

General Information

With this catalogue, you can get an overall view of our current Standard range of endoscopes. This program covers a clear range of the most common optics for the different areas of application. Kindly contact us if you should be in need of optics which are not yet included in the present range.

Warranty

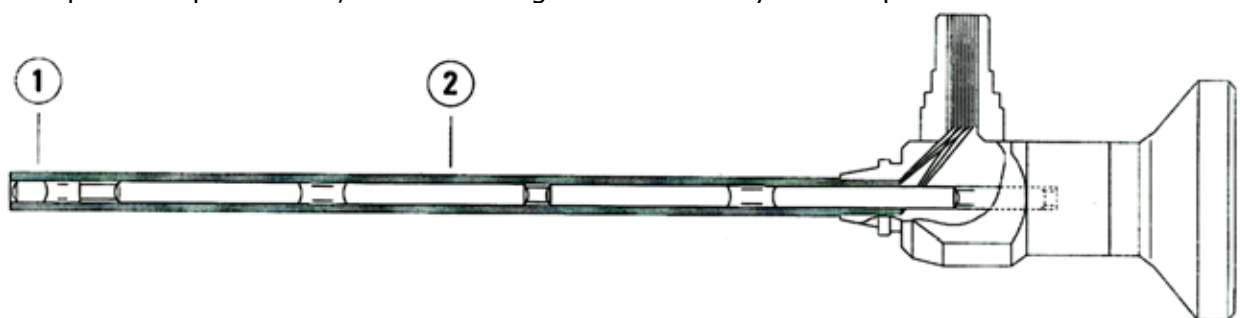
Autoclavable (134 C° / 273 F°)

All products with this sign are fully autoclavable. We guarantee 6 months for full autoclavability of this optics (see chapter **Autoclaving**)

Technical Features

Due to our long experience in the construction and production of endoscopes, our optics meet with all technical requirements for a first class product:

- **compact objectives**
- The new generation of compact objectives used in our endoscopes provides the guarantee for full autoclavability even for a long period and gives the user the security for a long life of the product.
- **rod lens system**
- New evaluated rod lens systems guarantee an illumination which really is second to none.
- **large image size**
- A high enlargement guarantees a comfortable working, even if the monitor is not so close to the operation field.
- comfortable direction of view on all optics according to the necessity of the operation
- brilliant illumination and crystal clear resolution
- true color rendition and regular focus on the whole image
- optimal depth of field, also according to the necessity of the operation



picture 01: Lens System

① *Kompaktobjektiv*
② *Stablinsen-System*

① compact objective
② system of rod lenses

Medical Capability

For the production of our optics we only use high-grade materials. All metal parts are made of stainless steel. This has a lot of advantages in comparison to the chromated brass bodies which are still used by many notable companies. The chromium can split and this can lead to an oxidation, which consequently means that the optic is no longer medical capable. A pure high-grade steel optic is much easier to repair or to rework.

Technical Features

Compatibility

- All endoscopes are Storz-compatible.
- All endoscopes are equipped with the fittings for all common light guides (Storz, Olympus, Wolf, ACM)
- All optics corresponds to DIN norms DIN 58105, part 1 and 2, for rigid and flexible endoscopes.
- All eyepieces correspond to DIN 58105, part 2 and therefore are compatible to all common camera systems.

