

Instruction Manual



Fiber Light Cable Sets

and

fusion

Fiber Light Cable Sets

high-temperature resistant

⚠ 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 fiber light cables / high-temperature resistant *-fusion-* fiber light cable sets (in the following called fiber light cable sets) consist of:

- ◇ **Fiber light cable set (with adapter at both ends)**
 - ◆ projector to light cable
 - with exchangeable color coding ring (standard color black).
This coding ring is available in different colors (see section 10)
 - ◆ light cable to endoscope
 - with color coding ring and identification code for fiber bundle diameter (see section 10)
- ◇ **Adapter, projector to light cable**, can be unscrewed
- ◇ **Adapter, light cable to endoscope**, can be unscrewed
 - ◆ with quick-disconnect coupling (ring actuation)



NOTE!

The fiber light cables are also available without adapters at both ends.

2 Intended use

The fiber light cable sets represent the flexible light connection between the light projector and the user-specific instruments (connection to the telescope, endoscope etc.).

- ◇ **Fiber light cable**
 - ◆ Transmission of light in the visible spectral range
- ◇ **Adapter, projector to light cable (8095.07) / light cable to endoscope (809509)**
 - ◆ Interface to RICHARD WOLF light projectors and telescopes (endoscopes) (see section 5.1.1)
- ◇ **Additional adapters for RICHARD WOLF projector to light cable / light cable to endoscope**
 - When using the fiber light cable set made by RICHARD WOLF
 - ◆ Interface to light projectors and endoscopes, made by OTHER MANUFACTURERS (see section 5.1.2)
 - When using fiber light cables made by OTHER MANUFACTURERS
 - ◆ Interface to light projectors and endoscopes made by RICHARD WOLF (see section 5.1.3)

These products are exclusively intended for use by medical staff and may only be used by medically qualified and adequately trained doctors.

3 Indications and field of use

For examination, diagnosis and therapy in conjunction with endoscopic accessories in the various medical disciplines.

4 Contraindications and side effects

4.1 Contraindications

Contraindications directly related to the product are presently unknown.

4.2 Side effects

Side effects are not known if instruments are applied as specified in the intended use.

5 Combinations



CAUTION!

Do not combine products incorrectly!

Injuries to the patient, user or others as well as damage to the product are possible.

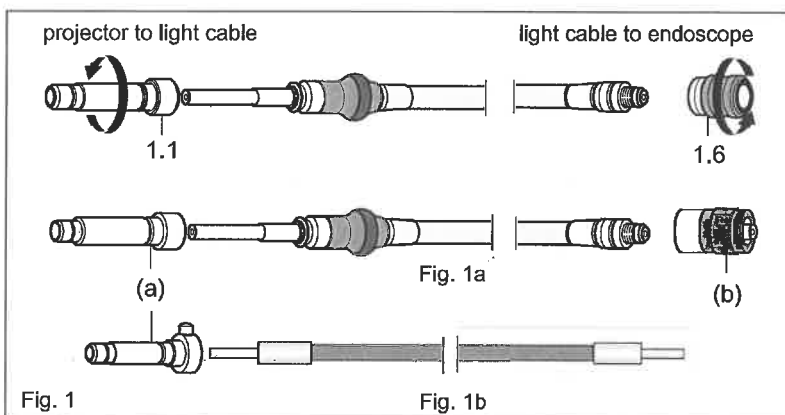
Joint application of different products is only permissible if the purpose and the relevant technical data are the same (working length, diameter, etc.).

Follow the instruction manuals of the products used in conjunction with this product.

Fig. 1

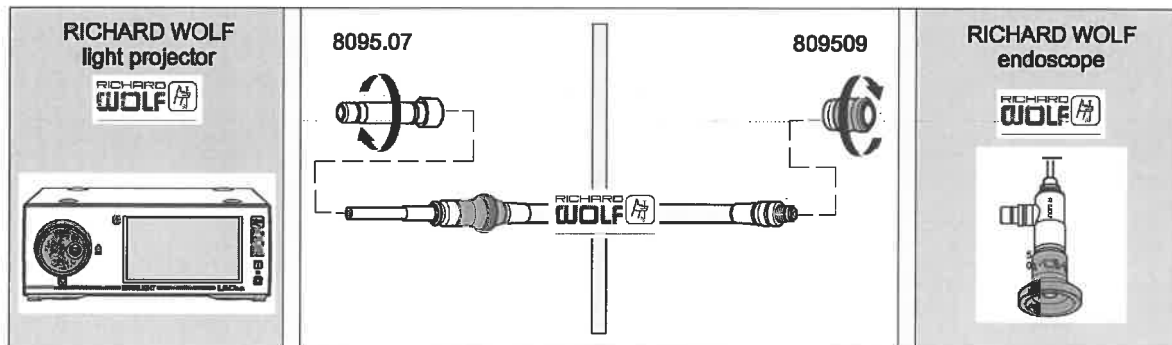
The adapters (1.1) and (1.6) can be unscrewed and replaced by projector and endoscope adapters (a) and (b).

