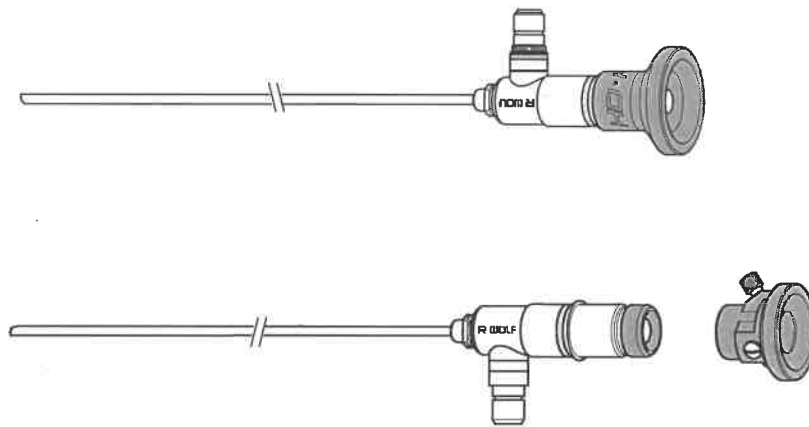


Instruction Manual



Rigid Endoscopes

PANDVIEW

PLUS

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lumina SL

3

ULTRA

⚠ Important general notes and instructions ⚠

Make sure that this product is used only as intended and described in this instruction manual, by adequately trained and qualified medical personnel, and that maintenance and repair are only carried out by authorized experts.

Use the product only in the combinations and with the accessories and spare parts specified in this instruction manual. Use other combinations, accessories and replacement parts only if they are expressly intended for the planned application and if the performance characteristics and safety requirements are not impaired. Do not alter the product in any way.

Reprocess the products before every application and before returning them for repairs as required by the instruction manual in order to protect the patient, user and others.

This manual is an integral part of the product and must be stored in such a way that it is accessible at any time during its entire life cycle. This manual must be passed on to any subsequent owner.

Immediately upon receipt, check the product and its accessories for completeness and possible damage. Should the shipment give right to complaints, please inform the manufacturer or supplier immediately.

Subject to technical changes!

Due to ongoing developments, the illustrations and technical data may deviate slightly.

CAUTION :

Federal law restricts this device to sale by or on the order of a physician.

Safety instructions and levels of danger

Symbols	Level of danger
	WARNING! <i>Failure to observe can result in death or serious injury.</i>
	CAUTION! <i>Failure to observe can result in slight injury or damage to the product.</i>
	IMPORTANT! <i>Failure to observe can result in damage to the product or surroundings.</i>
	NOTE! <i>Tips for optimum use and other useful information.</i>



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1 Technical description

The rigid endoscopes available in different product variants and consist of the following:

◇ Endoscope

with fixed eyecup

- ◆ with sheath tube, integrated light guide, optical system
- ◆ with locking cone
- ◆ cold-light connector
- ◆ with adapter (can be unscrewed)
- ◆ with color coding ring indicating the direction of view

with plug-on eyecup

- ◆ with sheath tube, integrated light guide, optical system
- ◆ with locking cone
- ◆ cold-light connector
- ◆ with adapter (can be unscrewed)
- ◆ with color coding ring indicating the direction of view
- ◆ with plug-on eyepiece adapter

Possible identification of the fiber bundle diameter on the endoscope:

- ◆ The product is marked with the code number and a color coding ring (new design).
- ◆ only the code number (numerical) is on the product.
- ◆ no code number and no coding ring are on the product

2 Intended use

The rigid endoscopes are used for visualizing the inside of the patient via natural or surgically created passages.

These products are exclusively intended for use by specialized medical personnel and must only be used by medically qualified and adequately instructed persons.

3 Indications and field of use

Rigid endoscopes

are designed for examination, diagnosis and / or therapy in conjunction with endoscopic accessories in the various medical disciplines.

4 Contraindications and side effects

4.1 Contraindications

- CJD** - Creutzfeldt Jakob Disease or a
- vCJD** - Variant of the Creutzfeldt-Jakob Disease
- BSE** - Bovine Spongiform Encephalopathy; so-called mad cow disease (e.g. Creutzfeldt-Jakob Disease)
- TSE** - Transmissible Spongiform Encephalopathy

On the basis of the patient's general condition the doctor in charge must decide whether the planned use is possible or not.

