

ROLS® ∞ Reinverter
(Automated)

Operator's Manual

Volk Optical Inc.
7893 Enterprise Drive
Mentor, OH 44060

Introduction

Volk's next generation Reinverting Operating Lens System[®] (ROLS[®] ∞), rights an inverted image created by indirect lenses.

The ROLS[®] ∞, is available in automated (shown) or manual configurations.



Table of Contents

Function and Intended Application	4
Warnings, Markings & Symbols	5
Safety Instructions	11
Technical Specifications	12
Components and Equipment List	13
Unpacking Your New System	14
Installation	15
Mounting ROLS® ∞ to the Microscope	15
Installation	16
Connecting Power and Footswitch	16
Operating the ROLS® ∞	17
Dismantling	20
Cleaning and Sterilization	21
MANUAL CLEANING INSTRUCTIONS FOR REMOVABLE HANDLE	21
Inspection / Function Check	22
Packaging	22
STERILIZATION INSTRUCTIONS FOR REMOVABLE HANDLE	22
CLEANING THE ROLS® ∞ ASSEMBLY HOUSING	22
Troubleshooting	23
Storage & Transport	24
Service and Repair	25
Inspection / Preventative Maintenance	25
Regulatory Information	28

Function and Intended Application

The ROLS® ∞ is a device that is used to re-invert the inverted retinal image that is formed when one uses indirect-type ophthalmic lenses during eye surgery. The image inversion is achieved by placing a suitably formed optical prism within the collimated beam pathway of a stereo surgical microscope. More specifically, the ROLS® ∞ Assembly is placed between the microscope objective and the surgeon's eyepieces.


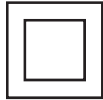




This complete level of re-inversion allows the retinal image to be upright and correctly oriented for surgical procedures. The ROLS® ∞ Assembly allows the surgeon to switch between normal and inverted image mode whenever necessary by just moving the detachable handles.

Please read and follow the instructions found in this manual before using your new system to ensure safe and dependable service. Please register your product on line at www.volk.com or complete and mail the enclosed registration card. Registering your purchase will safeguard your investment by:

- ensuring you receive updates with product information, maintenance tips or industry news
- ensuring Volk Optical can contact you or your distributor if servicing is needed on your product
- enabling Volk Optical to improve product design based on your input and needs



Warnings, Markings & Symbols

Symbol	Description
	ATTENTION: Refer to the manual. The user is advised of important operating and maintenance instructions.
	ss II protection against electric shock
	Type B Applied Part degree of protection against electric shock
IPX0	Degree of protection provided by the Main Power Assembly against harmful ingress of water
IPX8	Degree of protection provided by Foot pedal against harmful ingress of water
	Equipment is suitable for continuous mode of operation
	AC Alternating Current
	Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
	Follow the cleaning and sterilization instructions detailed within this manual
	Portable and mobile RF communications equipment can affect medical electrical equipment.
	Service or repair is to be performed by qualified, authorized personnel. Return to Volk for servicing. Do not attempt to repair this Assembly.
	Disassembly of this unit beyond the instructions in this manual will void the warranty.
	The use of accessories or cables other than those specified, with the exception of those sold by Volk Optical, may result in increased emissions or decreased immunity of this equipment or system.
	Do not operate or leave this Assembly in any environment that may exceed +10° C to 40°C; relative humidity of 30% to 75%; and an atmospheric pressure range of 700 hPa to 1060 hPa.
	ETL listed: UL 60601-1, CAN/CSA C22.2 No. 601.1 CENELEC EN 60601-1 IEC 60601-1-2, JIS T0601-1
	The CE mark on this device indicates that it has been tested and conforms to the provisions noted within the 93/42/EEC Medical Device Directive.

Guidance and Manufacturer's Declaration – Electromagnetic Emissions

The ROLS® ∞ is intended for use in the electromagnetic environment specified below. The customer or the user of the ROLS® ∞ should assure that it is used in such an environment.