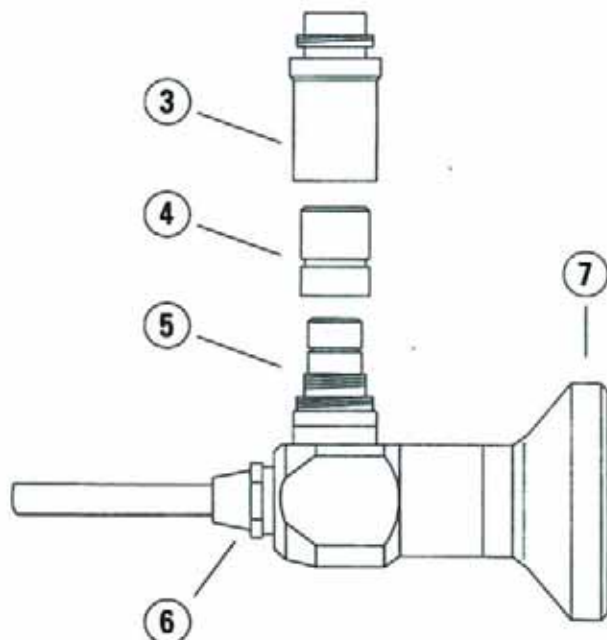
3) Storz/Olympus fitting

4) Wolf fitting

5) ACM connector

6) Storz connector

7) Eyepiece (DIN 58105)



picture 02: Light Guide Connector, Fittings and Eyepiece

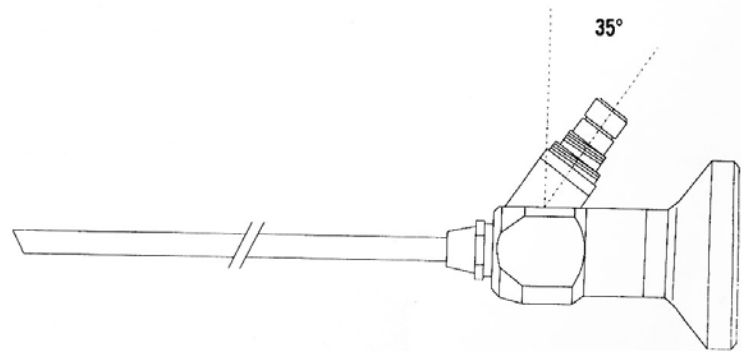
Special Constructions

For any further requirements please don't hesitate to contact us. On principle everything should be possible!

Technical Features

example 1

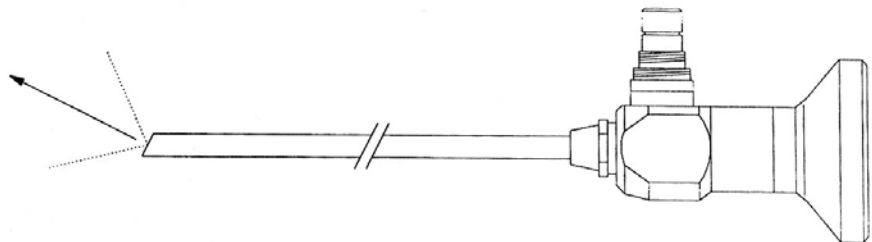
Light guide connector
35° beveled



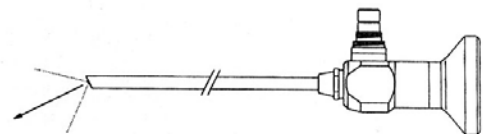
Picture 03: light guide connector 35° bevelled

example 2

Viewing direction
turned 180° (to
light guide
connector)



Compared to usual viewing direction



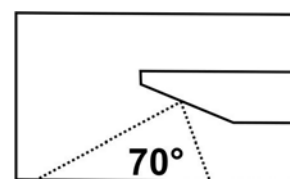
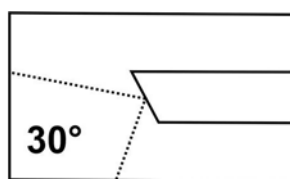
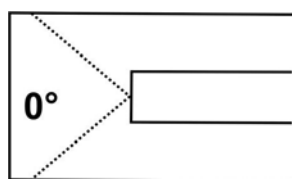
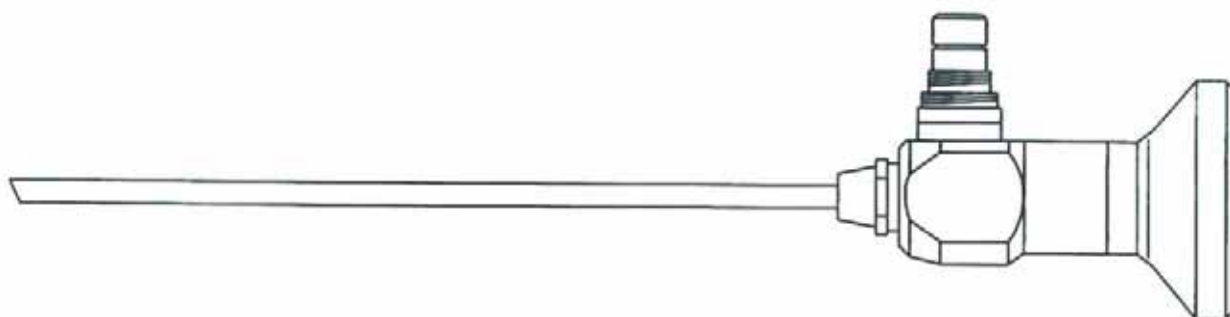
picture 04: viewing direction turned 180"

