



EXC-500 MICROSCOPE SERIES



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CONTENTS

SAFETY NOTES	3
CARE AND MAINTENANCE	3
	4
UNPACKING AND COMPONENTS DIAGRAMS	4-6
ASSEMBLY DIAGRAM & PROCEDURE	7
DETAILED ASSEMBLY	8-10
ADJUSMENT & OPERATION	
POWERING ON ILLUMINATION SPECIMEN SLIDE STAGE & STAGE TENSION INTERPUPILLARY DISTANCE LIGHT PATH FOCUSING CONDENSER APERTURE DIAPHRAGM ECO MODE FUSE REPLACEMENT	
SPECIFICATIONS	16
TROUBLESHOOTING	17-19
PRE-CONFIGURED MODELS & ACCESSORIES	20-24
MAINTENANCE	25
SERVICE	25
WARRANTY	25

SAFETY NOTES

- 1. Open the shipping carton carefully to prevent any accessory, i.e. objectives or eyepieces, from dropping and being damaged.
- 2. Do not discard the molded foam container; the container should be retained should the microscope ever require reshipment.
- 3. Keep the instrument out of direct sunlight, high temperature or humidity, and dusty environments. Ensure the microscope is located on a smooth, level and firm surface.
- 4. If any specimen solutions or other liquids splash onto the stage, objective or any other component, disconnect the power cord immediately and wipe up the spillage. Otherwise, the instrument may be damaged.
- 5. All electrical connectors (power cord) should be inserted into an electrical surge suppressor to prevent damage due to voltage fluctuations.
- 6. For safety when replacing the LED bulb or fuse, be sure the main switch is off ("O"), remove the power cord, and replace the LED bulb after the bulb and the lamp house has completely cooled.
- 7. Confirm that the input voltage indicated on your microscope corresponds to your line voltage. The use of a different input voltage other than indicated will cause severe damage to the microscope.

CARE AND MAINTENANCE

- 1. Do not attempt to disassemble any component including eyepieces, objectives or focusing assembly.
- 2. Keep the instrument clean; remove dirt and debris regularly. Accumulated dirt on metal surfaces should be cleaned with a damp cloth. More persistent dirt should be removed using a mild soap solution. Do not use organic solvents for cleansing.
- 3. The outer surface of the optics should be inspected and cleaned periodically using an air stream from an air bulb. If dirt remains on the optical surface, use a soft cloth or cotton swab dampened with a lens cleaning solution (available at camera stores). All optical lenses should be swabbed using a circular motion. A small amount of absorbent cotton wound on the end of a tapered stick such as cotton swabs or Q-tips, makes a useful tool for cleaning recessed optical surfaces. Avoid using an excessive amount of solvents as this may cause problems with optical coatings or cemented optics or the flowing solvent may pick up grease making cleaning more difficult. Oil immersion objectives should be cleaned immediately after use by removing the oil with lens tissue or a clean, soft cloth.
- 4. Store the instrument in a cool, dry environment. Cover the microscope with the dust cover when not in use.
- 5. ACCU-SCOPE[®] microscopes are precision instruments which require periodic preventative maintenance to maintain proper performance and to compensate for normal wear. An annual schedule of preventative maintenance by qualified personnel is highly recommended. Your authorized ACCU-SCOPE[®] distributor can arrange for this service.

INTRODUCTION

Congratulations on the purchase of your new ACCU-SCOPE[®] microscope. ACCU-SCOPE[®] microscopes are engineered and manufactured to the highest quality standards. Your microscope will last a lifetime if used and maintained properly. ACCU-SCOPE[®] microscopes are carefully assembled, inspected and tested by our staff of trained technicians in our New York facility. Careful quality control procedures ensure each microscope is of the highest quality prior to shipment.

UNPACKING AND COMPONENTS

Your microscope arrived packed in a molded EPE foam container. **Do not discard the container**: the EPE foam container should be retained for reshipment of your microscope if needed. Avoid placing the microscope in dusty surroundings or in high temperature or humid areas as mold and mildew will form. Carefully remove the microscope from the container by its arm and base and place the microscope on a flat, vibration-free surface.

