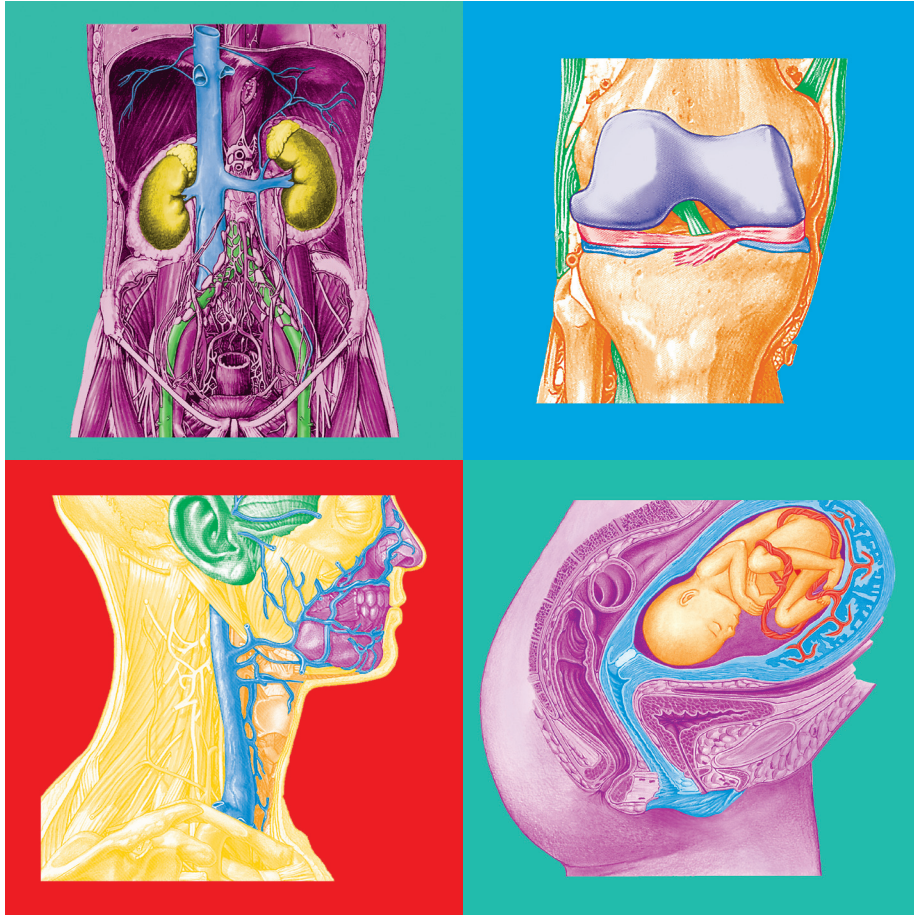




ENDOSCOPES

ELCON
MEDICAL INSTRUMENTS GmbH

ELCON 230

wide range of top quality instruments



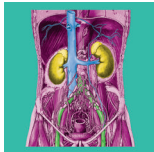
ELCON was founded in the year 1977 by Mr. H.R. Jakobi and a group of professionals with experience of many years in the field of surgical instruments.

All activities and products of ELCON are part of a continuous quality and safety control.

We are certified according to EN ISO 13485 and FDA registered.
Downloads under: www.elcon-medical.com