The laws and regulations valid in your country must be complied with.

For further notes and instructions please refer to the latest medical literature...

Contraindications directly related to the product are presently unknown

4.2 Side effects

No side effects are to be expected if the system is used as intended.

5 Combinations

The rigid endoscopes are used in conjunction with:

Rigid endoscopes

- ◇ Light sources and fiber light cables / fusion fiber light cable
- ◇ Video cameras and objective lenses
- ◇ Mirror reflex cameras
- ◇ Endoscopic accessories, e.g.
 - ◆ Trocar sleeves, forceps and scissors, electrodes



CAUTION!

Do not combine products incorrectly!

Injuries of the patient, user or others as well as damage to the product are possible. The different products can only be used together if their intended uses and relevant technical data (such as working length, diameter, peak voltage, etc.) are the same.

Follow the instruction manuals or the corresponding system manuals of the products used in combination with this product.

Follow the "Notes and instructions on HF applications", order no.: GA-S 002 as well as the HF device manufacturer's instructions.

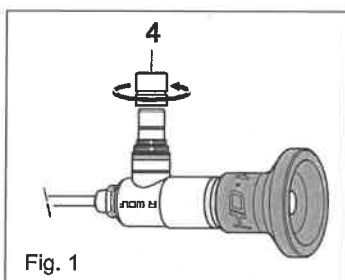


Fig. 1

Fig. 1

- ◇ The adapter (4) on the endoscope can be unscrewed and replaced by the corresponding adapters to connect fiber light cables of other manufacturers.
 - ◆ For order data, please follow the latest catalog pages.
 - ◆ For this, see GA-A287 and GA-A009

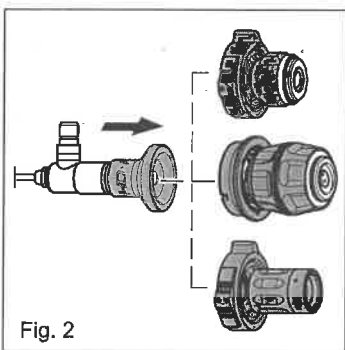


Fig. 2

Fig. 2

- ◇ Objective lenses with C-mount thread for working via the monitor or under direct view.
 - ◆ For order data, please follow the latest catalog sheets.
 - ◆ For this, see GA-S022

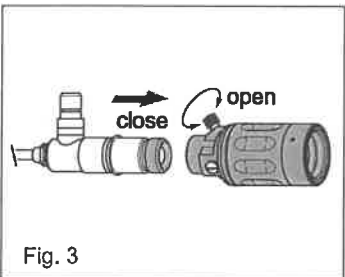


Fig. 3

Fig. 3

- ◇ Objective lenses with RW-mount thread for working via the monitor or under direct view.
 - ◆ For order data, please follow the latest catalog pages.
 - ◆ For this, see GA-S022

Fig. 4

- ◇ Plug-on eyecup (18) for the connection of objective lenses with C-mount thread to endoscopes with plug-on eyepiece adapter (14).
Plug-on eyecup, rotatable, special design for video TUR.
- For order data, please follow the latest catalog pages.
- For this, see GA-S022