- ◇ When using fiber light cable sets made by RICHARD WOLF (Fig. 1a) the adapters serve
 - ◆ to connect to light projectors and endoscopes made by OTHER MANUFACTURERS (see section 5.1.2)
- ◇ When using fiber light cables made by OTHER MANUFACTURERS (Fig. 1b) the adapters serve
 - ◆ to connect light projectors and endoscopes made by RICHARD WOLF (see section 5.1.3)

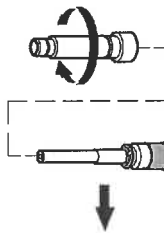
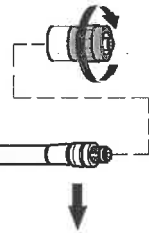
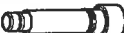


5.1 Overview of permissible combinations

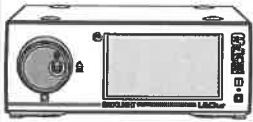
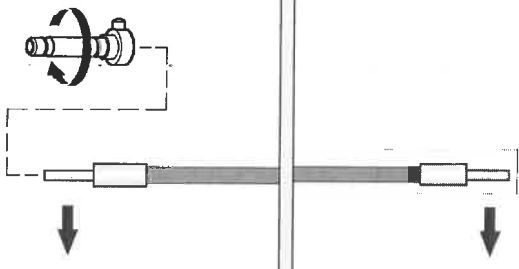
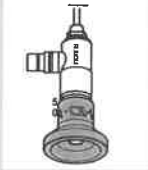
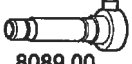
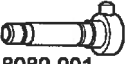
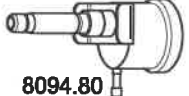
5.1.1 Connection of RICHARD WOLF fiber light cable set to RICHARD WOLF light projectors and endoscopes



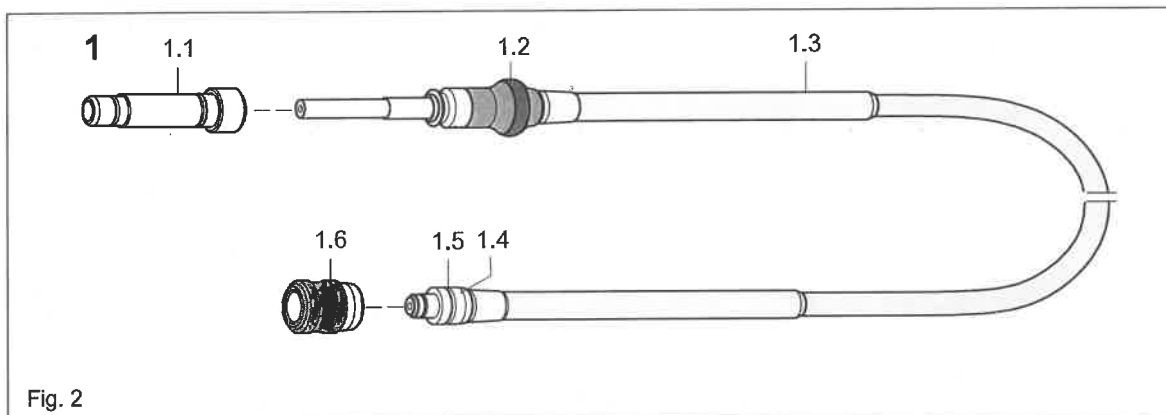
5.1.2 Connection of RICHARD WOLF fiber light cable set to light projectors and endoscopes of OTHER MANUFACTURERS

