



More Precision

ELTROTEC // Industrial Endoscopes





- Ø 0.7mm to 2.0mm
- Lengths: 29.5mm to 234mm
- 50° Field of view
- Extremely small and versatile
- High quality glass-rod lens system
- External focus ring for dioptre adjustment

Description:

The miniature Eltrotec PKF endoscope is ideally suited for the inspection of miniature components and channels in the field of microelectronics and precision engineering. With only 0.7mm diameter, it is one of the smallest rigid endoscopes. The low light transmission due to its small diameter is compensated for through the use of high quality glass-rod lenses (GRIN lenses). The PKF endoscope can be focussed on the desired object using the focus ring enabling the area of interest to be sharply defined.

The object is illuminated using an external light source from our range of accessories. The endoscopes can optionally be connected to a camera system.

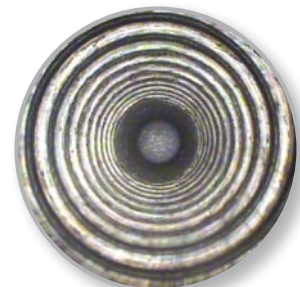
Features:

- Rigid construction using GRIN lenses
- Perfect image sharpness
- True-colour image reproduction
- Optimised light conductors for excellent image brightness
- Special adaptations possible

Operating conditions:

- Temperature in air:
 - Endoscope probe: -20°C to +100°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)

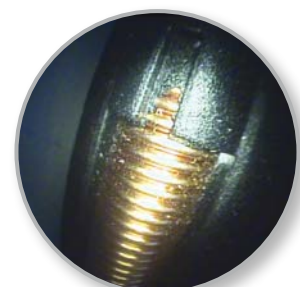
Application examples:



Inspection of thread turn



Inspection of injection nozzles



Installation position of spring

Type PKF				
Outer-Ø mm	Direction of view	Field of View	Length mm	Article no.
0.7	0°	approx. 50°	29.5	20011227
1.0	0°	approx. 50°	29.5	20010863
			60.3	20010039
			90.5	20010040
1.7	0°	approx. 50°	60.3	20010024
			105.8	20010025
1.7	15°	approx. 50°	60.3	20011366
			105.8	20010026
2.0	0°	approx. 50°	105.8	20010772
			149.5	20010027
			234	20010028
2.0	15°	approx. 50°	105.8	20011361
			149.5	20011362
			234	20011363

Mirror tube for the Eltrotec PKF

- Rotatable stainless steel tube 360°
- Mirror in the form of a prism
- Deflection 65° / 90° and 110°



Outer-Ø mm	Deflection	Article no. mirror tube	for endoscope-Ø mm	for length mm	Article no. endoscope
1.0	65°	20021228	0.7	29.5	20011227
	90°	20021229			
	110°	20021230			
1.3	65°	20020873	1.0	29.5	20010863
	90°	20020821			
	110°	20021231			
1.3	65°	20021232	1.0	60.3	20010039
	90°	20020077			
	110°	20021233			
1.3	65°	20020078	1.0	90.5	20010040
	90°	20020079			
	110°	20020914			
2.0	65°	20020081	1.7	60.3	20010024
	90°	20020082			
	110°	20020083			
2.0	65°	20020817	1.7	105.8	20010025
	90°	20020084			
	110°	20021234			
2.3	65°	20020766	2.0	105.8	20010772
	90°	20020165			
	110°	20020774			
2.3	65°	20020085	2.0	149.5	20010027
	90°	20020086			
	110°	20021235			
2.3	65°	20021236	2.0	234	20010028
	90°	20020087			
	110°	20021237			

Accessories:

Optical fibres, TV cameras, video processors and light sources

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