



#### A SEILER FAMILY TRADITION

- Seiler Instruments was founded in 1945 by Eric H. Seiler and his wife Dora L. Seiler.
- Eric H. Seiler was educated in the art of optics in Germany, where he earned his Masters from the Zeiss – Jenna School of Fine Optics.
- Now a fourth generation family manufacturing business based in St. Louis Missouri.





#### **SEILER INSTRUMENTS & MANUFACTURING**

#### > FIVE DIVISIONS

- > MEDICAL
- > MANUFACTURING
- **➢** GEOSPATIAL
- > PLANETARIUM
- > DESIGN SOLUTIONS



# SEILER MEDICAL PRODUCT PORTFOLIO



# SEILER MEDICAL PRODUCT PORTFOLIO

- > ENT SURGICAL MICROSCOPES
- > OPTHALMOLOGY MICROSCOPES
- > MULTIDISCIPLINARY SURGICAL MICROSCOPES
- **COLPOSCOPES**
- > DENTAL MICROSCOPES
- > COMPOUND MICROSCOPES
- > SURGICAL LOUPES & LED HEADLIGHTS



# DENTAL SURGICAL MICROSCOPES



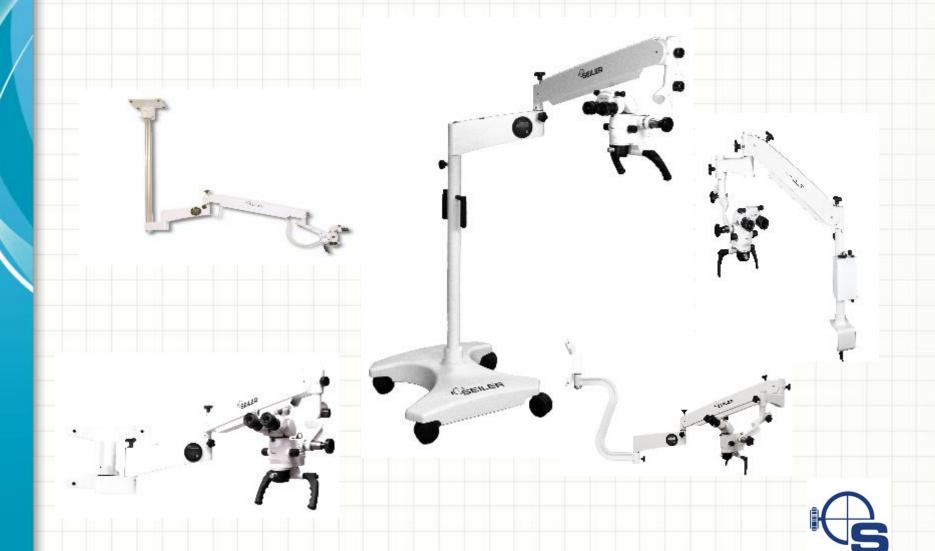


#### **DENTAL OPERATING MICROSCOPES**

- > ALPHA AIR SERIES
  - ALPHA AIR 6
    - Six levels of magnification.
  - ALPHA AIR 3
    - Three levels of magnification



# FIVE MOUNTING OPTIONS



#### **ALPHA AIR 6 DENTAL MICROSCOPE**

- 6 LEVELS OF MAGNIFICATION
  - **>** 2.72, 4.08, 5.30, 8.70, 10.88, 17.00
- > 0-220 INCLINABLE BINOCULAR HEAD
  - > OPTIONAL: FIXED INCLINED,
    STRAIGHT
- > 10X WIDE FILED EYE PIECE- STANDARD
- > 250mm OBJECTIVE LENS STANDARD
- GERMAN APOCHROMATIC LENSES
- > 150,000 LUX LED ILLUMINATION STANDARD
- ▶ USB & 12V DC POWER SUPPORT ON OPTIC POD
- RED FREE FILTER STANDARD
- CURING FILTER STANDARD
- GAS PISTON PANTOGRAPHIC ARM
- > LARGE SELECTION OF ACCESSORIES





#### **ALPHA AIR 3 DENTAL MICROSCOPE**

- > 6 LEVELS OF MAGNIFICATION
  - **4.08, 6.8, 10.88**
- > 0-220 INCLINABLE BINOCULAR HEAD
  - > OPTIONAL: FIXED INCLINED, STRAIGHT
- > 10X WIDE FILED EYE PIECE-STANDARD
- > 250mm OBJECTIVE LENS STANDARD
- GERMAN APOCHROMATIC LENSES
- > 150,000 LUX LED ILLUMINATION STANDARD
- > RED FREE FILTER STANDARD
- CURING FILTER STANDARD
- GAS PISTON PANTOGRAPHIC ARM





#### **ALPHA AIR SERIES ACCESSORIES**

- > ASSISTANT TEACHING HEAD
- > LASER FILTER
- **➢** BEAMSPLITTER
- > EXTENDER ROTATION DEVICE
- > IRIS DIAPHRAGM
- > VARIO FOCUS OBJECTIVE 200MM -350MM



# ALPHA AIR SERIES IMAGING ACCESSORIES

- ➤ GO PRO HERO SEILER SPECIFIC
- > DIGITAL CAMERA
  - CANON
  - NIKON
  - SONY
- > VIDEO
  - -HD
  - CCD
- ➤ VIDEO ADAPTER, DSLR ADAPTERS