Other brand of light projector 	e.g. 8083.10 	e.g. 807001 	Other brand of endoscope 
Light projector made by	Adapter, projector to light cable	Adapter, light cable to endoscope	Endoscope made by
ACMI + Circon	 8083.10	 807002	ACMI + Circon
Storz	 fits directly	 807001	Storz
Machida	 8097.11		
Fuji	 8096.85		
Heine	 8096.751		
Pentax	 8096.90		
Olympus	 8096.811	 807001	Olympus
	 8096.812		
Zeiss	 8096.701		
Stryker	No adapter required WOLF adapter fits		

5.1.3 Connection of fiber light cables made by OTHER MANUFACTURERS to RICHARD WOLF light projectors and endoscopes

RICHARD WOLF light projector 	e.g. 8089.00 	RICHARD WOLF endoscope 
Adapter, projector to light cable	Fiber light cable made by	Adapter, light cable to endoscope
 8089.00	Storz, 3.5 mm	 808801
 8089.001	Storz, 4.8 mm	 808801
 8094.80	Olympus-Standard	 808801
	Olympus WA032...A	No adapter required WOLF adapter fits
	ACMI + Circon	No adapter required WOLF adapter fits

6 Illustration



6.1 Legend and identification

Item	Designation
1	RICHARD WOLF Fiber Light Cable Set
1.1	Adapter, projector to light cable - RICHARD WOLF or OTHER MANUFACTURER
1.2	Color coding ring exchangeable for internal identification
1.3	Fiber light cable
1.4	Identification number for fiber bundle diameter
1.5	Color coding ring for fiber bundle diameter
1.6	Adapter, light cable to endoscope - RICHARD WOLF or OTHER MANUFACTURER quick-disconnect coupling with ring actuation

6.2 Symbols

Symbols	Designation
	Follow the instruction manual
	Observe the instruction manual
	Order number
	Lot designation
	Serial no.
	Manufacturer
	Identification in conformity with EEC directive 93/42/EEC on medical products, is only valid if the product and/or its packaging is provided 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 Use



CAUTION!

The products have only limited strength!

Applying excessive force will lead to damage, impair the function and endanger the patient.

Immediately before and after each use, check the products for damage, loose parts and completeness.

Do not use the products if they are damaged or incomplete or have loose parts.

7.1 Initial preparation

7.1.1 Mounting the adapter (1.1) (1.6) to the fiber light cable

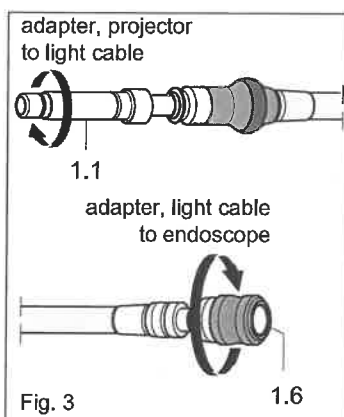


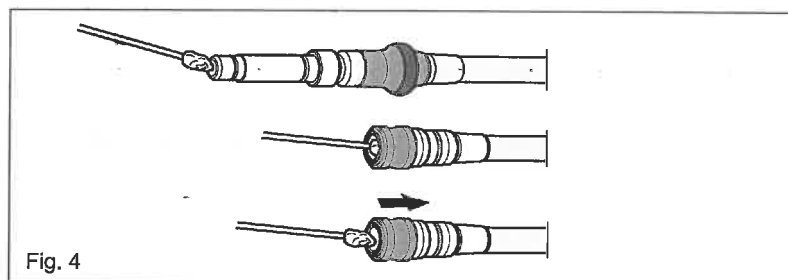
Fig. 3

- ◇ Screw on the adapters, projector to light cable (1.1) and light cable to endoscope (1.6).

➤ For this, see section 5.1

Fig. 4

- ◇ Remove any residues (e.g. water stains) originating from reprocessing with a cotton swab soaked with alcohol (wooden swab carrier, not metal or plastic).



- ◇ Carry out a check: see section 8

7.1.2 Identification of fiber bundle diameter on fiber light cable



IMPORTANT!

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

Possible consequences if the identification does not match:

- ◇ 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!

In the case of unfavorable combinations, temperature increases can occur at the coupling point or at the light exit point of the endoscope.

Burns of the patient, user and others as well as damage to endoscope are possible.

Reduce the light output or choose a fiber light cable with suitable diameter.