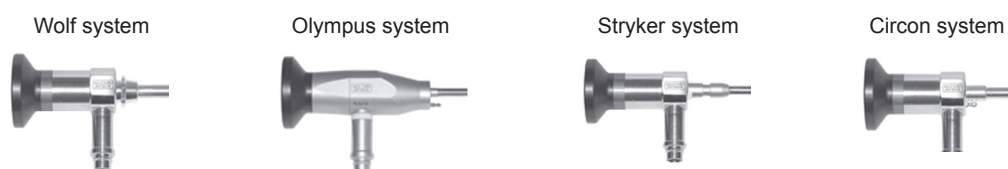
ELCON
N1 - N10

230
ENDOSCOPES

General Information				N1
	Orthopaedy		Arthroscopes	N2
	Laparoscopy / Surgery	 	Laparoscopes OP-Laparoscope	N3 N3
	Gynaecology		Hysteroscopes	N4
	Urology		Cystoscopes	N4
	ENT	   	Sinuscopes Otoscopes Laryngo-Pharyngoscopes Bronchoscopes / Oesophagoscope	N5 N6 N6 N6-7
why ELCON		6 convincing reasons for ELCON endoscopes		N8
Repair / Exchange		Repair if cheaper and safe - Exchange if necessary		N9
Sterilisation		according to WHO-recommendation		N10

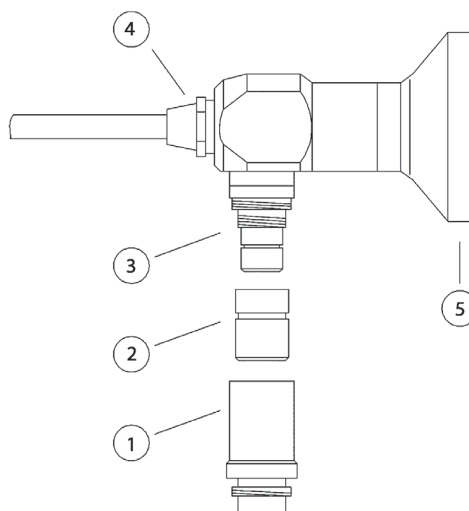
medical endoscopes

- For the production of our medical endoscopes we use solely high-grade materials.
All metal parts are made of stainless steel.
- Instrument compatibility
Our Endoscopes are equipped with an instrument connector compatible to Storz.
Other instrument connectors compatible to Wolf, Olympus, Stryker, Circon ... are available on request.



- Light guide compatibility
All endoscopes are equipped with the fittings for all common light guides (Storz, Olympus, Wolf, ACMI-type)

- 1 Storz / Olympus fitting
- 2 Wolf fitting
- 3 ACMI fitting
- 4 Instrument connector
- 5 Eyepiece (DIN 58105)



- TV adapter / Camera compatibility
All eyepieces are compatible to all common TV adapter (corresponding to DIN 58105, part 2)
All endoscopes are compatible to all common camera systems (CCD / 3CCD / HD)
- Sterilization
Endoscopes marked with "autoclavable" are full autoclavable with 134°C/273°F

For any further requirements please contact us. We are able to design any endoscopic product specific to your needs.



ARTHROSCOPE - wide angle

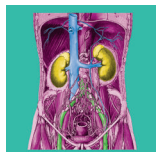


Ø 1.9MM	Working length: 69mm	
230-41-100	Viewing direction:	0°
230-41-130	Viewing direction:	30°
	Working length: 102mm	
230-41-200	Viewing direction:	0°
230-41-230	Viewing direction:	30°
Ø 2.4MM	Working length: 98mm	
230-41-300	Viewing direction:	0°
230-41-330	Viewing direction:	30°
Ø 2.7MM	Working length: 110mm	
230-41-000	Viewing direction:	0°
230-41-030	Viewing direction:	30°
230-41-070	Viewing direction:	70°
	Working length: 141mm	
230-49-000	Viewing direction:	0°
230-49-030	Viewing direction:	30°
230-49-045	Viewing direction:	45°
230-49-070	Viewing direction:	70°
	Working length: 175mm	
230-48-000	Viewing direction:	0°
230-48-030	Viewing direction:	30°
230-48-045	Viewing direction:	45°
230-48-070	Viewing direction:	70°
	Working length: 187mm	
230-42-000	Viewing direction:	0°
230-42-030	Viewing direction:	30°
230-42-070	Viewing direction:	70°
Ø 3MM	Working length: 110mm	
230-41-400	Viewing direction:	0°
230-41-430	Viewing direction:	30°
Ø 4MM	Working length: 175mm	
230-44-000	Viewing direction:	0°
230-44-030	Viewing direction:	30°
230-44-045	Viewing direction:	45°
230-44-070	Viewing direction:	70°