#### **ALPHA AIR DENTAL MICROSCOPES**

- > SUPERIOR MANEUVERABILITY
- > GERMAN APOCHROMATIC LENSES
- > BRIGHTEST LED ILLUMINATION IN MARKET
- > MANY FEATURES STANDARD NOT OPTIONS
- > INDUSTRY LEADING WARRANTY
- > LARGE SELECTION OF ACCESSORIES
- > FLEXIBLE CONFIGURATIONS
- > HIGH RETURN ON INVESTMENT



# CE CERTIFICATE



Application of Council Directive: 2004/108/SC - SMC Directive & Application of Council Directive: 98/42/SSC - Medical Device Directive

Standards to which Conformity is Declared: EN 60601-1:2007 including: CISPR 11:2015/A1, EN 61000-3-2:2014/A2:2009, EN 61000-3-3:2013, EN 61000-6-1:2007 including:

EN 61000-4-2:2008, EN 61000-4-3:2006/A1:2007/A2:2010, EN 61000-4-4:2012, EN 61000-4-5:2014, EN 61000-4-6:2013, EN 61000-4-8:2009, EN 61000-4-11:2004 EN 62471:2008, EN 60601-1:2007







# Preparation prior to Installation

- > Set up entire Microscope and Accessories.
  - ➤ Practice assembly of Microscope & Accessories
  - Charge any batteries that may be in digital imaging device that is being installed.
- ➤ Study Product Manuals.
- ➤ Study Training Modules.



# DAY OF INSTALLATION



# **Installation Day**

- > Items to bring:
  - > Tools
    - > Allen Wrenches
    - ➤ Cleaner & Rags
    - ➤ White Zip Ties
  - ➤ Movers Blanket
    - > Used to protect the base when attaching base weights
  - > ACCOUNT SIGN OFF SHEET NEW
  - Spec Sheets and Catalogs
  - Seiler Reference Manual
  - ➤ Microscope & Accessories



# **Installation Day**

- > OPTIC BOX
  - Stores Tools & Cleaning Equipment
  - Protects Optic Head during transport.
  - Wheels and telescoping handle for easy transport.
  - Helpful to use but not required by Seiler.





#### After the Installation

- ➤ Send Follow up Email
  - > A Thank You for their interest or purchase
  - > Stress Key Points of the Microscope
  - ➤ Next steps in the process.
  - ➤ Attach Catalog & Specification Sheet.



# ALPHA AIR INSTALL



#### **Installation Sequence**

- Review Microscope Checklist with Account
- ➤ Price Quote if for a Evaluation
- Manual
  - Magnification Chart
  - Maintenance
  - Troubleshooting
- Warranty USA
  - ➤ Lifetime on Optics & Mechanics
  - > 3 Years on Electronics
- Microscope Parts
- Accessories
- Movement of Scope
  - Tipping Hazard of Floor Model Reviewed
- Parfocalization
- Signature on Microscope Checklist
- Email, send photo or fax signed Microscope Checklist to:
  - micro@seilerinst.com
  - Fax: 314-968-3601
  - > Texts: 314-707-7153





### Microscope Check List - NEW-

- Every time a Seiler Colposcope, Alpha Air, or Zoom Microscope is assembled and left at the facility to be used either for an evaluation or for an installation after a purchase, the Microscope Checklist must be completed and returned to Seiler.
- Faxed: 314-968-3601
- ➤ Email: micro@seilerinst.com
- ➤ Text with picture attached: 314-707-7153



#### Microscope Check List – WHY?-

- To ensure all points of the microscope are consistently covered at **every** install and evaluation.
- To ensure that the microscope is used safely and to prevent any tipping hazard from occurring.
- To ensure that all questions and concerns of the customer are addressed and answered.



# **Alpha Air Check List**



1-800-489-2282 · micro@seilerinst.com · www.seilermicro.com

#### SEILER ALPHA AIR MICROSCOPE CHECK LIST

DATE:	
SEILER REPRESENTATIVE:	
ACCOUNT:	
account.	
MICROSCOPE: (circle one) Alpha Air 3 - De	ental Alpha Air 6 - Dental Alpha Air 3 - ENT Alpha Air 6 - ENT
MICROSCOPE MOUNT: (circle one)	FLOOR WALL HIGHWALL CEILING TABLETOP
ACCESSORIES:	
ACESONES:	<del></del>
8 <del>1</del>	<del></del>
CHECK LIST: (PLEASE CHECK OFF AFT	ER EVERY POINT DETAILED)
PRICE QUOTE	OPTIC POD - FRONT
	HANDLES
MANUAL	OBJECTIVE LENS
WARRANTY	FINE FOCUS KNOB
WINDOWN! T	FILTER
BASE & POLE	MAGNIFICATION CHANGER
WEIGHTS	NO DRAPES ALLOWED WHILE 'ON'.
LOCKING CASTERS	OPTIC POD - BACK
BLACK HANDLES CLEANING	POWER PORTS 12V AND USB
	LIGHT SOURCE BUTTONS & FUNCTIONS
LED ARM	
ON/OFF BLUE BUTTON	BINDCULAR HEAD EYE PIECES
LED READOUT	IPD
STAND BY	THUMB SCREW
MIN/MAX	
UNDERCARRIAGE PLATE	ACCESSORIES
ELECTRICAL CONNECTIONS	DESCRIPTION & FUNCTIONS
PANTOGRAPHIC ARM	THUMBSCREWS & CONNECTIONS
CORD CHANNEL	ARM MOVEMENT
ARM LOCK DOWN LOCATION	FLOOR STAND - TIPPING HAZARD
- December of the second	
CARRIER & COUPLER ARM KNOBS & FUNCTIONS	
NUMBERED TENSION KNOB	
CERTIFY THAT THE MICROSCOPE AND IT'S ACCE.	SSORIES ARE IN PERFECT WORKING ORDER AND HAVE BEEN DEMONSTRATED.
The state of the s	The state of the s
OCCOUNT NAME & DATE:	



