



# More Precision

**ELTROTEC** // Industrial Endoscopes



## ELTROTEC Pro Superslim/Slim/Hardy/SuperHardy



- Ø 1.85mm to 7.2mm
- Lengths: 50mm to 940mm
- Focal range from 2mm to ∞
- Latest endoGRINs® image relay lenses
- External focus ring for dioptre adjustment
- Temperature range optional up to 300°C

### Description:

Rigid ELTROTEC Pro precision endoscopes complete the proven advantages of the Top-Line series by first-class quality of the special multi-coated lenses and modern GRIN lens technology. These endoscopes are designed for the professional user.

Other high quality characteristics include a focus ring and an optimised fibre optic connector for high light yield.

This is why these endoscopes are ideal for adapting to a camera.

The endoscopes can optionally be connected to a camera system.

### Features:

- For mobile use
- Brilliant and high-contrast images
- Temperature range optional up to 300°C

### Operating conditions:

- Temperature in air:
  - Endoscope probe: -20°C to +120°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)



Independent focusing ring



Classic fibre optic connector



Pro fibre optic connector



| Type          | Outer-Ø mm | Direction of view | Field of View | Length mm | Article no. |
|---------------|------------|-------------------|---------------|-----------|-------------|
| ProMicroslim  | 1.85       | 0°                | 42°           | 80        | 20752184    |
|               | 1.85       | 0°                | 42°           | 120       | 20752221    |
|               | 1.85       | 0°                | 42°           | 178       | 20752222    |
| ProSuperslim  | 2.4        | 0°                | 42°           | 102       | 20751409    |
|               | 2.4        | 0°                | 42°           | 185       | 20751481    |
|               | 2.8        | 0°                | 42°           | 265       | 20752224    |
|               | 2.8        | 0°                | 42°           | 350       | 20752225    |
|               | 2.8        | 0°                | 42°           | 435       | 20752226    |
| ProSlim       | 4.2        | 0°                | 42°           | 50        | 20752205    |
|               | 4.2        | 0°                | 42°           | 180       | 20752195    |
|               | 4.2        | 0°                | 42°           | 305       | 20752202    |
|               | 4.2        | 0°                | 42°           | 435       | 20752230    |
|               | 4.2        | 0°                | 42°           | 560       | 20752215    |
| ProHardy      | 6.35       | 0°                | 42°           | 180       | 20752231    |
|               | 6.35       | 0°                | 42°           | 305       | 20752232    |
|               | 6.35       | 0°                | 42°           | 435       | 20752233    |
|               | 6.35       | 0°                | 42°           | 560       | 20752234    |
| ProSuperHardy | 7.2        | 0°                | 42°           | 711       | 20752194    |
|               | 7.2        | 0°                | 42°           | 940       | 20752191    |

#### Mirror tubes for Eltrotec Pro endoscopes

- Direction of view 90°
- Rotatable stainless steel tube - 360°
- Mirror in the form of a prism



| Outer-Ø mm | Direction of view | Article no. mirror tube | for endoscope-Ø mm | Length mm | Article no. endoscope |
|------------|-------------------|-------------------------|--------------------|-----------|-----------------------|
| 2.2        | 90°               | 20751389                | 1.85               | 80        | 20752184              |
|            |                   | 20752096                |                    | 120       | 20752221              |
|            |                   | 20752223                |                    | 178       | 20752222              |
| 2.77       | 90°               | 20751392                | 2.4                | 102       | 20751409              |
|            |                   | 20751393                |                    | 185       | 20751481              |
| 3.8        | 90°               | 20752227                | 2.8                | 265       | 20752224              |
|            |                   | 20752228                |                    | 350       | 20752225              |
|            |                   | 20752229                |                    | 435       | 20752226              |
| 4.8        | 90°               | 20752236                | 4.2                | 50        | 20752205              |
|            |                   | 20750838                |                    | 180       | 20752195              |
|            |                   | 20751091                |                    | 305       | 20752202              |
|            |                   | 20751397                |                    | 435       | 20752230              |
|            |                   | 20751765                |                    | 560       | 20752215              |
| 8.0        | 90°               | 20751401                | 6.35               | 180       | 20752231              |
|            |                   | 20751402                |                    | 305       | 20752232              |
|            |                   | 20751143                |                    | 435       | 20752233              |
|            |                   | 20752235                |                    | 560       | 20752234              |
| 8.0        | 90°               | 20752193                | 7.2                | 711       | 20752194              |
|            |                   | 20752192                |                    | 940       | 20752191              |

| Accessories                     | Article no. |
|---------------------------------|-------------|
| Mini Maglite hand light source  | 20751054    |
| LED hand light source           | 20751761    |
| SuperNova LED hand light source | 20752271    |



Mini Maglite hand light source

LED hand light source

SuperNova LED hand light source

## 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