semiflex ARTHROSCOPE - wide angle



Ø 2.7MM	Working length: 110mm	
230-41-000SF	Viewing direction:	0°
230-41-030SF	Viewing direction:	30°
	Working length: 141mm	
230-49-030SF	Viewing direction:	30°
	Working length: 175mm	
230-48-000SF	Viewing direction:	0°
230-48-030SF	Viewing direction:	30°
	Working length: 187mm	
230-42-000SF	Viewing direction:	0°
230-42-030SF	Viewing direction:	30°
Ø 4MM	Working length: 175mm	
230-44-000SF	Viewing direction:	0°
230-44-030SF	Viewing direction:	30°
230-44-045SF	Viewing direction:	45°
230-44-070SF	Viewing direction:	70°

**LAPAROSCOPE - wide angle**
AUTOCLAVE
 18 min / 134°C / 273°F
HD Scope

Ø 10MM	Working length: 210mm	
230-07-000	Viewing direction:	0°
230-07-030	Viewing direction:	30°
	Working length: 310mm	
230-08-000	Viewing direction:	0°
230-08-030	Viewing direction:	30°
230-08-045	Viewing direction:	45°
	Working length: 344mm	
230-10-000	Viewing direction:	0°
230-10-030	Viewing direction:	30°
230-10-045	Viewing direction:	45°
	Working length: 450mm	
230-09-000	Viewing direction:	0°
230-09-030	Viewing direction:	30°
230-09-045	Viewing direction:	45°
	Working length: 540mm	
230-09-100	Viewing direction:	0°
230-09-130	Viewing direction:	30°

Ø 2MM**230-01-000****230-01-030**

Working length: 241,5mm

Viewing direction:

0°

Viewing direction:

30°

Ø 3MM**230-12-000****230-12-030**

Working length: 300mm

Viewing direction:

0°

Viewing direction:

30°

Ø 5MM**230-03-000****230-03-030****230-03-045****230-03-070**

Working length: 300mm

Viewing direction:

0°

Viewing direction:

30°

Viewing direction:

45°

Viewing direction:

70°

230-04-000**230-04-030****230-04-045**

Working length: 360mm

Viewing direction:

0°

Viewing direction:

30°

Viewing direction:

45°

230-04-100**230-04-130**

Working length: 450mm

Viewing direction:

0°

Viewing direction:

30°

Ø 5.5MM**230-13-000****230-13-030**

Working length: 310mm

Viewing direction:

0°

Viewing direction:

30°

Ø 6.5MM**230-05-000****230-05-030**

Working length: 300mm

Viewing direction:

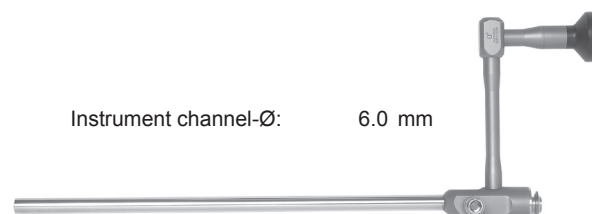
0°

Viewing direction:

30°

semiflex LAPAROSCOPE - wide angle
AUTOCLAVE
 18 min / 134°C / 273°F
HD Scope

Ø 5MM	Working length: 300mm	
230-03-000SF	Viewing direction:	0°
230-03-030SF	Viewing direction:	30°

OP LAPAROSCOPE - wide angle
AUTOCLAVE
 18 min / 134°C / 273°F
HD Scope

Instrument channel-Ø: 6.0 mm

Ø 10MM	Working length:	329mm
230-16-000	Viewing direction:	0°



HYSTEROSCOPE

AUTOCLAVE
18 min / 134°C / 273°F

HD Scope



Ø 2.0MM	Working length: 260mm	
230-55-030	Viewing direction:	30°
Ø 2.7MM	Working length: 302mm	
230-56-000	Viewing direction:	0°
230-56-012	Viewing direction:	12°
230-56-030	Viewing direction:	30°
230-56-070	Viewing direction:	70°
Ø 2.9MM	Working length: 302mm	
230-50-000	Viewing direction:	0°
230-50-012	Viewing direction:	12°
230-50-030	Viewing direction:	30°
Ø 4MM	Working length: 302mm	
230-57-000	Viewing direction:	0°
230-57-012	Viewing direction:	12°
230-57-030	Viewing direction:	30°
230-57-070	Viewing direction:	70°