- A. All autoclavable optics are etched "autoclave 134°C/273°F".
- B. All optics may only be autoclaved at 134°C/273°F ($\pm 5^\circ$) for a maximum of 8 minutes. Failure to follow these parameters may destroy the optic.
- C. Optics should not be autoclaved at 120°C/248°F, as the prolonged sterilization time may damage the optics.
- D. The endoscopes must be thoroughly cleaned before autoclaving. Under no circumstances a hard object should be used for this purpose. We recommend the use of alcohol and cotton pads for the cleaning of optical surfaces (distal and proximal). Under no circumstances optics may be cleaned with the use of ultrasonic waves as this may also destroy them! Poorly cleaned surfaces lead to significant impairment and unavoidably to dimming of the lenses.
- E. The precleaned optics are placed in sterilization containers or sterilization cloths specially designed for this purpose. Care must be taken to ensure that no thermal bridge exists between the optic and the sterilization container.

Autoclaving

- F. After the sterilization is complete, the optics in the sterilizer are allowed to slowly cool to room temperature. Rapid cooling will destroy the optic.
- G. Please follow any further instructions pertaining to your particular sterilizer and have it inspected from time to time.

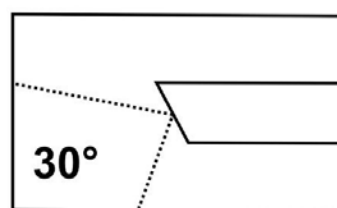
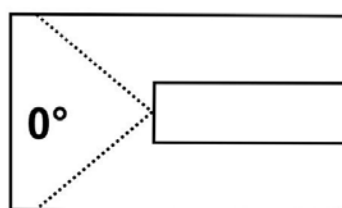
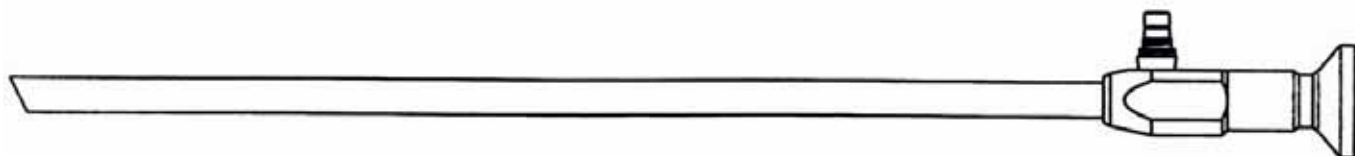
Arthroscopes



Ø	l=Length	0°	30°	70°
1.7 mm	58 mm	32E-017.00		
	104 mm	32E-017.10		
2.7 mm	180 mm	32E-027.10	32E-027.13	32E-027.17
4.0 mm	180 mm	32E-040.00	32E-040.03	32E-040.07

autoclavable (134°C / 273°F)

Laparoscopes



Ø	l=Length	0°	30°
2.0 mm	200 mm	30E-301.00	
	300 mm	30E-302.00	
4.0 mm	200 mm	30E-304.00	30E-304.03
5.0 mm	300 mm	30E-305.00	30E-305.03
6.5 mm	300 mm	30E-306.00	30E-306.03
10.0 mm	310 mm	30E-310.00	30E-310.03

autoclavable (134°C / 273°F)