- **➢** Base and Pole:
  - > Weights are underneath the base.
  - ➤ Locking casters.
  - > Black handles to move entire scope.
  - > Cleaning of Base and Pole.
  - > Demonstrate ease of movement.
  - > Sturdy construction of Base.





#### > LED Arm:

- ➤ Identify the Knobs that attach LED Arm to Pole and LED Arm to Panto-Arm.
- ➤ On/Off Blue Button.
- > LED Readout
  - ➤ Stand by
  - ➤ Min/Max and in between.
  - ➤ Diagnostic Readouts
- ➤ Small footprint, sleek design.





> LED Arm:



- ➤ Remove the cover plate from the underside of the LED Arm.
  - ➤ Point out the two cord connection points.
  - ➤ Demonstrate how to reattach the cover plate.
  - ➤ Trouble Shooting: If Scope is not powering up or illuminating check these two connections.



- > Pantographic Arm:
  - Knob on top of Arm to adjust "drift".
  - Channel to hold Optic Pod Cord.
  - > Arm Lock Down Location.
  - ➤ Gas Piston Design for smooth maneuverability.





- > Carrier/Coupler Arm:
  - ➤ Identify the knobs and their functions.
  - ➤ Point out the Numbered Tension Knob and benefits.
  - Demonstrate the pivot points and improved maneuverability.





#### ➤ Optic Pod:

- Demonstrate the handles, objective lens, filter, magnification changer, binocular head and IPD.
- Cannot cover with surgical drape.
- ➤ Position Fine Focus Knob.
- Remind to tighten thumb screw for binocular head.





- **➤** Back of Optic Pod:
  - **Power Ports:** 
    - ➤ Identify 12v and USB Power ports.
    - ➤ Only Scope to have USB Power Port on Optic Pod
  - **➤ Light Source Buttons:** 
    - ➤ Identify buttons.
    - ➤ Demonstrate how it turns on/off and change in light levels. Point out on LED Readout





#### **Accessories**



- ➤ Identify and describe every accessory being demonstrated.
- Strongly recommend customer to read manuals of Digital Image Devices prior to use.
- Show how to tighten all connections. (Rings, knobs, thumb screws.)



#### **Movement of Scope**

- ➤ Demonstrate the fluid movement of the scope at each pivot point.
  - ➤ North/South, East/West, Circular movements.
  - ➤ How to make adjustments to the scope based on accessories being used.
  - > Explain how to adjust for "Drift".
- ➤ Demonstrate Floor Unit Tipping Hazard and it's prevention.



#### FLOOR MOUNT TIPPING HAZARD

- ➤ Under certain circumstances the Floor Model of the Alpha Air Surgical Microscopes will tip over.
  - ➤ All arms are extended in one line with Ex/Rotation Device, 3D observation tube, DSLR attached and user pulls down on Optic Pod handles.





### FLOOR MOUNT TIPPING HAZARD

- ➤ To mitigate the Tipping Hazard do not fully extend both arms linearly when there are accessories from both sides of the beam splitter.
- ➤ Position the Pantographic Arm perpendicular from the LED Arm when using the Alpha Air Microscope.



# Proper Position for Alpha Air Arms





# Mitigating the Floor Mount Tipping Hazard

Do not extend Arms like this:

Position the Arms like this:







> STEP ONE: Set both eye pieces to "0" until Step 4. No further adjustments until STEP FOUR with the eye pieces.



>STEP TWO: Identify the location on the binocular head that adjusts the Inter-Pupillary Distance (IPD).



0-220 BINOCULAR HEAD



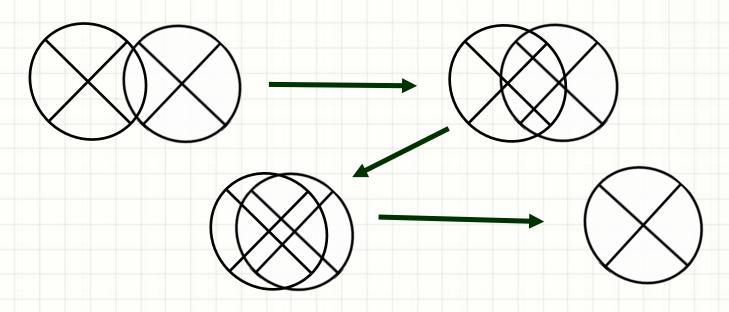
STRAIGHT BINOCULAR HEAD



**FIXED 45 BINOCULAR HEAD** 



➤ STEP TWO: Take a piece of paper and draw an "X" on it. Place that piece of paper on a flat, stationary area at the recommended focal length. (10" with 250mm, 12" with 300mm objective). Set magnification level to lowest setting. Adjust IPD until you get a single solid image. Record IPD Value for future reference.