Emissions Test	Compliance	Electromagnetic environment - guidance
RF Emissions CISPR 11	Group 1	The ROLS® ∞ uses RF energy only for their internal function. Therefore, RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF Emissions CISPR 11	Class B	<p>The ROLS® ∞ is suitable for use in all establishments and may be used in domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes, provided the following warning is heeded:</p> <p>Warning: This equipment/system is intended for use by healthcare professionals only. This equipment/system may cause radio interference or may disrupt the operation of nearby equipment. It may be necessary to take mitigation measures, such as re-orienting or relocating the ROLS® ∞ or shielding the location.</p>
Harmonic Emissions IEC 61000-3-2	Class A	
Harmonic Emissions IEC 61000-3-3	Complies	

Guidance and Manufacturer's Declaration – Electromagnetic Immunity

The ROLS®∞ is intended for use in the electromagnetic environment specified below. The customer or the user of the ROLS®∞ should assure that it is used in such an environment.

Immunity Test	IEC 60601 Test level	Compliance Level	Electromagnetic Environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tiles. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 2 kV line(s) to line(s) to earth	± 2 kV line(s) to line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines	< 5% UT (>95% dip in UT) for 0,5 cycle	< 5% UT (>95% dip in UT) for 0,5 cycle	Mains power quality should be that of a typical commercial or hospital environment. If intermittent dips and interruptions in mains power are experienced, it is recommended that the ROLS®∞ be powered from an uninterruptible power supply or battery backup device.
IEC61000-4-11	40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT for 25 cycles) < 5% UT (>95% dip in UT) for 5 sec	40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT for 25 cycles) < 5% UT (>95% dip in UT) for 5 sec	The ROLS®∞ requires continued operation during power mains interruptions. It is recommended that the ROLS®∞ be powered from an uninterruptible power supply or battery.
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE UT is the a.c. mains voltage prior to application of the test level.

Guidance and Manufacturer's Declaration – Electromagnetic Immunity

The ROLS® ∞ is intended for use in the electromagnetic environment specified below. The customer or the user of the ROLS® ∞ should assure that it is used in such an environment.

Immunity Test	IEC 60601 Test level	Compliance Level	Electromagnetic Environment – guidance
Portable and mobile RF communications equipment should be used no closer to any part of the ROLS® ∞ including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance			
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	$d = 1.2 P$
Radiated RF IEC 61000-4-3	3V/m 80 MHz to 2.5 GHz	3 V/m	$d = 1.2 P$ 80 MHz to 800 MHz $d = 2.3 P$ 800 MHz to 2.5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the

Guidance and Manufacturer's Declaration – Electromagnetic Immunity transmitter manufacturer and d is the recommended separation distance in meters (m).

Field strengths from fixed RF transmitters as determined by an electromagnetic site survey^a should be less than the compliance level in each frequency range.^b

Interference may occur in the vicinity of equipment marked with the following symbol:



NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ROLS® ∞ is used exceeds the applicable RF compliance level above, the ROLS® ∞ should be observed to verify normal operation. If abnormal performance is observed, additional measure may be necessary, such as re-orienting or relocating the ROLS® ∞.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Disposal

The ROLS® ∞ contains no known hazardous chemicals or components. It should be disposed of properly.

Safety Instructions

Before installing or using this equipment familiarize yourself with the operating instructions and all safety features.

If you cannot understand these instructions, including warnings and cautions, contact Volk personnel before installation or use.

Follow all the instructions for setup, usage, sterilization and disassembly. If you have any questions, please contact a Volk representative.

Check all parts for damage and test before use. The ROLS® ∞ must be in proper working order; do not use if there is any damage or if the Assembly is in need of repair.

The ROLS® ∞ must be used only with the original accessories and parts supplied or specified by Volk Optical otherwise the warranty is void.

The ROLS® ∞ may only be used for its intended use in the surgical specialties by educated and qualified personnel. The surgeon shall be responsible for the proper selection for each application, for obtaining the appropriate training, knowledge and experience.