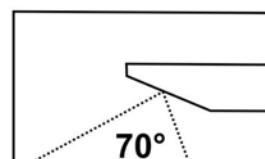
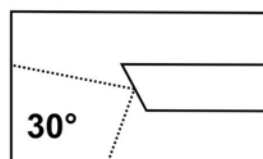
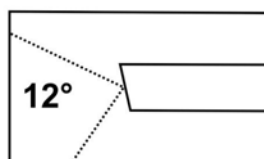
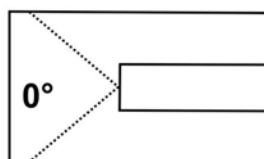
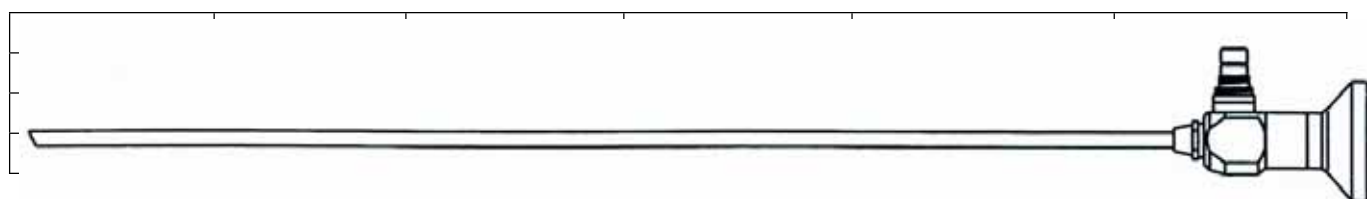
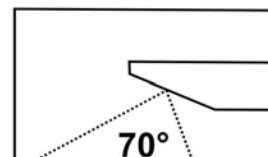
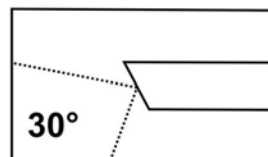
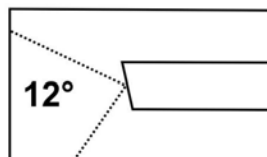
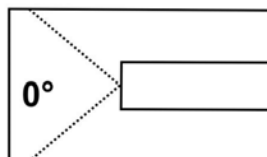
Thoracoscopes

Ø	l=Length	0°	30°
10.0 mm	170 mm	30E-311.00	30E-311.03

autoclavable (134°C / 273°F)

Gynecology - Urology

Hysteroscopes



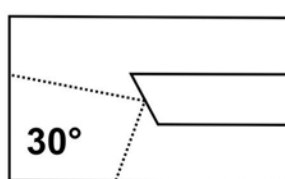
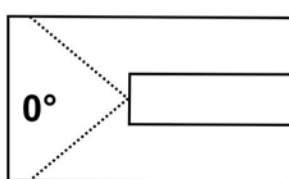
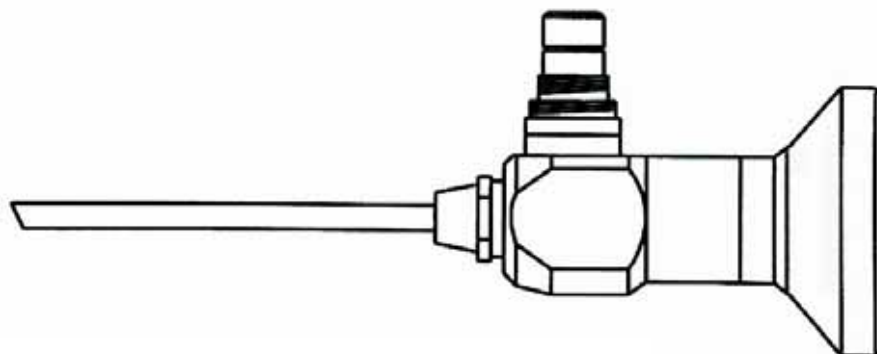
Cystoscopes