- ➤ STEP 3: Set the microscope to the highest level on the magnification changer and position the scope to where the image is as sharp as possible using both eyes.
- ➤ STEP 4: Next, go to the lowest magnification level without changing the microscope's position. Close left eye, with right eye focus the eye piece to achieve the sharpest image. Close right eye, with left eye focus the piece to achieve the sharpest image. Once the image is clear in both eyes, the Parfocalization Process is complete.



## **Installation Sequence**

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  - Troubleshooting
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  - ➤ Lifetime on Optics & Mechanics
  - > 3 Years on Electronics
- Microscope Parts
- Accessories
- Movement of Scope
  - Tipping Hazard of Floor Model Reviewed
- Parfocalization
- Signature on Microscope Checklist
- Email, send photo or fax signed Microscope Checklist to:
  - micro@seilerinst.com
  - Fax: 314-968-3601
  - > Texts: 314-707-7153





# QUESTIONS?





#### INTRODUCTION TO EVOLUTION ZOOM

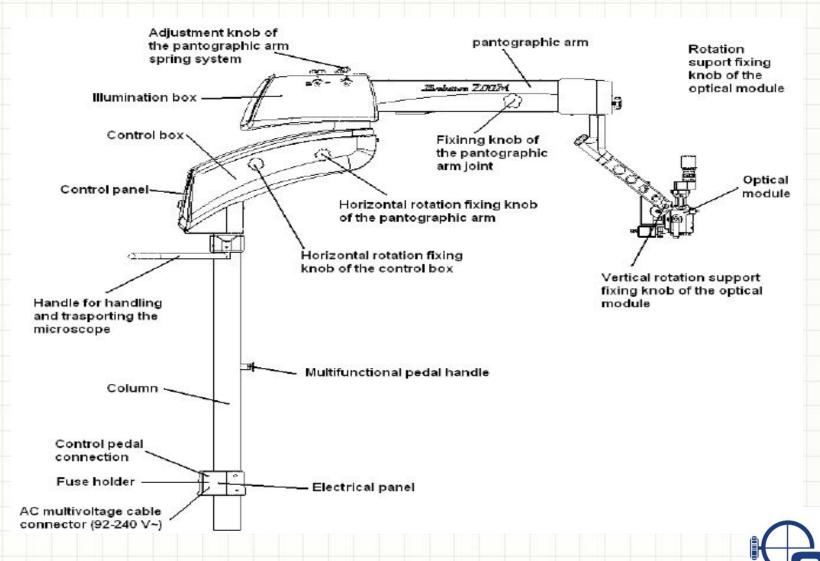




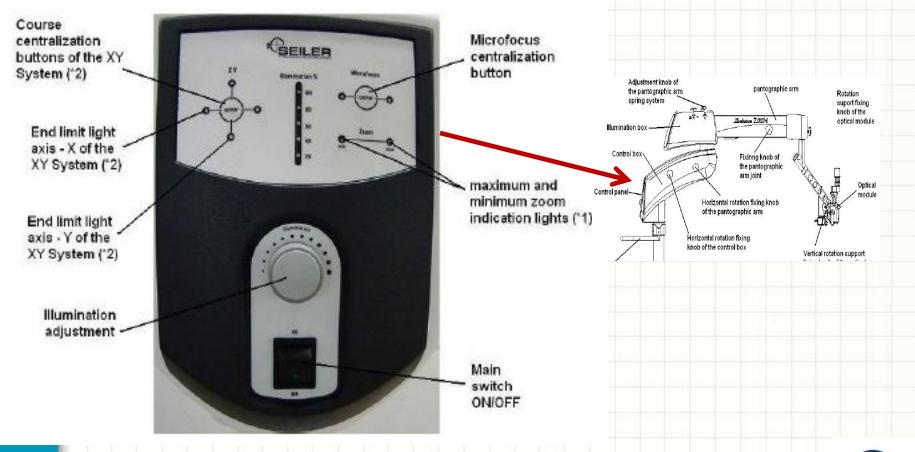
# INTRODUCTION TO THE EVOLUTION ZOOM

- THREE TYPES OF ZOOM:
  - DENTAL
  - MULTIDISCIPLINARY: Neurosurgery, Spine, ENT, and Plastic
  - OPTHALMOLOGY
- Today's Presentation will cover the general components that are shared amongst all three Zoom Microscopes.

#### MAIN ELEMENTS OF THE ZOOM



#### **ZOOM CONTROL PANEL**





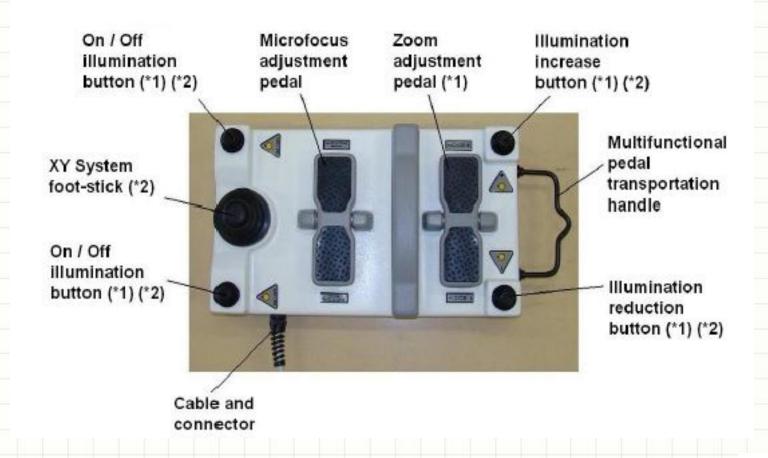
#### **EIGHT FUNCTION HAND CONTROL GRIP**







#### **MULTIFUNCTION FOOT PEDAL**





#### **EVOLUTION ZOOM ACCESSORIES**

- Special Beamsplitter
- Standard Accessories as the Alpha Air Series.
- XY System
- Surgical Drape
- Ophthalmology Accessories
  - These will be discussed during another training session.