On the fiber light cable / FUSION fiber light cable the fiber bundle diameter is marked by means of a color coding ring and a code number on the endoscope connector of the light cable.

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.

Code number and color coding ring are found on the endoscope.

Fig. 5

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

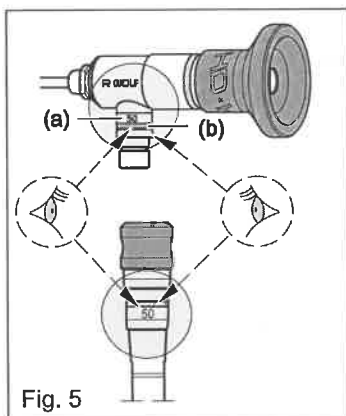


Fig. 5

If there is only the code number on the endoscope

Fig. 6

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

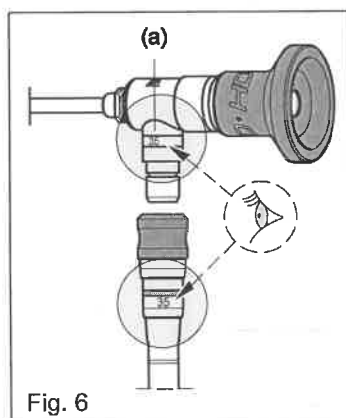


Fig. 6

7.2 Additional notes and instructions for use

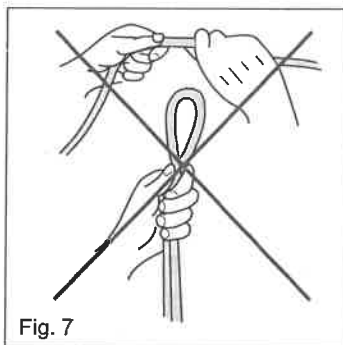


Fig. 7



CAUTION!

*The light cable has only limited strength!
Applying excessive force and high mechanical loads can cause damage
(e.g. parting of cable / light cable) and impair the function.
Do not bend or twist the light cable and do not coil up the cable to form a
ring with an excessively small radius.*



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*
- ✦ *when using high performance light projectors.*

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

*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.*



WARNING!

Fire hazard!

*When placing the fiber light cable onto heat-sensitive, flammable surfaces (dark
drapes etc.) the extreme temperatures generated at the light exit area can cause
excessive heating or even ignition.*

Lay down the fiber light cable at a safe place.

Switch off the light source if the light will not be used for an extended period of time.



CAUTION!

Danger of burns!

*As a result of the high light energy, the adapter and the glass surface of the fiber
light cable are extremely hot when disconnected from the light projector.*

*This may cause burns if the parts make inadvertent contact with the patient,
user or others.*

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

7.2.1 Replacing the color coding ring (1.2) on the light cable connector facing the projector (only if required)

NOTE!

*As a standard, the fiber light cable sets are delivered with a black color coding ring (1.2) at the light cable connector facing the projector.
For identification in the hospital, the black coding ring can be replaced by rings of different colors (see section 10).*

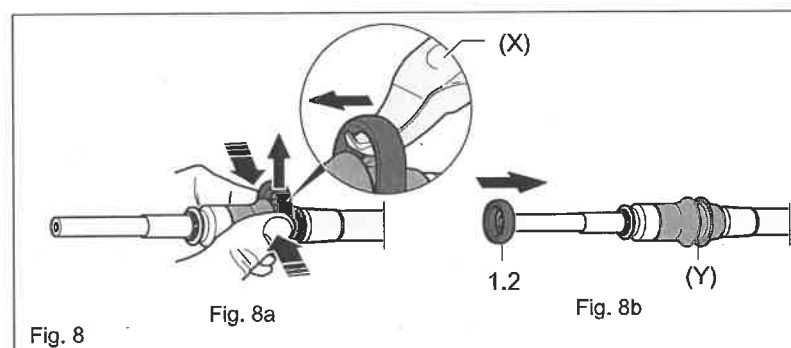
Fig. 8

Removing the color coding ring (1.2)

- ◇ Compress the color coding ring (1.2) at the light cable connector facing the projector as shown in Fig. 8a and push in direction of arrow.
- ◇ Position the O-ring tool (X) and remove the color coding ring (1.2) in direction of arrow.