CYSTOSCOPE

AUTOCLAVE
18 min / 134°C / 273°F

HD Scope



Ø 1.9MM	Working length: 187.5mm	
230-19-000	Viewing direction:	0°
230-19-030	Viewing direction:	30°
Ø 2.7MM	Working length: 187.5mm	
230-20-100	Viewing direction:	0°
230-20-130	Viewing direction:	30°
230-20-170	Viewing direction:	70°
Ø 2.7MM	Working length: 302mm	
230-20-000	Viewing direction:	0°
230-20-012	Viewing direction:	12°
230-20-030	Viewing direction:	30°
230-20-070	Viewing direction:	70°
Ø 2.9MM	Working length: 302mm	
230-22-000	Viewing direction:	0°
230-22-012	Viewing direction:	12°
230-22-030	Viewing direction:	30°
Ø 4MM	Working length: 302mm	
230-21-000	Viewing direction:	0°
230-21-012	Viewing direction:	12°
230-21-030	Viewing direction:	30°
230-21-070	Viewing direction:	70°

semiflex HYSTEROSCOPE

AUTOCLAVE
18 min / 134°C / 273°F

HD Scope



Ø 2.7MM	Working length: 302mm	
230-56-000SF	Viewing direction:	0°
230-56-012SF	Viewing direction:	12°
230-56-030SF	Viewing direction:	30°
Ø 4MM	Working length: 302mm	
230-57-000SF	Viewing direction:	0°
230-57-012SF	Viewing direction:	12°
230-57-030SF	Viewing direction:	30°
230-57-070SF	Viewing direction:	70°

semiflex CYSTOSCOPE

AUTOCLAVE
18 min / 134°C / 273°F

HD Scope



Ø 2.7MM	Working length: 302mm	
230-20-000SF	Viewing direction:	0°
230-20-012SF	Viewing direction:	12°
230-20-030SF	Viewing direction:	30°
Ø 4MM	Working length: 302mm	
230-21-000SF	Viewing direction:	0°
230-21-012SF	Viewing direction:	12°
230-21-030SF	Viewing direction:	30°
230-21-070SF	Viewing direction:	70°



SINUSCOPE - wide angle

AUTOCLAVE

18 min / 134°C / 273°F

HD Scope

Ø 1.9MM	Working length: 69mm	
230-34-100	Viewing direction:	0°
230-34-130	Viewing direction:	30°
Ø 2.4MM	Working length: 89mm	
230-34-200	Viewing direction:	0°
230-34-230	Viewing direction:	30°
Ø 2.7MM	Working length: 110mm	
230-34-000	Viewing direction:	0°
230-34-030	Viewing direction:	30°
230-34-070	Viewing direction:	70°
	Working length: 141mm	
230-59-000	Viewing direction:	0°
230-59-030	Viewing direction:	30°
230-59-045	Viewing direction:	45°
230-59-070	Viewing direction:	70°
	Working length: 175mm	
230-58-000	Viewing direction:	0°
230-58-030	Viewing direction:	30°
230-58-045	Viewing direction:	45°
230-58-070	Viewing direction:	70°
	Working length: 187mm	
230-35-000	Viewing direction:	0°
230-35-030	Viewing direction:	30°
230-35-070	Viewing direction:	70°
Ø 3MM	Working length: 110mm	
230-34-300	Viewing direction:	0°
230-34-330	Viewing direction:	30°