Ø	l=Length	0°	12°	30°	70°
2.0 mm	200 mm	33E-020.00			
2.7 mm	302 mm	33E-027.00		33E-027.03	33E-027.07
4.0 mm	302 mm	33E-040.00	33E-040.01	33E-040.03	33E-040.07

autoclavable (134°C / 273°F)

ENT (Ear, Nose, Throat)

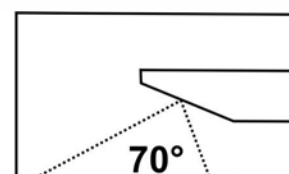
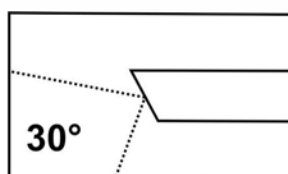
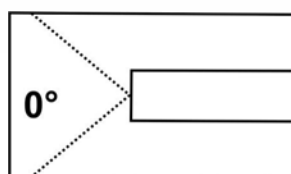
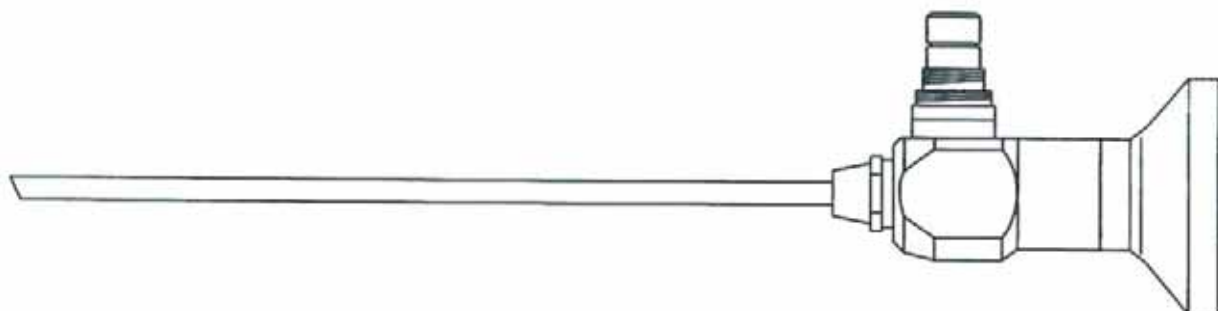
Otoscopes



Ø	l=Length	0°	30°
2.7 mm	50 mm	34E-027.00	34E-027.03
4.0 mm	50 mm	34E-040.00	34E-040.03

autoclavable (134°C / 273°F)