Installing a new color coding ring (1.2)

- ◇ Position the color coding ring (1.2) in the groove (Y) as shown in Fig. 8b.



8 Checks



CAUTION!

*Be careful if products are damaged or incomplete!
Injuries to the patient, user or third parties are possible.
Run through the checks before and after each use.
Do not use products which are damaged or 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 fiber light cable for:
 - ◆ damage
 - ◆ sharp edges
 - ◆ loose or missing parts
 - ◆ rough surfaces
- ◇ Any lettering, labeling or identification necessary for the safe intended use must be legible.
 - ◆ Missing or illegible inscriptions and labels that can lead to wrong handling and reprocessing must be reinstated.
- ◇ Check the outer coat of the fiber light cable for damage (e.g. cracks, kinks).
 - ◆ In the case of damage, do not use the fiber light cable.

8.2 Function check



IMPORTANT!

Disconnect the fiber light cable set from the light projector and carry out the following function checks:

- ◇ Check for secure connections.
- ◇ Check the locking mechanism of the adapter (1.6), light cable to endoscope.
Replace the adapter (1.6) if the connection
 - ▶ although locked is not secure.
 - ▶ cannot be locked or is difficult to lock.

Fig. 9

- ◇ Check the glass surfaces for deposits.
 - ▶ Deposits on the glass surfaces can cause a spotted or blurred field of view and therefore impair light transmission considerably.
This will cause excessive temperatures at the connectors and can lead to a melting and eventually failure of the fiber light cable.
 - ▶ Wipe the glass surfaces with a swab soaked with alcohol (wooden swab carrier, not metal or plastic). Remove hard-to-remove residues with instrument cleaner.

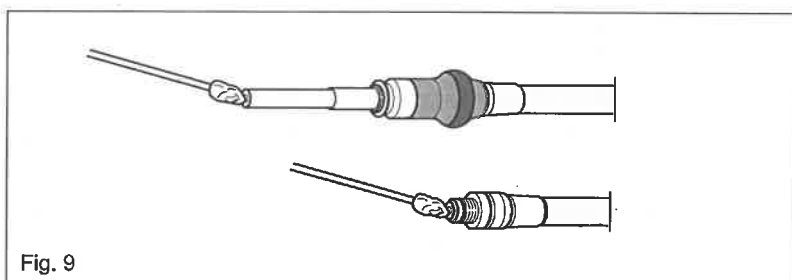


Fig. 9

Fig. 10

- ◇ Hold the fiber light cable connector facing the endoscope against a bright background.
 - ▶ Broken fibers appear as black dots. If approx. 30% of the fibers are broken, the light output is no longer adequate.

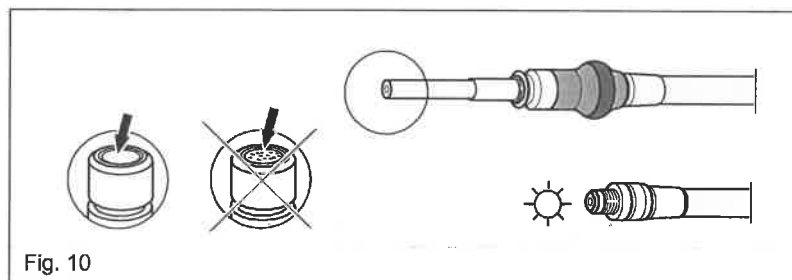


Fig. 10

- ◇ Check the fiber light cable connector facing the projector in the same way.

9 Reprocessing and maintenance

9.1 Disassembly before cleaning

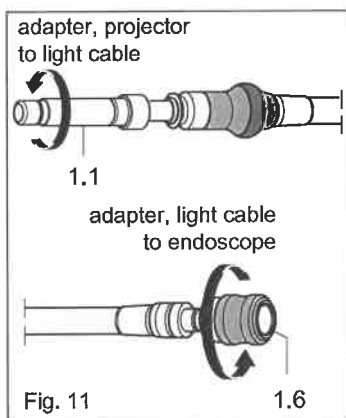


Fig. 11

- ◇ Unscrew the adapters, projector to light cable (1.1) and light cable to endoscope (1.6).

9.2 Illustrations on reprocessing

9.2.1 Manual cleaning

Fig. 12



IMPORTANT!

Do not clean the plastic parts with metal or sharp-edged tools (e.g. brushes).