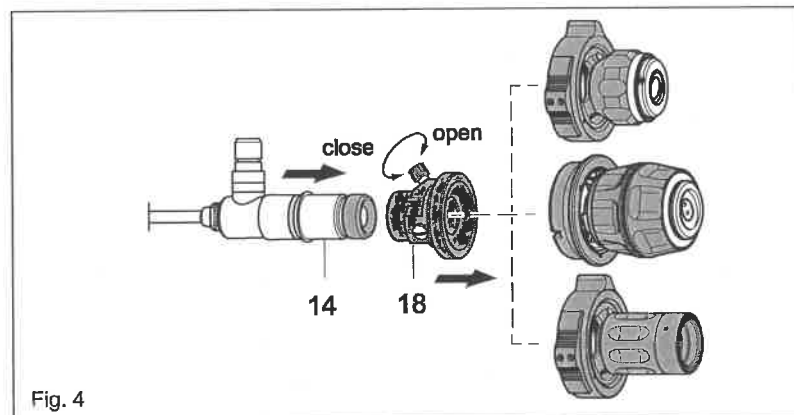


Fig. 4



6.1 Legend and identification

Item	Designation	Item	Designation
A	Endoscope (new design) - with fixed eyepiece and eyecup - with color coding ring and code number (numerical) identification of fiber bundle diameter	B	Endoscope (new design) - with fixed eyepiece and eyecup - with code number (numerical) identification of fiber bundle diameter
C	Endoscope (new telescope design) - with plug-on eyecup - with code number (numerical) identification of fiber bundle diameter	D	Endoscope - with fixed eyepiece and eyecup
E	Endoscope - with plug-on eyecup	F	Endoscope (PANOVIEW ULTRA) - with fixed eyepiece and eyecup - with color coding ring and code number (numerical) identification of fiber bundle diameter
1	Sheath tube	10	Product no.
2	Locking cone	11	Serial no.
3	Color coding ring identification of fiber bundle diameter	12	Numerical Indication of direction of view
4	Adapter	13	Sheath tube diameter
5	External thread for connecting suitable adapters	14	Plug-on eyepiece adapter
6	Numerical identification number identification of fiber bundle diameter	15	Color coding ring, red Identification of steam-sterilizability using the fractionated pre-vacuum procedure at 134°C (273°F)
7	Color coding ring Identification of direction of view	16	Convex ring only on PANOVIEW- *PLUS* Identification of increased object field; high detail resolution
8	HD Identification of high definition	17	AUTOCLAVE Identification of steam-sterilizability
9	Eyepiece with eyecup	18	Plug-on eyecup

Item	Explanations for items 3, 6 and 7	Color	Code number	Fiber bundle diameter in [mm]	
				Fiber light cable	FUSION Fiber light cable
3	Color coding ring Identification of fiber bundle diameter	blue	-	1.6	-
		green	-	2.5	-
		orange	-	3.5	-
		gray	-	5.0	5.0
6	Numerical identification number Identification of fiber bundle diameter	-	16	1.6	-
		-	25	2.5	-
		-	35	3.5	-
		-	45	5.0	5.0
		-	50		
		Color		Direction of view [°]	
7	Color coding ring Identification of direction of view	blue	0		
		green	5		
		orange	12 / 45 - 50		
		red	30 - 30		
		gray	50		
		purple	60		
		yellow	70		
		brown	90		
		white	110		

Symbols	Designation
	Follow the instruction manual
	Observe the instruction manual
REF	Order number
LOT	Lot identification
SN	Serial no.
	Manufacturer
CE	Identification in conformity with Medical Product Directive 93/42/EEC, only valid if the product and/or the packaging is marked with this identification . Products of category IIa and above, as well as sterile products or products with measuring function of category I, are additionally marked with the code no. of the notified body (0124).

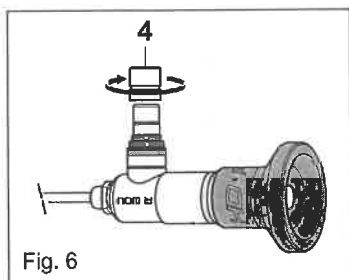
7 Application



CAUTION!

*The products have only limited strength!
Excessive force will cause damage, impair the function and therefore endanger the patient.
Immediately before and after each use, check the products for damage, loose parts and completeness.
Make sure that no missing parts remain in the patient.
Do not use the products if they are damaged or incomplete or have loose parts.*

7.1 Preparation



- ◇ Carry out a check: see section 8

Fig. 6

- ◇ Screw the adapter (4) to the endoscope.

7.1.1 Identification of fiber bundle diameter on endoscope



IMPORTANT!

To achieve optimum light transmission, the fiber bundle diameters of the endoscope and fiber light cable must match.

Possible consequences if there is a mismatch:

- ◇ Fiber light cables with excessively large fiber bundle diameter (cross-section) cause
 - ✦ excessive heating at the coupling point with the endoscope
- ◇ Fiber light cables with excessively small fiber bundle diameter (cross-section) cause
 - ✦ reduced light output



CAUTION!