# **ZOOM BEAMSPLITTER**





# **XY SYSTEM**



50 mm Range with automatic reset button







CONFIDENTIAL - DO NOT DISTRIBUTE

# **ZOOM SURGICAL DRAPE**





#### PANTOHGRAPHIC ARM CONNECTION

#### 5.4.3 Pantographic Arm Connection

Connect the microfocus / zoom cable to the connector indicated on the pantographic arm (Figure 9).

Insert the XY connection cable to the XY connector (\*2) (Figure 9).

Connect the video system power cable to its connector, if applicable (Figure 9).

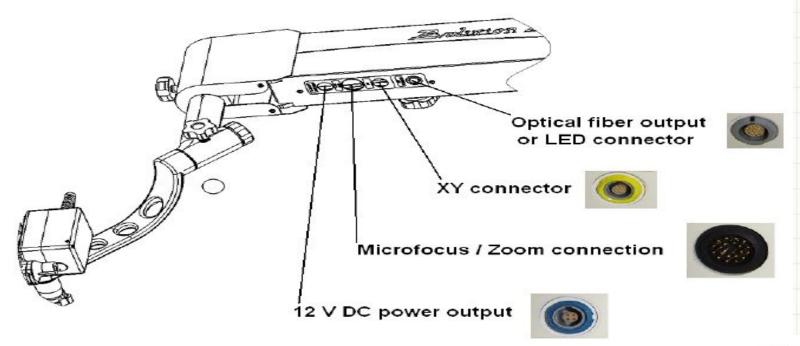


Figure 9: Lower View of pantographic arm (electrical connection)



#### **CLEANING THE ZOOM**

#### 7.6 Cleaning

#### 7.6.1 General

- The general cleaning of The Seiler Evolution Zoom Microscope shall be carried out
  with lint-free clothes or wipe tissues moistened in an appropriate non-abrasive cleaning
  agent. Steel-wire brushes, knives, erasers, emery cloth, sandpaper, and other devices
  that produce an abrasive action or cause contamination shall NOT be used.
- Water with neutral detergent is the most appropriate for the cleaning process. Do NOT
  use organic solvents to clean the external surfaces of the equipment (such as gasoline,
  ethanol, kerosene), since they can harm painted surfaces.
- Eyecups are threaded onto the eyepieces and it can be taken apart for cleaning purposes. Sterilization of them shall NOT be carried out in autoclaves or ovens (Figure 17).
- The knob silicone covers of the optical module can be sterilized in autoclaves or ovens.
- Control components such as buttons may be shielded from contact by a plastic film.



#### **EVOLUTION ZOOM SUMMARY**

- MOTORIZED ZOOM & MOTORIZED FOCUS
- ECONOMICAL PRICE POINT
- SUPERIOR MOVEMENT
- LARGE SELECTION OF ACCESSORIES



Introducing the

# **ALPHA AIR SERIES**





# **ALPHA AIR SERIES**

#### DENTAL

- ALPHA AIR 3 3 Step Magnification
- ALPHA AIR 6 6 Step Magnification

#### MEDICAL

- ALPHA AIR 3 ENT 3 Step Magnification
- ALPHA AIR 6 ENT 6 Step Magnification



# SAME FEATURES AS THE EVO/IQ

- MOUNTING OPTIONS
- POLE
- OPTICS
- BUILT- IN FILTERS
- BINOCULAR HEADS
- MAGNIFICATION LEVELS
- ACCESSORIES





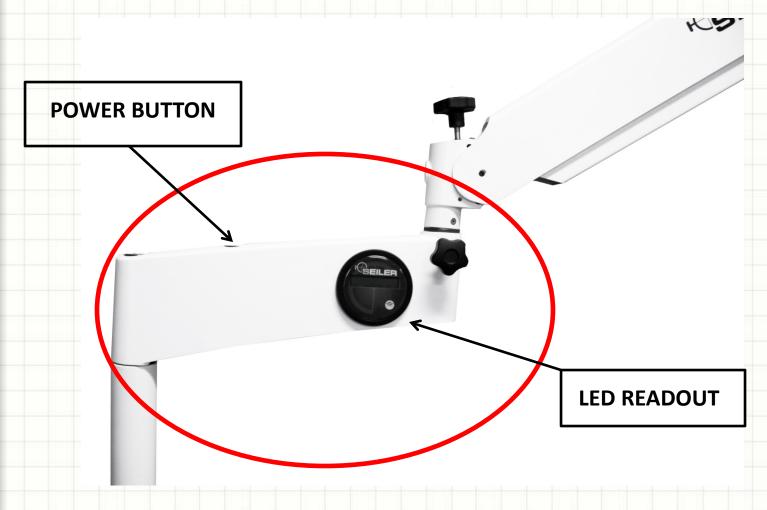
#### **ALPHA AIR NEW FEATURES**

- Microscope LED Arm
- New Pantographic Arm and Optical Pod movement
  - 6" Extension Arm no longer standard.
  - No Locking Knob on Pantographic Arm. Must use Allen Wrench.
- 150,000 LUX LED Light Source on Optical Pod
- USB & 12V DC ports directly on Optical Pod
- Hero 4 GoPro® with Remote
- Numbered Tension Knob on 45° Coupler Arm