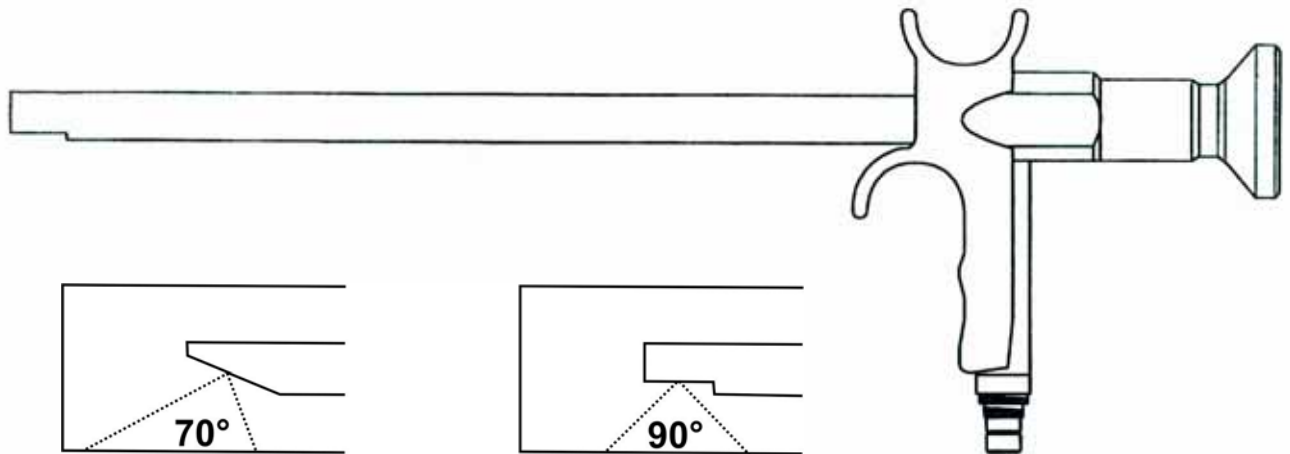
Sinusscopes



Ø	l=Length	0°	30°	70°
2.7 mm	110 mm	34E-012.00	34E-012.03	34E-012.07
	180 mm	34E-022.00	34E-022.03	34E-022.07
4.0 mm	180 mm	34E-014.00	34E-014.03	34E-014.07

autoclavable (134°C / 273°F)

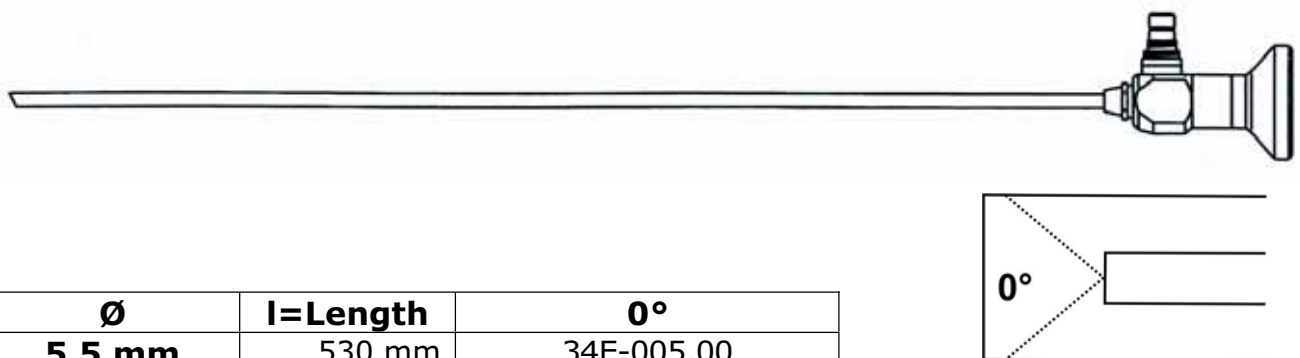
laryngoscopes



Ø	l=Length	70°	90°
10.0 mm	190 mm	34E-010.07	34E-010.09

autoclavable (134°C / 273°F)

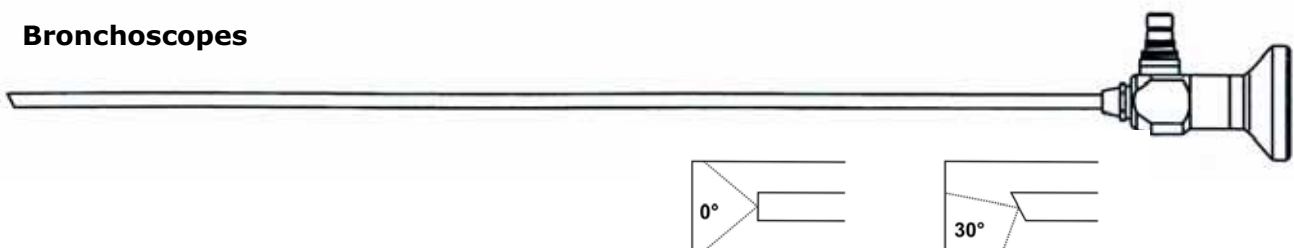
Oesophafoscopes



Ø	l=Length	0°
5.5 mm	530 mm	34E-005.00

autoclavable (134°C / 273°F)