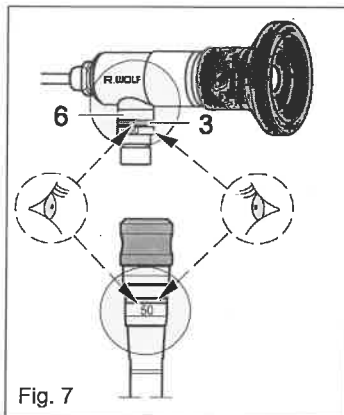
*Intense heat due to high light energy!
Unfavorable combinations can cause a temperature increase at the coupling point of the fiber light cable and at the light outlet of the endoscope.
Burns on the patient, user and others as well as damage to endoscope are possible.
Reduce the light output or adapt the light cable cross section.*

Due to the different product variants, the identification of the fiber bundle diameter on the endoscope differs.

Possible identification on the endoscope:

- ◇ The product is marked with the code number and color coding ring (new design).
- ◇ Only the code number (numerical) is on the product.
- ◇ No code number and no color coding ring is found on the product.

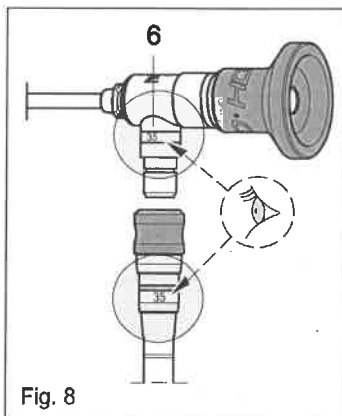
The fiber bundle diameter of the fiber light cable / fusion fiber light cable is marked with a color coding ring and a code number on the endoscope connector of the light cable.



A code number and color coding ring are found on the endoscope

Fig. 7

The code number (6) and the color coding ring (3) on the endoscope and on the endoscope connector of the fiber light cable must be the same.



If there is only the code number on the endoscope

Fig. 8

The code number (6) on the endoscope and on the endoscope connector of the fiber light cable must be the same.

NOTE!

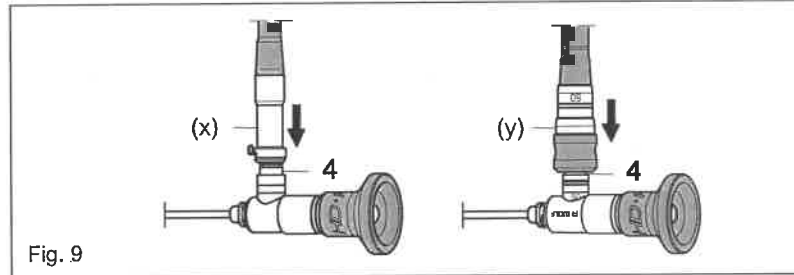
If there is no code number and no color coding ring on the endoscope, contact RICHARD WOLF for appropriate fiber light cable size.

7.1.2 Connecting the fiber light cable to the endoscope and the system components

Connecting the fiber light cable

Fig. 9

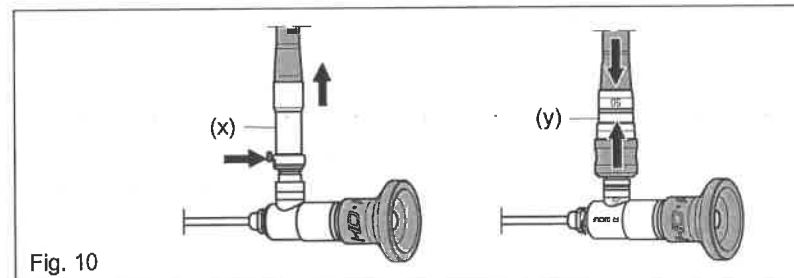
- ◇ Connect the fiber light cable (x) or (y) to the adapter (4) on the endoscope and to a suitable light source.
 - ◆ Fiber light cable (x)
 - adapter, endoscope-to-light cable (tab)
 - ◆ Fiber light cable (y) / fusion fiber light cable / special fiber light cable
 - adapter, endoscope-to-light cable (quick-release coupling with actuation ring)



Removing the fiber light cable

Fig. 10

- ◇ Fiber light cable (x):
 - Push the tab in direction of arrow and remove the fiber light cable (x).
- ◇ Fiber light cable (y) / fusion fiber light cable / special fiber light cable
 - push the fiber light cable (y) slightly against the endoscope, slide the quick-release coupling (ring actuation) in the direction indicated by the arrow and remove the fiber light cable (y).



NOTE!

For further information and notes on the fiber light cables please refer to the descriptions in manuals GA-A287 and GA-A009.

