service. If required, you can obtain rental devices to bridge downtimes or to test before purchasing a device.



**ND Tec
Repair
Service**

WEBSITE



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Outstanding Insights