



# More Precision

**ELTROTEC** // Industrial Endoscopes





- Ø 2.5mm to 7.9mm
- Lengths: 700mm to 1,200mm
- Resolution of 18,000 image points
- Complete set in a handy case
- Unique image brilliance

#### Description:

Flexible Top-Line endoscopes are equipped with a resolution of 18,000 image points. The tempered optical fibre bundle provides increased definition and stronger contrast.

The Top-Line Semi-Flexibel is 1m long and has a formable probe.

A probe tip with angular offset and lengths of up to 1200mm characterise the Flexibel Pro model. Flexibel Pro endoscopes stand out due to unique image brilliance, quality and functionality.

Both endoscopes are available as a complete set with light source and mirror head.

The endoscopes can optionally be connected to a camera system.

#### Features:

- Easy handling
- Battery-powered illumination
- Probe tips can be angled on 2/4 sides
- Locking brake with the Pro model
- Brilliant, high contrast images
- Battery-powered xenon hand light source
- TV applications via adapter possible
- Protective sheathing from stainless steel braiding
- Probe tip from braided tungsten

#### Operating conditions:

- Temperature in air:
  - Endoscope probe: -20°C to +60°C
  - Complete endoscope: -20°C to +50°C
- Pressure resistance in air: up to 5 bar
- Resistance to liquids:
  - The endoscope probe can be immersed in the following liquids for short periods: water, saline solution (5%), kerosene, petrol, diesel, 70% alcohol
- Humidity: up to 95% at 40° (no condensation)

#### Complete set:

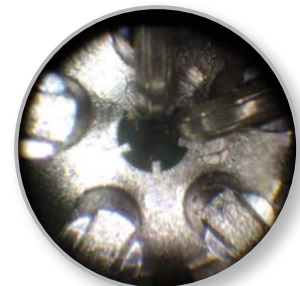
- Top-Line flexible endoscope
- 90° mirror head (with Flexibel Pro ø 5mm, optional 90° prism head)
- SuperNova LED
- Robust aluminium case
- Li-Ion battery with charging device



#### Application examples:



Position of a screw



Position check

Top-Line	Semi-Flexibel	Flexibel Pro				
Outer-Ø	7.9mm	2.5mm	2.5mm	3.3mm	4mm	5mm*
Length	1000mm	700mm	1200mm	850mm		
Resolution	18,000 image points	7000 image points		18,000 image points		
Direction of view	0° / 90°	0° / 90°		0°		
Field of view	40°	60°		45°		
Focal range	5mm to ∞					
Mirror head	90° mirror head	-			90° mirror head	
Probe tip angle (articulation)	-	2 times, 120° respectively				
Bend radius	40mm	35mm	35mm	40mm		
Temperature stability	≤ 60°					
Article number	20761227	20751770	20751771	20751886	20751893	20751639

\*90° prism head available

Accessories	Article no.
90° mirror head for Flexibel Pro, only with ø 5mm	20751641
90° prism head for Flexibel Pro, only with ø 5mm	20751678
90° viewing adapter for Semi-Flexibel	20751928
SuperNova light source incl. power supply and accumulator	20752271
Lemo 1 adapter from Top-Line endoscope to fibre optic cable EL 1/4 1800 MEP	21061030



90° mirror head



90° prism head (optional)



SuperNova LED hand light source

#### Accessories:

Optical fibres, TV cameras, video processors and light sources



Information about other flexible endoscopes with numerous different diameters can be received on request.

Please contact us - we will advise you on the selection of the optimal solution tailored to your needs.

## High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



2D/3D profile sensors (laser scanner)



Optical micrometers, fibre optic sensors and fibre optics



Colour recognition sensors, LED analyzers and colour online spectrometer



Measurement and inspection systems