Volk Optical cannot be responsible for any liability for damages caused by inappropriate application and use or by inappropriate cleaning and sterilization and care of the system.

Never connect this instrument with any other product that is not specifically designed to be used with the ROLS® ∞.

Do not operate the ROLS® ∞ outside of the stated environmental operating conditions.

Technical Specifications

Auto ROLS®∞

FDA classification	Class 1
Device Classification	 Class II protection against electric shock
Applied Part	 Type B
FDA classification	Class 1
Degree of Protection against the Presence of Flammable Anesthetic Mixtures	
Ordinary equipment, not for use in a flammable atmosphere	
Interfaces	Hard mounts to common surgical microscopes.
Mount Size	80mm x 107mm x 58mm (3.1" x 4.2" x 2.3")
Weight	382 g
Storage/Transport Conditions	Temperature: +10° C to +40°C
Operating Conditions	Temperature: +10° C to +40°C
Power Requirement	12VDC, 250 mA,
Mode of Operation	Continuous Operation
Sterility	Components of this system which are sterilizable are shipped in a non-sterile condition. Sterilize before use.
Materials	All metal components are surgical grade materials. This product is latex free.

Components and Equipment List

ROLS∞ Assembly	Optical prism device that allows the user to switch between indirect and normally inverted image modes.
----------------	---

Unpacking Your New System

All shipping materials and containers should be kept in a safe place for future storage and transportation. All components and parts should be handled with care.

Verify all components for shipping damage

Remove and check that the following components are present and free from any damage:

Reinverting Operating Lens System ∞ (ROLS∞) (Optional Equipment)

- Remove from case and check for damage.
- Carefully remove foam shipping components from unit prior to operation.
- The ROLS∞ is placed in manual operation mode for shipping. To return the device to automated operation mode follow the instructions in the **Operating the ROLS ∞** section titled **Returning ROLS∞ to AUTOMATED Mode**.



NOTE:

The system should be assembled and tested for correct functionality prior to first use.

Installation

Mounting ROLS® ∞ to the Microscope

The ROLS® ∞ Assembly is easy to install on your operating microscope and is available in two flange styles. If you ordered a Zeiss flange style unit, it will only fit on Zeiss microscopes or microscopes manufactured by Topcon, Takagi, Moeller-Wedel and Inami that accept Zeiss compatible accessories. If your ROLS® ∞ Assembly is a Leica flange style, it will only fit Leica or Wild microscopes. If you are uncertain of compatibility, please contact Volk Optical Inc.

Installing The ROLS® ∞ Assembly On A Single Scope Unit (with only a surgeon's set of oculars):

Turn off the electrical power to the microscope and attached microscope accessories.

Lock the microscope in an easily accessible position.

Remove any accessories attached to the Beam Splitter, including the Observer's Tube.

Loosen the lock screw to remove the Upper Microscope Assembly.

- **For a Leica microscope**, completely remove the lock screw and use the replacement lock screw supplied with the ROLS® ∞.
- **For a Zeiss microscope**, loosen screw enough to remove the Upper Microscope Assembly.

Remove the entire upper microscope assembly (Binoculars, Beam Splitter, Laser Safety Filter Attachment) from the base portion of the microscope.

NOTE: If applicable, do not remove the Assistant's Scope. For proper operation, the ROLS® ∞ Assembly must be positioned below the Surgeon's Scope but above the Assistant's Scope.

NOTE: For proper clearance, the laser filter or the beam splitter must be positioned between the ROLS® ∞ Assembly and the Surgeon's binoculars.

Hold the ROLS® ∞ Assembly in a horizontal position with the Volk lettering readable from the surgeon's position (typically at the patient head end of the surgical gurney).

Slide the lower Male Flange Lock on the ROLS® ∞ Assembly into the upper female Flange Lock of the base portion of the microscope.

Attach the sterilizable handle to the handle post on the right side of the ROLS® ∞.

- The handle should be cleaned and sterilized prior to use per the instructions in this manual.