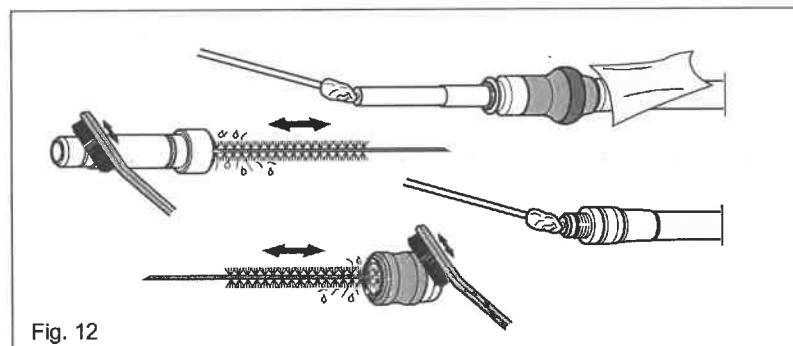


Fig. 12

9.3 Assembly before sterilization



NOTE!

Before sterilization, screw on the adapters, projector to light cable (1.1), light cable to endoscope (1.6) only loosely to allow a sufficient flow of sterilization medium. Tighten all screw connections before use.

- ◇ Screw on the adapters, projector to light cable (1.1) and light cable to endoscope (1.6) only loosely, i.e. 1 - 2 turns.

9.4 Reprocessing procedures

The following table (see next page) describes the reprocessing procedure for the individual products validated by Richard Wolf.



IMPORTANT!

- ◆ *When used as intended and when following the 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.*
- ◆ *The user must ensure that the reprocessing process including the resources, materials and staff are suitable to achieve the required results.*
- ◆ *Follow the national and international requirements on validation.*

Product:	Fiber light cable set (1)	
Reprocessing guide:		
Preparation at the point of use:	Directly after use, remove any coarse soiling from the fiber light cable set (1). Do not use fixing agents or hot water (>40°C) as this will bake residues to the surfaces and may have a negative influence on the cleaning success.	
Transport:	The fiber light cable set (1) should be stored and transported to the reprocessing room in a closed container to avoid damage to the fiber light cable set (1) and prevent any contamination of the environment.	
Precleaning:	Disassembly before cleaning: see section 9.1 No special requirements	
	Manual	Machine
Cleaning:	See section 9.2, Fig. 12 1. Immerse the fiber light cable (1.3) and the adapters (1.1) (1.6) (1.7) in a cleaning solution for at least 5 minutes. 2. Then brush inside of adapters (1.1) (1.6). 3. Wipe the fiber light cable (1.3) and the adapters (1.1) (1.6) for at least 20 seconds using a sterile lint-free disposable cloth in order to remove any residues. 4. Then, thoroughly rinse the fiber light cable (1.3) and the adapters (1.1) (1.6) for at least 20 seconds and dry with a sterile lint-free disposable cloth. 5. Clean the glass surfaces on the fiber light cable (1.3) using a cotton swab soaked with alcohol (wooden or plastic swab carrier, not metal).	1. Coil up fiber light cables (1.3) on special devices provided in the washer-disinfector and fix the loose ends. 2. Place the adapters (1.1) (1.6) in a small-parts sieve in the washer-disinfector. ♦ >4 min. of pre-washing with cold water ♦ Empty ♦ >6 min of washing with a cleaning agent at 55°C ♦ Empty ♦ >3 min of neutralization*) using warm tap water (<40°C) ♦ Empty ♦ >2 min of intermediate rinsing using hot warm tap water (<40°C) ♦ Empty
Disinfection:	1. Immerse the fiber light cable (1.3) and the adapters (1.1) (1.6) in a certified disinfectant solution, for the exposure time refer to the manufacturer's instructions. 2. Then rinse thoroughly with water**) for at least 20 seconds. 3. Clean the glass surfaces on the fiber light cable (1.3) using a cotton swab soaked with alcohol.	Carry out thermal machine disinfection following the national requirements regarding the A0 value (see DIN EN ISO 15883).
Drying:	Manual drying: Dry the fiber light cable (1.3) and adapters (1.1) (1.6) with a sterile lint-free disposable cloth or swab or, alternatively, in a drying cabinet.	Drying of fiber light cable using the washer/disinfector drying cycle. If necessary, additional manual drying can be achieved using a sterile lint-free disposable cloth or swab or alternatively in a drying cabinet.
Function test, visual check, maintenance:	Check visually for cleanliness. If necessary, repeat the reprocessing procedure until the fiber light cable (1.3) and the adapters (1.1) (1.6) are visually clean. Assembly before sterilization: see section 9.3 Carry out a visual check: see section 8.1	
Packaging:	Package the fiber light cable set (1) for sterilization as required by the standards.	
Sterilization:	Screw the adapters (1.1) (1.6) on the light cable loosely to allow penetration of the sterilant. Tighten down the adapters before use. Steam sterilization in Pre-Vac cycle at 270°F with 4 minutes exposure time and 20-30 minutes dry time. Other sterilization procedures: see section 9.4.1	
Storage:	Store the sterilized instruments 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.	
Validation:	The validation for reprocessing was carried out with the following materials and machines:	
	Manual	
	♦ Cleaning agent:	Cleaner 0.5% neodisher MediClean (Dr. Weigert)
	♦ Disinfectant:	Cidex (Advanced Sterilization Products)
	Machine	
	♦ AWD:	Miele G7735CD
	♦ Washer-disinfector rack:	Miele E 440/1
	♦ Program:	Vario-TD
	♦ Cleaning agent:	Cleaner 0.5% MediClean (Dr. Weigert)
	Sterilization	
	♦ Sterilizer:	Selectomat HP 666-1 HRED (MMM)
Additional instructions:	In accordance with DIN EN ISO 17664 the user is obliged to validate the procedure used.	