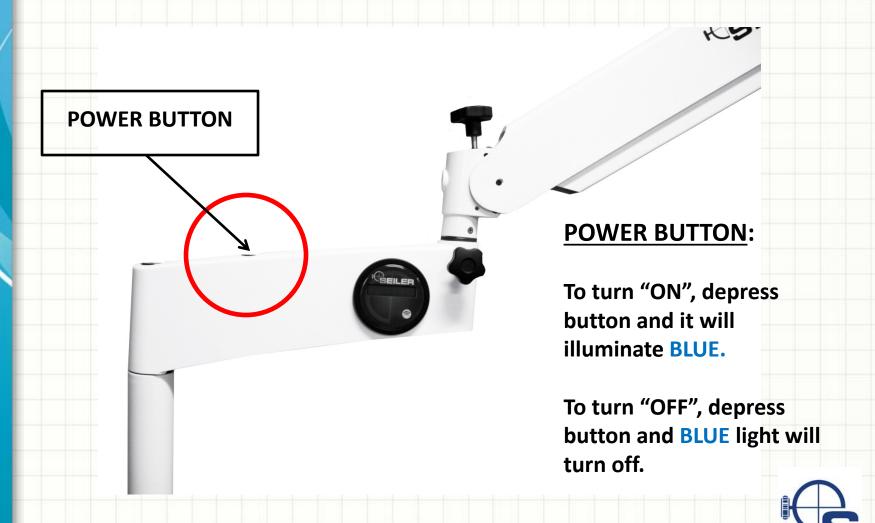


# MICROSCOPE LED ARM

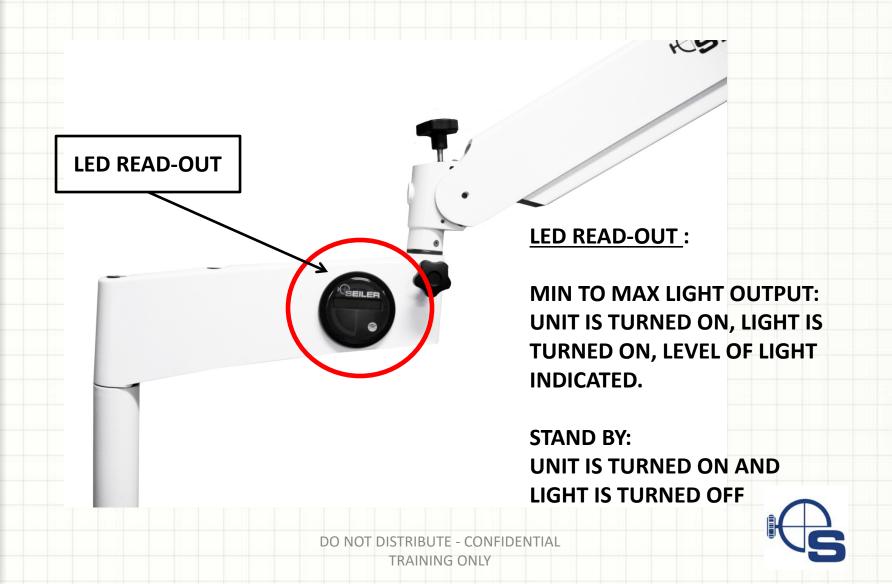




# **POWER BUTTON**



# **LED READ-OUT**



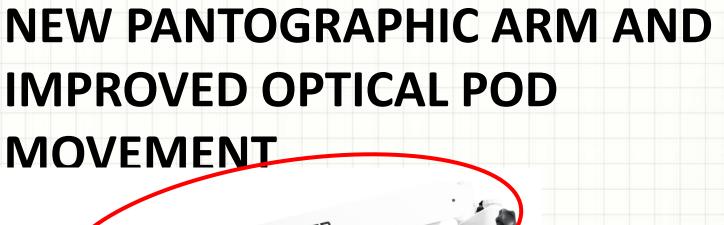
# MICROSCOPE LED ARM

- FEATURES & BENEFITS
  - LIGHT WEIGHT 8.5 pounds
    - "Easier to move and reposition"



- "Fits better in smaller Operatories than EVO/IQ"
- LED READOUT
  - "Keeps track of LED Output levels for consistent lighting levels"
  - Provides Diagnostic Codes for Technicians