Verify that the two flanges are seated flush together. If necessary, slightly rotate the ROLS∞ Assembly left and right until the exact fit is achieved.

Tighten the thumbscrew on the microscope base. The ROLS∞ Assembly is now locked to the base portion of the microscope.

Slide the lower Male Flange Lock on the Upper Microscope Assembly into the upper Female Flange Lock on the ROLS∞ Assembly while observing the assembly is in the correct orientation.

Verify that the two flanges are seated flush together. If necessary, slightly rotate the Upper Microscope Assembly left and right until the exact fit is achieved.

Tighten the lockscrew. The Upper Microscope Assembly is now locked to the base portion of the microscope.

Reinstall accessories to the beam splitter, unlock the operating microscope and turn on the electrical power to the microscope and accessories.

Installation

Connecting Power and Footswitch

The automated ROLS∞ includes a power supply and footswitch that will also be installed.

Power

- The power supply may be attached to either side of the ROLS∞ at the connector marked:

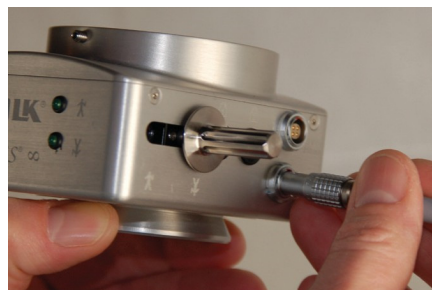
— 12VDC

Footswitch

- The footswitch attaches on the left side of the ROLS∞ at the connector marked with the footswitch symbol:



- The ROLS∞ is factory aligned when it is manufactured. However, the ROLS∞ can be custom aligned to the microscope onsite if needed.
 - Custom alignment should be performed at installation by trained personnel only.



Operating the ROLS®

Automated ROLS®

- Plug in the connected power supply.
 - Depending on the position of the inverting prism, one of the position indicator lights will be lit when the power is on.
- For AUTOMATED mode, the slider switch on the left side of the ROLS® front panel should be in the bottom position with the footswitch marking:

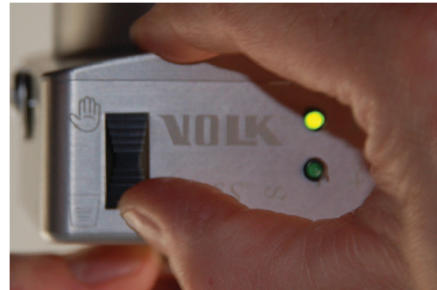


- Use the connected footswitch to toggle the inverting prism into and out of the microscope's field of view.
 - The inverting prism is OUT of the field of view when the indicator light next to the upright stick figure is lit.
 - The inverting prism is IN of the field of view when the indicator light next to the inverted stick figure is lit.



Using ROLS∞ in Manual Mode

- To engage the manual mode, move the slider switch on left side of the ROLS∞ front panel up to the top position with the hand symbol:



- Attach the included sterilizable handle to the handle post on the right side of the ROLS∞.
 - The handle should be cleaned and sterilized prior to use per the instructions in this manual.



- Use the attached sterilizable handle to slide the inverting prism into and out of the microscope's field of view.
 - The inverting prism is OUT of the field of view when the handle is positioned at the FRONT of the ROLS∞.
 - The inverting prism is IN of the field of view when the handle is positioned at the BACK of the ROLS∞ as shown.