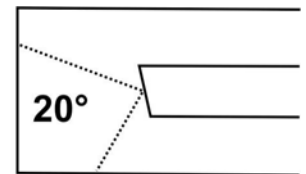
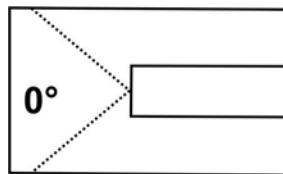
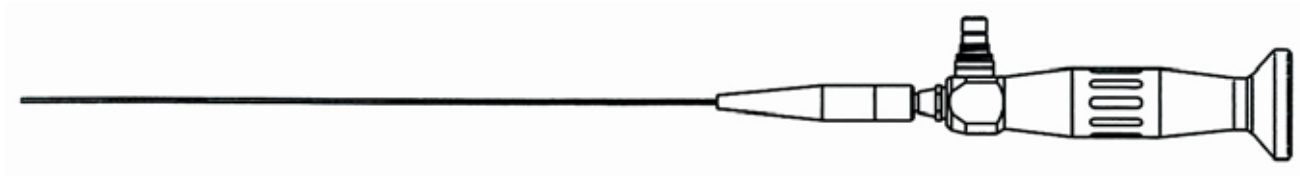
Bronchoscopes



Ø	l=Length	0°	30°
5.5 mm	505 mm	34E-006.00	34E-006.03

autoclavable (134°C / 273°F)

Flexible Microendoscopy



Flexible Microendoscopes Ø 0,3 mm	Fix-focus	Focusable	c-mount
0° 1.600 pixel	35E-003.10	35E-003.20	35E-003.30
20° 1.600 pixel	35E-003.12	35E-003.22	35E-003.32

Soakable length variable up to 1000 ml

Flexible Microendoscopes	fix-focus	focusable	c-mount
Ø 0,5 mm 0° 3.000 pixel	35E-005.10	35E-005.20	35E-005.30
Ø 0,5 mm 20° 3.000 pixel	35E-005.12	35E-005.22	35E-005.32
Ø 0,7 mm 0° 6.000 pixel	35E-007.10	35E-007.20	35E-007.30
Ø 0,7 mm 20° 6.000 pixel	35E-007.12	35E-007.22	35E-007.32
Ø 0,9 mm 0° 6.000 pixel	35E-009.10	35E-009.20	35E-009.30
Ø 0,9 mm 20° 6.000 pixel	35E-009.12	35E-009.22	35E-009.32
Ø 1,2 mm 0° 6.000 pixel	35E-012.10	35E-012.20	35E-012.30
Ø 1,2 mm 20° 6.000 pixel	35E-012.12	35E-012.22	35E-012.32
Ø 1,4 mm 0° 10.000 pixel	35E-014.10	35E-014.20	35E-014.30
Ø 1,4 mm 20° 10.000 pixel	35E-014.12	35E-014.22	35E-014.32
Ø 1,6 mm 0° 10.000 pixel	35E-016.10	35E-016.20	35E-016.30
Ø 1,6 mm 20° 10.000 pixel	35E-016.12	35E-016.22	35E-016.32

Soakable length variable up to 2000 ml



sterilisierbar im Autoklav, zugentlastet
sterilizable in the autoclave, pullprotected
esterilizable en autoclave
stérilisable en autoclave



1,80 m

2,30 m

ø 3,5 mm

38E-018.35

38E-023.35

ø 4,8 mm

38E-018.48

38E-023.48



38E-050.01

Storz
AESCULAP

Storz
AESCULAP
Winter & Ibe



38E-051.01



38E-050.05

OLYMPUS
ACM
MARTIN

ACM
BRITISH
CODMAN



38E-051.05



38E-050.10

WOLF / HSW
MEDICON
COMEG / DYONICS

WOLF / HSW
MEDICON
COMEG / DYONICS



38E-051.10



38E-050.15

HEINE
OPTOTECHNIK

HEINE
OPTOTECHNIK



38E-051.15



38E-050.20

VOLPI
SCHÖLLY
RFQ



38E-050.25

PENTAX



38E-050.30

FUJI