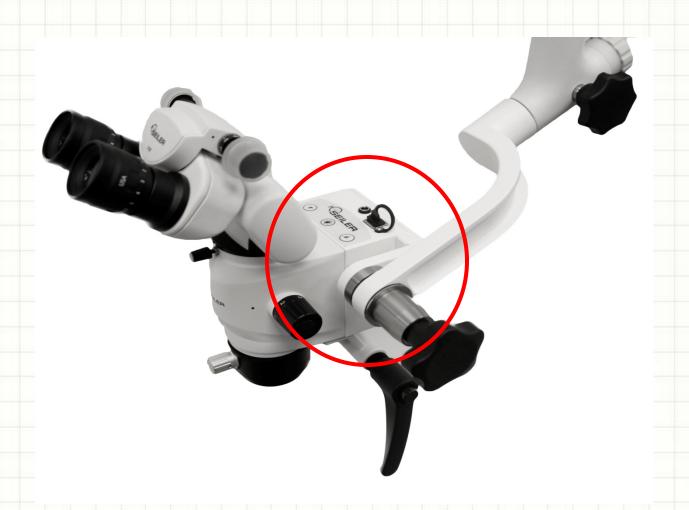
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TRAINING ONLY

# NEW PANTOGRAPHIC ARM AND IMPROVED OPTICAL POD MOVEMENT

- FEATURES & BENEFITS
  - New Pantographic Arm designed for improved movement.
  - Optic Pod Arm improved for smoother North/South movement.
    - "Feather-touch movement of the Microscope to allow for easy positioning during procedure."



# 150,000 LUX LED LIGHT SOURCE



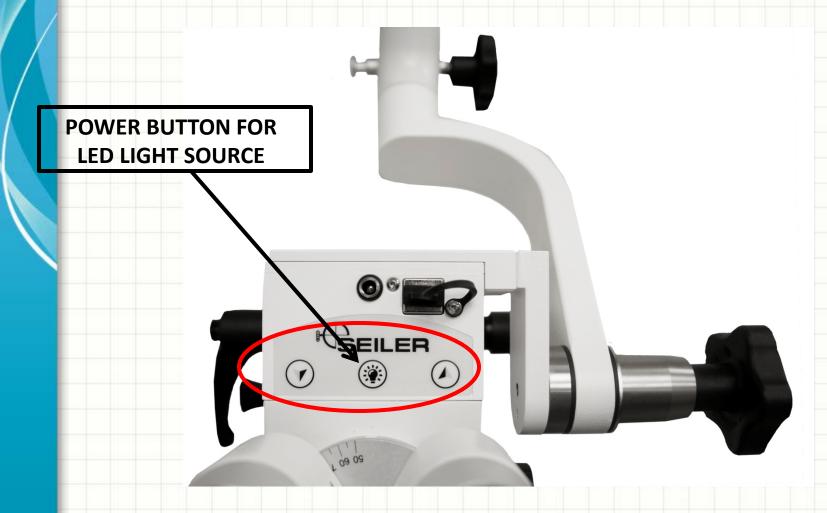


# LIGHT SOURCE CONTROLS





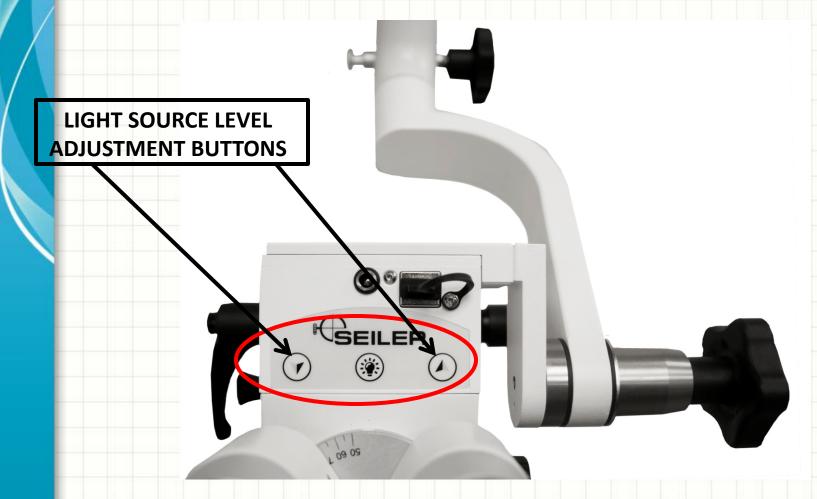
# LIGHT SOURCE CONTROLS





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# LIGHT SOURCE CONTROLS





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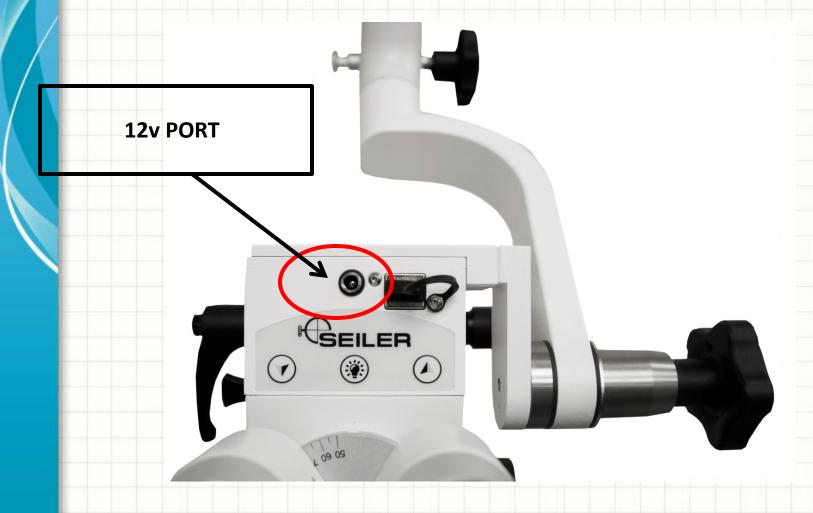
# 150,000 LUX LED LIGHT SOURCE

- FEATURES & BENEFITS
  - The Highest LUX LED Light Source on the Market today!
    - "Flexibility to adjust from 10,000 LUX to 150,000 LUX to view the canals and to digitally document."
  - 20,000 hours or more of LED illumination life.
    - "No longer have to change out expensive bulbs frequently."