Returning ROLS∞ to AUTOMATED Mode

- Disconnect power from the device.
- To re-engage the ROLS∞ in AUTOMATED mode the prism slide handle must be in the same position it was in when the device was switched to MANUAL mode.
 - If the prism was in the FRONT position when the device was changed to MANUAL mode then return the prism to the FRONT position using the handle on the right side.
 - If the prism was in the BACK position when the device was changed to MANUAL mode then return the prism to the BACK position using the handle on the right side.
- Move the slider switch on the left side of the ROLS∞ front panel to the bottom position with the footswitch marking:



Dismantling

To remove the ROLS∞ Assembly from the microscope:

- Turn off the electrical power to the microscope and the attached microscope accessories.
- Lock the microscope in an easily accessible position.
- Remove any accessories attached to the Beam Splitter, including the Observer's Tube.
- Remove all microscope assemblies up to and including the Surgeon's Scope.
- Remove the ROLS∞ Assembly and place into the storage case.
- Reassemble the scope(s) and the remaining microscope assemblies.
- Verify that all flanges are seated flush together. If necessary, slightly rotate the appropriate assembly left and right until the exact fit is achieved.
- Tighten all thumbscrews, reinstall accessories to the beam splitter, unlock the operating microscope and turn on the electrical power to the microscope and accessories.

Cleaning and Sterilization

Notes:

1. The removable handle is the only component of the ROLS∞ that may be sterilized.
2. Remove sterilizable handle from ROLS∞ prior to cleaning and sterilization.
3. Corrosive cleaning agents (e.g. chloride, saline, etc.) are not recommended. Enzymatic and cleaning agents with neutral pH are recommended.

Reprocessing Limitations: Repeated cleaning and sterilization has minimal effect on the sterilizable handle when processed according to instructions. End of life is normally determined by wear and damage due to use.

Preparation at the Point of Use

1. New, used or contaminated units must be cleaned.
2. **Body fluids and/or tissue should not be allowed to dry on the device prior to cleaning.** Remove excess body fluids and tissue.
3. Universal precautions for handling contaminated materials should be observed.
4. Instruments should be cleaned as soon as possible after use to minimize the drying of any body fluids and tissue.

Preparation of cleaning agent: Prepare a neutral pH enzyme and cleaning agent according to manufacturer's recommendations.

MANUAL CLEANING INSTRUCTIONS FOR REMOVABLEHANDLE

1. Use a lint free tissue dampened with an antibacterial, aldehyde-free solution to remove macroscopic visible deposits from each device. Pay special attention to any uneven surfaces, lumens, crevices, joints, corners and other hard-to-reach areas, e.g.:
 - a) The interior of the removable handle.
2. Prepare fresh Enzol solution (enzymatic cleaner - 1 ounce per gallon) using warm (30-43°C) sterile de-ionized water.
3. Soak components in Enzol solution for 20 minutes. Actuate all movable parts while submersed in the cleaner. Use a syringe to "deliver" Enzol solution to hard-to-reach areas prior to soaking.
4. After soaking, aggressively brush devices with a soft-bristle brush until all traces of cleaner and soil are removed. Pay special attention to any uneven surfaces, lumens, crevices, joints, corners and other hard-to-reach areas, e.g.:
 - a) The interior of the removable handle.
5. After brushing thoroughly rinse* devices in a room temperature sterile de-ionized water bath (not under running water) until all visible cleaner has been removed. Use a syringe to "deliver" rinse water to the hard-to-reach areas of each device. Repeat rinsing cycle 5 times, changing water between cycles.
6. Transfer the devices to a freshly prepared Enzol solution (per step 1 above) and sonicate for 20 minutes.
7. After sonication, thoroughly rinse* devices in a room temperature sterile de-ionized water bath (not under running water) until all visible cleaner has been removed. Use a syringe to "deliver" rinse water to the hard-to-reach areas of each device. Repeat rinsing cycle 5 times, changing water between cycles.
8. Inspect each device for remaining debris. If any is observed, repeat the cleaning procedure with freshly prepared cleaning solutions until debris is removed.

*The rinsing will be conducted under the water level to prevent aerosolization. Rinsing will be performed by:

- Agitating the device under water;
- Bringing the device above the water level;
- Re-immersing device under water.



Cleaning & Care (cont.)

Inspection / Function Check

1. Carefully check to ensure that all visible blood and soil has been removed.
2. Visually check for damage and/or wear.
3. If damage or wear is apparent, contact Volk Optical or your distributor for return.