*) depending on the quality of the neutralization solution, add an acid based on citric acid.

**) use sterile water if manual disinfection is not followed by sterilization.

9.4.1 Alternate Sterilization Methods

- ◇ For possible alternate sterilization methods, refer to our website, www.richardwolfusa.com under „Reprocessing & Sterilization“ for listings of the Richard Wolf instruments approved for various reprocessing methods.

10 Technical data and order data

10.1 Fiber light cable sets

PRODUCT NO.	DESIGNATION	Fiber bundle dia. Ø [mm]	Working length [m]	FIBER LIGHT CABLE <i>Fusion</i> FIBER LIGHT CABLE Color coding ring				
				light cable connector facing the projector	light cable connector facing the endoscope			
				8095.07 	809509 			
				Individual color	blue	green	orange	gray
	FIBER LIGHT CABLE SETS / <i>Fusion</i> FIBER LIGHT CABLE SET consisting of: ◆ Fusion fiber light cable including adapter, projector to light cable 8095.07 and adapter, light cable to endoscope 809509							
806616301	FIBER LIGHT CABLE SET							
80661630	Fiber light cable	1.6	3.0	●	●	○	○	○
806625301	FIBER LIGHT CABLE SET							
80662530	Fiber light cable	2.5	3.0	●	○	●	○	○
806635301	FIBER LIGHT CABLE SET							
80663530	Fiber light cable	3.5	3.0	●	○	○	●	○
806650301	FIBER LIGHT CABLE SET							
80665030	Fiber light cable	5.0	3.0	●	○	○	○	●
806550301	<i>Fusion</i> FIBER LIGHT CABLE SET							
80655030	<i>Fusion</i> Fiber light cable	5.0	3.0	●	○	○	○	●

Legend: ● = yes ○ = no

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

PRODUCT NO.	DESIGNATION	
	Color coding ring (1.2) on the fiber light cable <i>Fusion</i> connector facing the projector / fiber light cable, connector facing the projector (exchangeable) packaging unit = pack of 10	
809520	black (standard color)	For hospital-specific identification exchangeable individually
809521	Red	
809522	Blue	
809523	Green	
809524	Yellow	
809525	Orange	
809526	Violet	
809527	White	

11 Spare parts and accessories

ITEM	ILLUSTRATION	PRODUCT NO.	DESIGNATION
1.1		8095.07	Adapter, projector to light cable
1.6		809509	Adapter, light cable to endoscope
-		15106.230	O-ring tool
-		4055.90	Wall bracket for the storage of 4 light cables

12 Operating, storage, transport and shipping

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 700 hPa to 1060 hPa



NOTE!

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

12.1 Disposal of product, packaging material and accessories

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

◆ Further information is available from the manufacturer on request.

13 **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.