7.2 Indications for Use



IMPORTANT!

Use only products with type BF or CF applied parts in conjunction with the endoscope.

7.2.1 Light



WARNING!

Intense heat due to high light energy!

Danger of inadvertent tissue damage

➤ due to insufficient distance between the light exit area and the tissue

➤ due to soiling/contamination in the light exit area

➤ if high performance sources are used

Do not touch the light exit area and avoid direct contact with the tissue. Remove any soiling.

In neurosurgery use only halogen light sources up to a maximum of 250 W or other light sources (e.g. gas discharge lamps, xenon) up to a maximum of 180 W. Do not use fluid light cables.



WARNING!

Fire hazard!

When placing the endoscope onto heat-sensitive flammable surfaces (dark drapes etc.) the high light energy at the light exit area of the endoscope can cause high temperatures or even ignition.

Store the endoscope in a safe place.

Switch off the light source if the endoscope is not used for a period of time.



CAUTION!

Danger of burns!

Due to the high energy output of the light source the adapters and the glass surface of the fiber light cable are extremely hot when disconnected from the light source.

This may cause burns if inadvertently the patient, user or others touch the parts.

Do not touch the adapter and the glass surface of the fiber light cable. Allow the fiber light cable to cool down.



CAUTION!

Danger of dazzling!

Danger of impaired sight.

Do not look into the light exit area / free end of an endoscope / fiber light cable which is connected to a light source.

7.2.2 Electrical current



WARNING!

Danger of electric shock!

Patient leakage currents can add up if the endoscopes are combined with other powered endoscopic accessories.

Make sure that the combinations do not exceed the permissible patient leakage currents.

7.2.3 Image quality



CAUTION!

Increased risk potential if the image is blurred!

Danger of injuring the patient.

Stop the intervention for safety reasons if the image is blurred.

Check the image quality of the endoscope before use (section 8.2).

7.3 HF applications

Follow the "Notes and instructions on HF applications", order no.: GA-S 002 as well as the HF device manufacturer's instructions.



CAUTION!

*If high-frequency current is used, leakage currents may cause burns!
This may result in burns around the user's eye.
Use the endoscope only with the eyecup connected.*

7.4 Laser application

When applying a laser make sure you follow the laser device manufacturer's instructions as well as the general regulations on the use of lasers.
Wear the required personal protection gear.



CAUTION!

*Highly coherent laser beam!
This may result in injuries from laser energy in the user's face around the eye.
Wear the required personal protection gear when using this product in conjunction with laser devices.
An additional suitable filter attachment is required when using lasers and working with endoscopes under direct view.*

8 Checks



CAUTION!

*Be careful if products are damaged or incomplete!
Injuries of the patient, user and others are possible.
Run through the checks before and after each use.
Do not use the products if they are damaged, incomplete or have loose parts.
Return damaged products together with any loose parts for repair.
Do not attempt to do any repairs yourself.*

8.1 Visual check

- ◇ Check the endoscopes in particular in the distal area and the accessories for:
 - ◆ damage
 - ◆ sharp edges
 - ◆ loose or missing parts
 - ◆ rough surfaces.
- ◇ Any inscriptions or identification necessary for the safe intended use must be legible.
 - ◆ To prevent wrong handling or reprocessing, any illegible lettering, labeling or identification must be reinstated.

8.2 Function check

Fig. 11

- ◇ Check image quality and light output in conjunction with the system components.
- ◇ Check the glass surfaces for any deposits.
 - ◆ Deposits on the glass surfaces can cause a spotted or blurred field of view and hence impair light transmission considerably.
 - ◆ Clean the glass surfaces with a swab soaked with alcohol (wooden swab carrier, not metal or plastic) and hard-to-remove deposits with a suitable instrument cleaner.

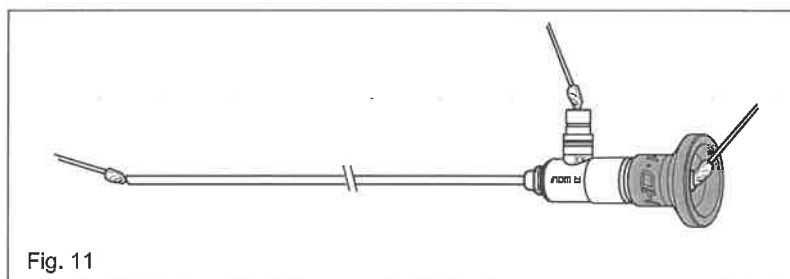


Fig. 11

Fig. 12

- ◇ Check the light output without the system components.
- ◇ Hold the distal end of the endoscope towards a light source.
 - ◆ Broken fibers appear as black dots at the cold-light connector. If approx. 30% of the fibers are broken, the light output is no longer sufficient.