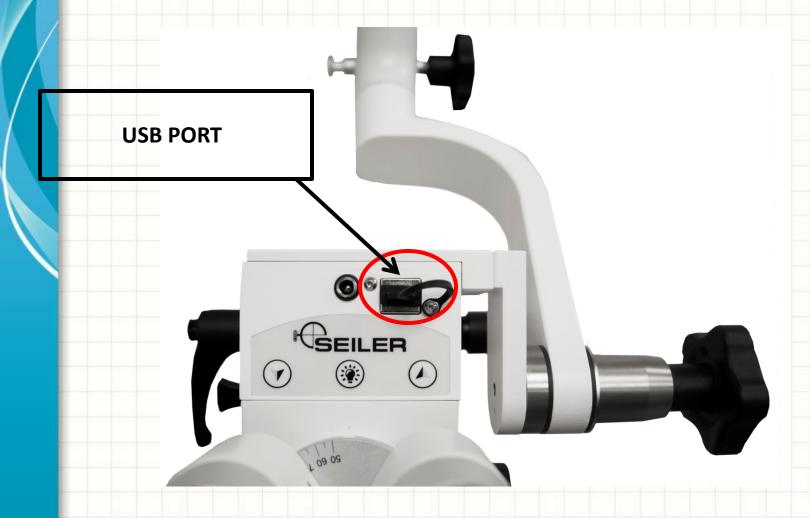




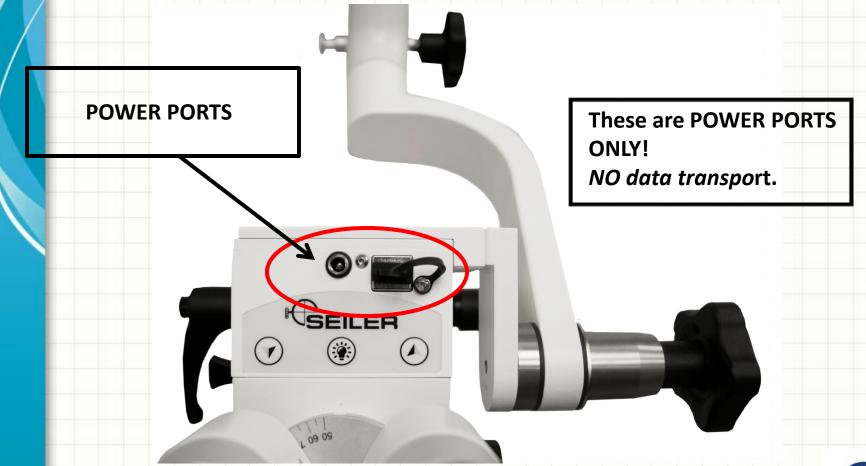














- FEATURES & BENEFITS
  - Power Ports on Optical Pod
    - "Significantly improves cable management and eliminates the need to depend on the use of batteries in digital imaging devices."



#### **USB Power Port With GoPro®**



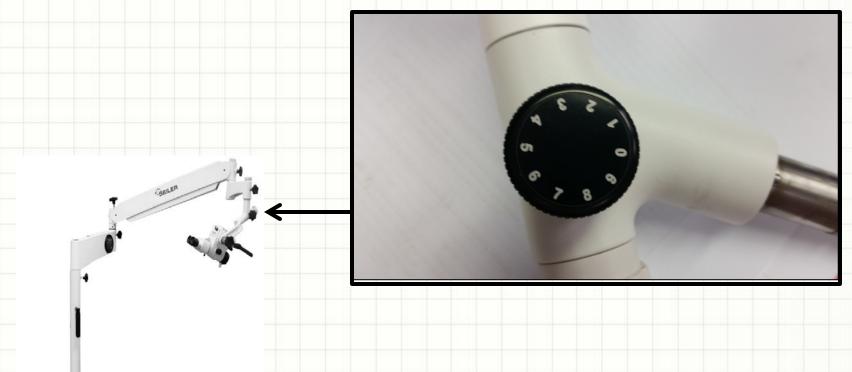


# **Hero GO PRO® with Remote**





# **Numbered Tension Knob**





GEILER

#### **Numbered Tension Knob**

- FEATURES & BENEFITS
  - Numbered Tension Knob
    - "Easier to adjust tension in the 45° Angle Arm depending on accessory being used."
    - "Consistently the correct tension every time for any accessories being used in the procedure."





PREASSEMBLED POWER CORD



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# **Key Points**

- Seiler's Lightest & Brightest Surgical Microscope.
- Improved, smoother movement of the Microscope.
- New Go Pro® and Remote available. Only manufacturer that offers this accessory!
- Only Microscope that has USB & 12v power port on Optical Pod.
- A great QUALITY & VALUE PROPOSITION for your accounts!



# QUESTIONS?