Packaging

1. If applicable, use standard medical grade steam sterilization wrap following the double wrap method.

STERILIZATION INSTRUCTIONS FOR REMOVABLE HANDLE

Steam sterilize using a pre-vacuum cycle for 5 minutes at a minimum temperature of 132°C.

CLEANING THE ROLS® ASSEMBLY HOUSING

1. The external surface of the ROLS® housing may be cleaned with a slightly moist cloth.
2. To avoid damage to the ROLS® Assembly, do not submerge the housing in any solution.
3. Do not attempt to clean the ROLS® prism.

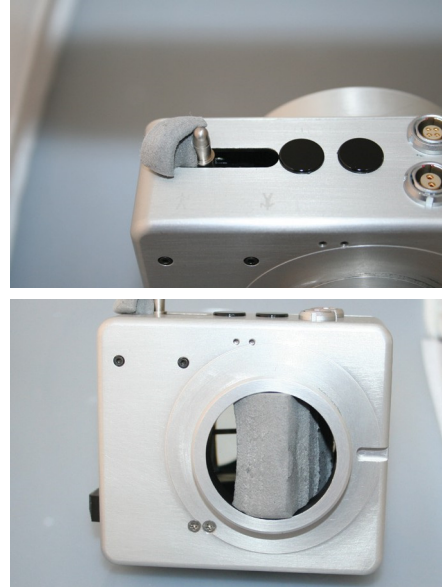
Troubleshooting

I do not see the desired image of the retina.

- Make sure that the ROLS∞ is properly aligned to the optical axis of the microscope under the objective lens.
 - Contact a trained representative for assistance aligning the ROLS∞ prism to the optical axis of the surgical microscope.
- Confirm that the bottom of the ROLS∞ is mounted flush to the scope and the scope oculars are mounted flush to the top of the ROLS∞.
- All components mounted to the scope should be rotationally centered relative to each other. The rotation of any component about the optical axis can affect the image provided by the scope.

Storage and Transport

- Retrieve all original shipping containers and packing materials. The shipping containers are customized to protect the devices during transport and **must** be used to prevent any damage that may occur during shipping.
- Place foam shipping inserts in their appropriate locations in the ROLS∞ prior to shipping or storage.



- Ensure the ROLS∞ is placed in the correct foam cut out in the storage case.
- Make sure all foam for all components is correctly located and close the case.
- If shipping, place all cases or shipping boxes within cardboard boxes to minimize any shipping damage.
- If keeping in storage, ensure the components are stored in the following conditions and stored in the cases provided:
 - Temperature: +10° C to +40°C



CAUTION

Shipping the ROLS∞ without original packaging or packaging provided by Volk Optical will void the warranty of your ROLS∞. If you cannot locate original packaging materials contact Volk Optical to request appropriate shipping materials be sent to you.

Service and Repair

All components are to be inspected periodically for proper functionality. If any component or part is considered to be malfunctioning or defective, contact Volk Optical customer service (see contact details in this manual).

Repairs and corrective maintenance must only be carried out by Volk Optical Inc. Any work carried out by unauthorized persons will nullify any warranty.

Inspection / Preventative Maintenance

The following steps should be done before each usage:

Components Available For Order From Volk

Device	Platform	175 mm or 200 mm Ob- jective Lens	Scope Make	Item Number
ROLS [∞]	Manual		Zeiss type	11306
	Manual		Leica type	11310
	Manual		Leica M520	11374
	Auto		Zeiss type	11363
	Auto		Leica type	11364
Storage Case	ROLS [∞]			11432
Shipping Box and Foam Inserts	ROLS [∞]			11524
				11534
				11535
Power Supply	Auto ROLS [∞]			11386
Footswitch	Auto ROLS [∞]			11461
Other Power Cords and Cables				Call to order