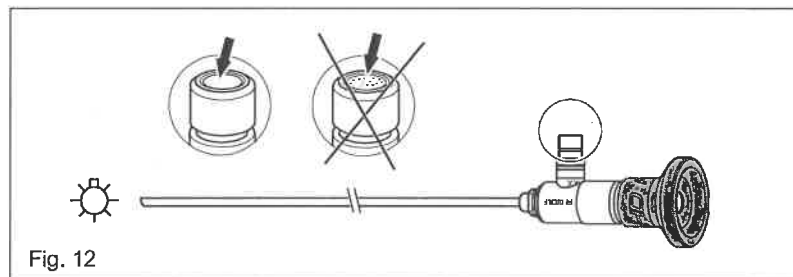


Fig. 12

9 Reprocessing and maintenance



WARNING!

Creutzfeldt-Jakob Disease!

If the patient is suspected of having Creutzfeldt-Jakob Disease (CJD) or a variant of the Creutzfeldt-Jakob Disease (vCJD) or the latter have been diagnosed, adequate measures must be taken to prevent possible transmission to other patients, users and third parties.

For this purpose, apply the country-specific reprocessing guidelines and regulations.



IMPORTANT!

Do not clean plastic parts using metal or sharp-edged tools (such as metal bristle brushes).

9.1 Reprocessing procedure

The following describes the reprocessing procedure used by Richard Wolf GmbH for the validation.



IMPORTANT!

- ◆ *If used as intended and following the manufacturer's instruction manual, it is not necessary to limit the number of possible reprocessing cycles.*
- ◆ *Careful and gentle handling of medical products during the entire reprocessing process has an essential influence on the service life of the products.*
- ◆ *Before returning defective products for repair, they must have been subjected to the entire reprocessing cycle.*
- ◆ *It is the user's responsibility to make sure that the reprocessing process including the resources, material and personnel, is suited to yield the required results.*
- ◆ *The national and international requirements regarding the validation of the reprocessing process established by the user must be observed.*



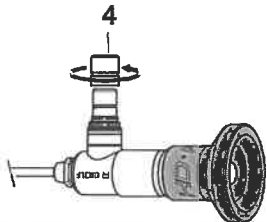
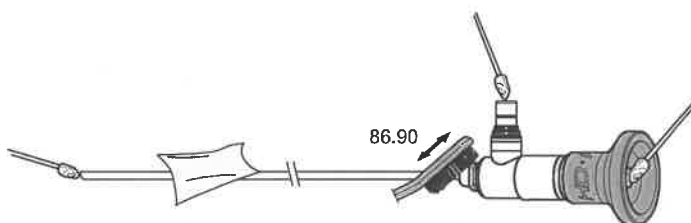
IMPORTANT!

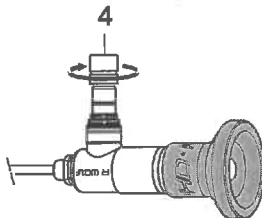
Further notes and instructions on reprocessing are described in manual GA-J020 "Reprocessing of RICHARD WOLF Heat-stable Instruments" and must be followed.



IMPORTANT!

Do not sterilize the products in hot-air sterilizers.