Ø 4MM	Working length: 140mm	
230-36-100	Viewing direction:	0°
230-36-130	Viewing direction:	30°
230-36-145	Viewing direction:	45°
230-36-170	Viewing direction:	70°
	Working length: 175mm	
230-36-000	Viewing direction:	0°
230-36-030	Viewing direction:	30°
230-36-045	Viewing direction:	45°
230-36-070	Viewing direction:	70°
230-36-090	Viewing direction:	90°
	Working length: 175mm	
230-36-030TU	Viewing direction:	30°
230-36-045TU	Viewing direction:	45°

TU = 180° rotated light cable connection

semiflex SINUSCOPE - wide angle

AUTOCLAVE

18 min / 134°C / 273°F

HD Scope


Ø 2.7MM	Working length: 110mm	
230-34-000SF	Viewing direction:	0°
230-34-030SF	Viewing direction:	30°
	Working length: 175mm	
230-58-000SF	Viewing direction:	0°
230-58-030SF	Viewing direction:	30°
	Working length: 187mm	
230-35-000SF	Viewing direction:	0°
230-35-030SF	Viewing direction:	30°
Ø 4MM	Working length: 175mm	
230-36-000SF	Viewing direction:	0°
230-36-030SF	Viewing direction:	30°
230-36-045SF	Viewing direction:	45°
230-36-070SF	Viewing direction:	70°



TELE-LARYNGO-PHARYNGOSCOPE

(Extension: 5x-7x, soakable) / lateral illumination



HD Scope

Ø 11MM

Working length: 200mm

230-62-070

Viewing direction:

70°

230-62-090

Viewing direction:

90°

LARYNGOSCOPE

AUTOCLAVE
18 min / 134°C / 273°F

HD Scope



lateral illumination

Ø 10MM

Working length: 190mm

230-63-070

Viewing direction:

70°

Working length: 190mm

230-63-090

Viewing direction:

90°

standard illumination

Ø 4MM

Working length: 175mm

230-63-170

Viewing direction:

70°

230-63-190

Viewing direction:

90°

Ø 5.8MM

Working length: 188mm

230-63-270

Viewing direction:

70°

BRONCHOSCOPE OESOPHAGOSCOPE

AUTOCLAVE
18 min / 134°C / 273°F

HD Scope



Ø 2.9MM

Working length: 303mm

230-84-000

Viewing direction:

0°

Working length: 365mm

230-84-100

Viewing direction:

0°

Ø 5.5MM

Working length: 490mm

230-85-000

Viewing direction:

0°

230-85-030

Viewing direction:

30°

OESOPHAGOSCOPE

Ø 5.5MM

Working length: 530mm

230-86-000

Viewing direction:

0°

OTOSCOPE

AUTOCLAVE
18 min / 134°C / 273°F

HD Scope



Ø 2.7MM

Working length: 34mm

230-80-000

Viewing direction:

0°

Working length: 50mm

230-81-000

Viewing direction:

0°

230-81-030

Viewing direction:

30°

Ø 4MM

Working length: 50mm

230-82-000

Viewing direction:

0°

230-82-030

Viewing direction:

30°

**NASO-PHARYNGO / LARYNGOSCOPE**

- 2 way deflection
- One hand operation
- Completely soakable and designed for gas sterilization
- With ETO valve



	Ø	image bundle	working length	deflection	direction of view	field of view	depth of focus / mm	working channel
230-70-000	3.2	7.000	300	140° up/down	0°	70°	6 - 1.000	-
230-72-000	3.2	16.000	300	140° up/down	0°	70°	6 - 1.000	-
230-71-000	3.8	12.000	300	125° up/down	0°	90°	5 - ∞	-
230-70-400	4.3	7.000	400	140° up/down	0°	85°	3 - ∞	Ø 1.4mm