Product Warranty

The Seller warrants to the Purchaser that the goods furnished hereunder will, for the appropriate periods of product warranties, as defined on our user instructions shipped with each product, conform to Sellers' agreed to specifications. The obligation of the Seller, and the Purchaser's sole and exclusive remedy hereunder, shall be limited, at the Seller's option, to replacement of defective goods or refund of the purchase price thereof. Purchaser shall not return goods unless authorized in writing by Seller. Seller shall have the right to inspect the goods at Purchaser's installation. Purchaser's failure to give prompt written notice (30 days) upon discovery of any alleged defect shall constitute a waiver by Purchaser of all claims with respect thereto. Notwithstanding the foregoing warranties and remedies, seller shall have no obligation hereunder if the goods become defective as a result of improper storage, contamination, adulteration, improper use or misapplication after delivery thereof to Purchaser. If the product fails to function due to defects in either materials or workmanship, Volk will, at its option, either repair or replace the product without charge, subject to the Warranty Limitations.

Volk Optical warrants its ROLS®∞ Reinverter against defects in materials or workmanship for a period of 1 year from receipt by end-user.

Customers shall be responsible for returning products for warranty service to Volk Optical, 7893 Enterprise Drive, Mentor, Ohio 44060 - USA.

Warranty repairs will include all labor, adjustments and replacement parts. Replacement parts may be remanufactured or contain remanufactured materials.

Warranty service may not be provided without proof the product was purchased from Volk Optical Inc. or an Authorized Volk Distributor.

This Warranty becomes null and void if the customer fails to return the product in packaging that is consistent with the original protective packaging and it results in shipping damage.

This Warranty becomes null and void if the customer fails to follow the recommended cleaning, disinfection and sterilization instructions and/or cautions contained in the product instruction manual.

This Warranty does not cover service required because of disassembly, unauthorized modifications or service, misuse or abuse.

SELLER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, OF THE PRODUCT SUPPLIED HEREUNDER, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY EXCLUDED. SELLER SHALL HAVE NO LIABILITY FOR LOSS OF PROFITS, OR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES UNDER ANY CIRCUMSTANCES OR LEGAL THEORY, WHETHER BASED ON NEGLIGENCE, BREACH OF WARRANTY, STRICT LIABILITY, TORT, CONTRACT, OR OTHERWISE. SELLER SHALL IN NO EVENT BE LIABLE IN RESPECT OF THIS ORDER AND/OR PRODUCT DELIVERED ON ACCOUNT OF THIS ORDER FOR ANY AMOUNT GREATER THAN THAT PAID TO SELLER ON ACCOUNT OF THIS ORDER. THE PURCHASER ACKNOWLEDGES THAT IT IS PURCHASING THE GOODS SOLELY ON THE BASIS OF THE COMMITMENTS OF THE SELLER EXPRESSLY SET FORTH HEREIN.



Ordering Information

Orders may be placed with the Authorized Volk Distributor in your region. Authorized Distributor contact information is available directly from Volk.

Volk Optical Inc.
7893 Enterprise Drive
Mentor, Ohio 44060
USA

Toll free within the United
States: 1-800-345-8655
Phone: 440 942 6161
Fax: 440 942 2257
Email: volk@volk.com
Website: www.volk.com

Regulatory Information



EU REPRESENTATIVE

The Volk authorized representative based in the European Union (EU) is:

Rudolf Riester GmbH
Bruckstraße 31
72417 Jungingen, Germany
Email: info@riester.de
Phone: +49 74 77 / 92 70-0
Fax: +49 74 77 / 92 70-70

Note: This product complies with current required standards for electromagnetic interferences and should not present problems to other equipment or be affected by other devices. As a precaution, avoid using this device in close proximity to other equipment.

Members of the European Union should contact their authorized Volk Distributor for disposal of this unit.



Certificate
FM 71461





Volk Optical Inc.

7893 Enterprise Drive
Mentor, Ohio 44060
USA

Phone: 440 942 6161

Toll free within the United States: 1-800-345-8655

Fax: 440 942 2257

Email: volk@volk.com

Website: www.volk.com

Copyright © 2011 Volk Optical Inc.

Part No. IM-041
Revision: E