Product:	Endoscopes (A) - (F)
Reprocessing sequence:	
Preparation at the point of use:	Immediately after use, remove coarse soiling from the products. Do not use any agents (e.g. aldehyde) or hot water above 40 °C for pre-cleaning, as this may bake residues to the surfaces.
Transport:	To avoid product damage and contamination of the environment, safe storage in a closed container is necessary.
Disassembly before cleaning:	Remove the adapter (4) from the endoscope. 
Pre-cleaning:	No special requirements
Manual reprocessing	
Cleaning:	1. Immerse the products in a certified cleaning solution for at least 5 minutes. ✦ For the immersion time and the concentration to be used, please refer to the manufacturer's specifications. 2. Brush the outer surfaces with a cleaning brush (86.90) until any visible residues have been removed. 3. At the end, thoroughly rinse the products with tap water for at least 20 seconds. 
Disinfection:	1. Immerse the products in a certified disinfectant solution. ✦ For the immersion time and the concentration to be used, please refer to the manufacturer's specifications. 2. At the end, thoroughly rinse the products with tap water for at least 20 seconds.
Drying:	1. Dry the outer surfaces of the products using a lint-free disposable cloth or swab or, alternatively, dry in a drying cabinet. 2. Clean glass surfaces with a swab soaked in alcohol.
Machine	
Cleaning:	Place the endoscope and adapter (4) into the holders provided in the special reprocessing basket and connect to the machine washer-disinfector. Program parameters ✦ >4 min of pre-washing with cold water ✦ Empty ✦ >6 min of washing with a cleaner at <55°C ✦ Empty ✦ >3 min of neutralization*) with tap water (<40°C) ✦ Empty ✦ >2 min of intermediate rinsing*) with tap water (<40°C) ✦ Empty
Disinfection:	Carry out thermal machine disinfection taking into account the national requirements with regard to the A0 value 3000 (see DIN EN ISO 15883).
Drying:	Dry the products with the drying cycle of the machine washer-disinfector. If necessary, additional drying can be achieved manually using a lint-free disposable cloth or swab, or, alternatively, a drying cabinet. Clean glass surfaces with a swab soaked in alcohol.

Product:	Endoscopes (A) - (F)
Reprocessing sequence:	
Function test, visual check, maintenance:	Check visually for cleanliness. If necessary, repeat the reprocessing procedure until the product is visually clean. ♦ Carry out a visual check: see section 8.1
Assembly before sterilization:	 NOTE! Before sterilization screw on adapter (4) only loosely to allow a sufficient flow of the sterilization medium. Tighten all screw connections before use. Fasten the adapter (4) to the endoscope only loosely, i.e. 1 - 2 turns.
Packaging:	Place the products into the reprocessing basket and wrap for sterilization, taking into account the applicable standards.
Sterilization:	Sterilize the products using the fractionated pre-vacuum method (ISO17665) taking into account the national requirements. ♦ Temperature exposure time: 4 min at 134°C +4°C (273°F +7°F) 132°C +4°C (270°F +7°F) (only for USA) ♦ Evacuation: 3 x ♦ Drying time^{*)}: 10 - 20 min 20 - 30 min (only for USA) ♦ Maximum sterilization temperature: 138°C For steam-sterilizable products the prion program (134°C, 18 minutes) is permissible. NOTE! The STERIS® Vpro Max and STERRAD® sterilization procedures are approved for endoscopes and endoscopic accessories with regard to their material compatibility. Follow the sterilizer manufacturer's specifications.
Storage:	Store the sterilized products in a restricted area at approximately 24°C / 75°F, with at least 4 air exchanges per hour and a relative humidity that does not exceed 70%, in accordance with ANSI / AAMI ST79.

^{*)} depending on the use of the cleaner and the rinsing water, add an acid based on citric acid.

^{**)} The drying time depends on the sterilization process used.

9.2 Alternate Sterilization Methods

- ♦ For possible alternate sterilization methods, refer to our website, www.richardwolfusa.com under „Reprocessing Resources“ for lists of Richard Wolf instruments approved for various reprocessing methods.

9.3 High Level Disinfection

Follow the high level disinfectant manufacturer's instructions for use regarding concentration, soak time, rinsing, and disposal of the solution.



CAUTION!

Cidex OPA solution should not be used to process any urological instruments used to treat patients with a history of bladder cancer.

In rare instances, Cidex OPA solution has been associated with anaphylaxis-like reactions in bladder cancer patients undergoing repeated cystoscopies.

Cidex OPA solution should not be used to process instruments for patients with known sensitivity to Cidex OPA or any of its components.



NOTE!

It is the responsibility of the user to determine whether high level disinfection is the appropriate reprocessing method for the intended use of the instrument, based on the user's own standard of care in compliance with Spaulding classification.