Delivery contains: Scope, transport case, leakage tester, light guide

6 convincing reasons for ELCON Endoscopes

1 Proximal and distal saphir-window, scratch-resistant, no glass corrosion

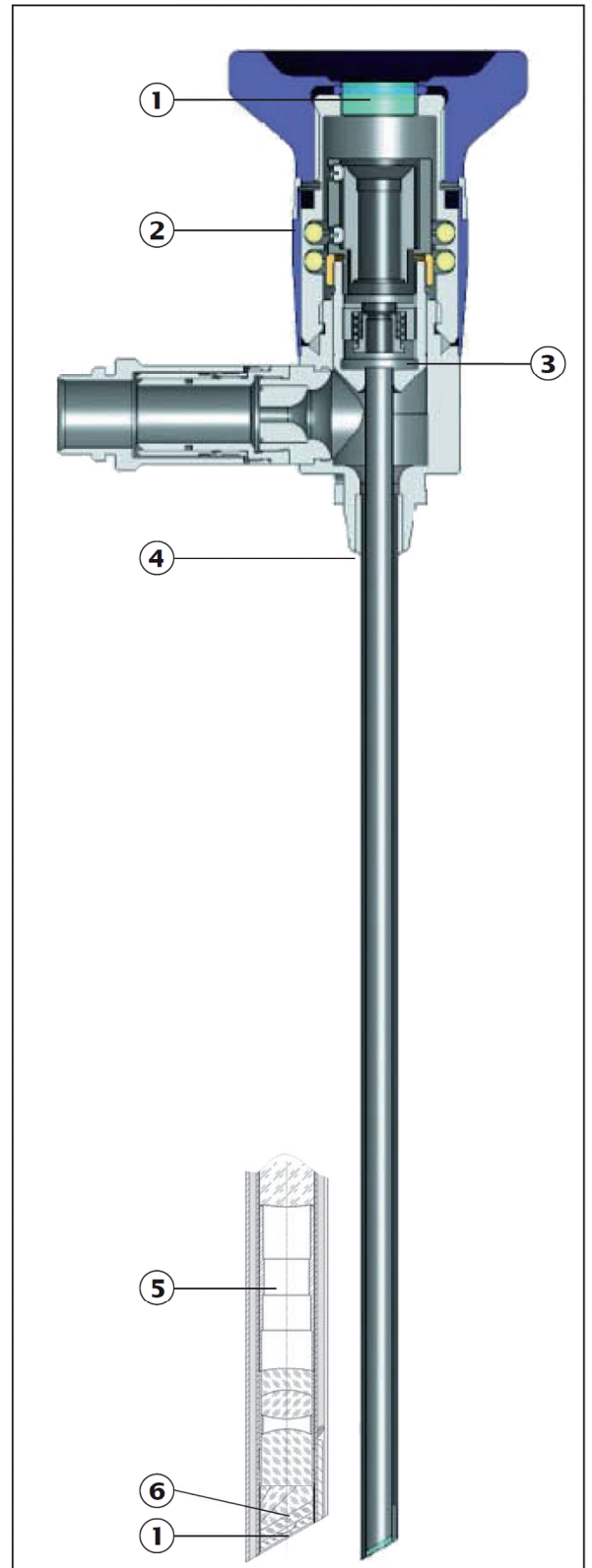
2 Scope body and sheath are made of stainless steel, no coating

3 Laser-welded optical centering = hermetic sealing between optics/fiber optics

4 Laser-welded connection between body and outer tube

5 Airspaces filled with drying agent = less humidity, longer service life

6 Service-friendly objective; most parts can be reuse



Repair or Exchange for all important brands!

With our well established Repair program you can offer your customers a fair and transparent service. You may rest assured, 90 % of all rigid surgical endoscopes can be repaired or exchanged.

Send us your damaged scopes and we offer you:

Repair if cheaper and safe

Four different REPAIR levels keep the program easy and straightforward. Detailed cost estimate reports and service reports with images before / after repair as well as our quality management system gives you full traceability of all repairs.

Exchange if necessary

EXCHANGE of below-listed Scopes into a NEW ELCON Scope saves you up to 1.000,00 EUR compared to our regular price list and offers you an **extended warranty** for the brand new ELCON scope **of 3 years**.