10 Spare parts and accessories

Item	Illustration	Product no.	Designation
18		8885.901	Plug-on connector
Adapters for connection to RICHARD WOLF fiber light cables			
4		15005.199	Adapters endoscope side for endoscopes - with code number and color coding ring
		8095.00	Adapters endoscope side for endoscopes - only with code number - no code number and no color coding ring - Color coding ring, red (indication of steam-sterilizability)
Adapters for connection to fiber light cables made by other manufacturers			
-		808801	Adapters endoscope side for endoscopes - with code number and color coding ring
-			Adapters endoscope side for endoscopes - only with code number - no code number and no color coding ring - Color coding ring, red (indication of steam-sterilizability)
-		8088.81	STORZ 3.5 mm / 4.5 mm, OLYMPUS Standard, Stryker
-		8087.00	STORZ 3.5 mm / 4.5 mm, OLYMPUS Standard, OLYMPUS WA032...A
-		86.90	Cleaning brush Steam-sterilizable universal brush

The products can be combined as required provided the relevant technical data and intended uses are observed. For a general overview please refer to the latest catalog pages, brochures or contact Richard Wolf or your representative.

11 Operating, storage, transport and shipping conditions

Operating conditions	+10°C to +40°C, 30% to 75% rel. humidity, atmospheric pressure 700 hPa to 1060 hPa
Storage, transport and shipping conditions	-20°C to +60°C, 10% to 90% rel. humidity, atmospheric pressure 700 hPa to 1060 hPa

NOTE!

To prevent damage during transport or shipment of the products we recommend using the original packaging material.

11.1 Disposal of product, packaging material and accessories

For the disposal comply with the country-specific laws and regulations.

♦ For further information please contact the manufacturer.

12 Warranty and Customer Service

Richard Wolf guarantees our instruments to be free from any defects in materials and workmanship under normal use and service for one year. Richard Wolf general terms and conditions may be found on the back of our invoice.

Parts delivered separately by Richard Wolf are subject to all of the same general terms and conditions for our products, including the limitations of warranty and liability.

All products should be returned to Richard Wolf for any necessary or desired repair or part replacement. No product repair or part replacement should be done other than by Richard Wolf unless the care and instruction manual or other written information indicates that repair or part replacement is authorized. If authorized, parts must be replaced only by parts supplied or specified by Richard Wolf, and product repair and part replacement must be done in strict conformance with Richard Wolf specifications and instructions for repair and part replacement, including post replacement testing and recalibration. Failure to follow this requirement in any way can be dangerous to you, your personnel and your patients and voids the warranty for the product repaired or the product in which the part was replaced and if the part was supplied by Richard Wolf, for that part.

Delivery by Richard Wolf of technical documents such as circuit or other design diagrams does not constitute authorization for product repair or part replacement. Richard Wolf instruments and other products should never be modified or altered under any circumstances.

Contact Richard Wolf if you have any question (1) whether replacement of a part or a repair is authorized by Richard Wolf, or (2) whether you have complete instructions and specifications for part replacement or repair.

These instructions do not attempt to cover all details or variations in equipment, nor to provide for every possible contingency to be met in connection with installation, operation, or maintenance. Should further information be required or should problems arise which are not covered sufficiently for the purchaser's purpose, the matter should be referred to Richard Wolf Medical Instruments Corporation.

Our national sales and service offices, as well as our manufacturing facility, are located in Illinois. Trained manufacturer's representatives are located throughout the U.S. to serve you. For any questions regarding these instruments, or to place an order, contact Richard Wolf customer service department at 847- 913- 1113 or 800- 323- WOLF (9653).

INSTRUMENT ORDERING POLICY

Richard Wolf reserves the right to make substitutions, if necessary, without prior notice.

REPAIR POLICY

Defective merchandise will be repaired or replaced at no charge to the customer, provided the customer delivers such defective merchandise prepaid. Any repairs, maintenance or servicing of Richard Wolf merchandise by anyone other than a factory authorized representative will render our warranty null and void.

REPAIR SHIPMENTS

When returning your instrument for repair, we suggest that you prevent shipping damage to the instrument by reusing the box that it was originally shipped in. Richard Wolf also recommends that the instrument be insured for an amount to cover the cost of replacement.

IMPORTANT

For general safety and health reasons, Richard Wolf requires that you clean and sterilize all instruments before returning them for repair. If instruments are received in an unsanitary condition, Richard Wolf will clean and sterilize each instrument and add a \$ 100.00 cleaning charge for each instrument requiring cleaning.