Type of Scope	ø (mm)	Compatible	Repair	Exchange
Arthroscope Sinuscope	4 / 2.7	ELCON & all other labels	Please ask for our repair program	Please ask for our exchange price list
Laparoscope	5 / 6.5 / 10	ELCON & all other labels	Please ask for our repair program	Please ask for our new repair program
Uro / Gyn	4	ELCON & all other labels	Please ask for our repair program	Please ask for our new repair program
URS	6 / 7.5	ELCON & Wolf	Please ask for our repair program	Please ask for our new repair program
Warranty			1 year	3 years

Sterilisation

All ELCON endoscopes with AUTOCLAVE mark are according to WHO-recommendation suitable for steam sterilisation - 18 min. at 134 °C/273 °F.



Since the outbreak of the Creutzfeldt-Jakob disease, many scientists have been busy to find out how to avoid the risk of transmission of the Spongiform Encephalopathy (Creutzfeldt-Jakob Disease, or BSE) during invasive operations particularly in the field of neurosurgery, spinal surgery or in case of ophthalmological surgical operations.

The World Health Organisation (WHO) has now published a report with recommendations regarding the handling of surgical instruments and endoscopes in view of sterility (WHO/CDS/CSR/APH/2000.3 <http://www.who.int/csr/en>).

According to this report, it is advisable to use disposable material. If not possible or too costly, the autoclaving and chemical sterilisation are considered to be most effective methods in order to maintain the heat resistance and reusability of endoscopes. In this context, the mandatory holding time with a defined maximum temperature (18-20 minutes with 134 °C) is a new and technically very complex requirement for rigid endoscopes.

ELCON Medical Instruments GmbH, having its core competence exactly in this field, offers now all autoclavable rigid endoscopes with validation concerning this new requirement of **18-20 minutes with a temperature of 134 °C**.

Reconditioning Compatibility of ELCON - Endoscopes

New sterilisation methods require a constructive consideration in scope manufacturing.

In times of increased infections new sterilisation methods have been developed to assure a safe and fast sterilisation process. Those sterilisation methods which do not have the major disadvantages of gas sterilisation (residues, environmental compatibility), are finding more and more acceptance in hospitals.

The advantages are evident:

- Short cycle times (usually < 75 minutes)
- No cooling cycles
- No toxic residues, therefore no burden for the persons in charge
- Remaining humidity < 5 %, not corrosive
- Virucide, sporicide, tuberculocide, bacteriozide, fungizide
- Suitable for thermolabile materials, as temperature is < 56 °C
- Process controlled

ELCON endoscopes have shown their material compatibility for these application methods by passing several tests.

STERIS® from Steris Corporation

STERIS® is a „cold“ liquid sterilisation. Acetic peroxide is mixed with sterile water, the instruments to be sterilised are washed with solvents. Precise information on www.steris.com

STERRAD® (50, 100, 100S, 200) from Johnson & Johnson

STERRAD® is a low temperature-plasma sterilisation. The hydrogen peroxide dioxide is transported from the magnetic field to the plasma phase.

The methods of STERRAD® and STERIS® help to avoid high temperatures on optical systems. This results in a very gentle sterilisation method. Nevertheless, the use of peracetic acid as well as hydrogen peroxide may cause a more intensive wear of the endoscope surfaces (washout, bleaching effects). However, these effects do not have any influence on the lifetime of the endoscopes. It is mainly a „cosmetical“ effect. These effects have such a minor influence on the lifetime of the endoscopes compared to the effects of high temperature methods.

All ELCON endoscopes are material compatible regarding following process:

- Soaking in disinfectant which is approved for instrument disinfection
- Gas sterilisation: formaldehyde, ethylene oxide
- STERRAD®* and STERIS® methods. The procedure STERRAD® NX is not approved for application.
- Autoclavation 18-20 minutes at 134 °C according to WHO-recommendation, see label.

The effects of the sterilizing process have to be documented by the user



ELCON

MEDICAL INSTRUMENTS GmbH

D - 78532 Tuttlingen
Tel: +49 7461 9281-0
info@elcon-medical.de

Dr. Karl-Storz-Str. 26
Fax: +49 7461 9281-29
www.elcon-medical.com