COMPONENTS DIAGRAM



EXC-500 MICROSCOPE SERIES

COMPONENTS DIAGRAM Eyepieces Camera/Photo Port Analyzer Slot (Optional) Specimen/Slide Condenser Holder Focusing Knob (on both sides) Y-Stage Movement Knob X-Stage Movement Knob Condenser Aperture **Diaphragm Adjustment** 0 0 Fine Focus Adjustment Knob Condenser Coarse Focus Illuminator Adjustment Knob Adjustment Knob Illuminator Push-in Diffuser On/Off Button Eco Mode Sensor For Low Power Objectives (2x-4x) Focus Tension Adjustment Knob

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5

EXC-500 MICROSCOPE SERIES

COMPONENTS DIAGRAM



ASSEMBLY DIAGRAM

The diagram below shows how to assemble the various modules. The numbers indicate the order of assembly. Your microscope was preassembled by our factory technicians at our New York facility prior to shipment. Should you need to disassemble/assemble your microscope in the future, please follow the instructions outlined below.

When assembling the microscope, make sure that all parts are free of dust and dirt, and avoid scratching any parts or touching glass surfaces.



DETAILED ASSEMBLY







Fig. 2



Fig. 3

Installing the Condenser & Stage Carrier - (Fig. 1 & 2)

Using the 3mm Hex wrench that was provided with your microscope, loosen the lock screw (1).

Gently slide the dovetail of the condenser/stage carrier onto the dovetail slide mount (2) as shown until it sits firmly on the resting bolt (3).

Retighten the lock screw with the Hex wrench.

Installing the Condenser - (Fig. 2 & 3)

Lower the condenser/stage carrier (1) to its lowest position by turning the condenser knob counter clockwise (2).

Loosen the condenser lock screw with the Hex wrench ③.

Position the condenser ④ with the centering pin facing toward the back of the dovetail slider. Slide the condenser into place and wiggle it to ensure the positioning pin is engaged.

Gently retighten the lock screw (3).

Installing the Stage - (Fig. 4 & 5)

With the condenser/stage carrier at its lowest position, remove protective tape and bag from stage and specimen holder (1). (The stage comes with the specimen holder pre-mounted to the top of the stage).

Using the 3mm Hex wrench, loosen the lock screw 2 on the front of the stage.

Position the X-Y movement knobs to the right ③. Align the circular mount on the bottom of the stage with the circular bracket on the condenser/stage carrier and set the stage in place so that it is centered over the condenser below.

8

Retighten the lock screw (2) on the front of the stage.







DETAILED ASSEMBLY (continued)



Fig. 6





Fig. 8



Installing the Nosepiece - (Fig. 6)

Unscrew the dust plugs from the nosepiece (1) for the number of objectives you will be installing.

Using the Hex wrench, loosen the lock screw (2) enough so that the nosepiece can easily slide into the notch (3) on the front of the dovetail mount (4), then slide the nosepiece onto the mount.

Retighten the lock screw 2 with the Hex wrench.

Installing the Viewing Head - (Fig. 7)

Using the Hex wrench loosen the lock screw (1).

Position the viewing head ② above the dovetail opening ③ as shown and with it tilted slightly down on the right, slide the dovetail under the notches in the dovetail hole and set it into place with the two eyepiece tubes ④ facing forward.

Retighten the lock screw (1).

Installing the Eyepieces - (Fig. 8 & 9)

Carefully remove the eyepieces ① from the protective packaging – be sure not to touch any optical (glass) surfaces. Remove the dust caps.

Insert an eyepiece (1) into one of the eyepiece tubes (2) and gently twist and push the eyepiece in until it is flush with the top surface of the eyepiece tube.

Repeat above for the other eyepiece.

DETAILED ASSEMBLY (continued)



Fig. 10

Installing the Objectives - (Fig. 10)

Rotate the coarse focusing knob $(\underline{1})$ to lower the stage to its lowest position.

Install the objectives into the nosepiece ② from the lowest magnification to the highest in a clockwise direction beginning with the first empty objective receptacle in front. Install each objective by using two hands to position and gently screw in the objective in a clockwise direction into the threads of the nosepiece receptacle.

NOTE: Never force any objectives onto the threads of the nosepiece, and do not over-tighten.



Installing the LED Lamp Housing - (Fig. 11)

Using the Hex wrench loosen the lock screw 1 for the LED lamp housing.

Align and install the lamp housing (2) with the opening (3) in the back of the stand as shown.

Retighten the lock screw (1).

Align the red dot on the LED lamp housing cable plug (4) with the red dot on the top of the lamp housing port (5) on the back of the microscope and slide the plug into the port for transmitted illumination ((2)).



Installing the Power Cord - (Fig. 12)

Align and plug the female end (1) of the power cord into the power cord socket (2) on the back of the microscope.

Plug the other end into a grounded (3-prong) outlet.

NOTE: Always use the power cord that is provided with your microscope; using a different power cord may damage your microscope. Should you need a replacement, contact your authorized ACCU-SCOPE dealer or call ACCU-SCOPE at 1-631-864-1000 for a dealer nearest you.

ADJUSTMENT & OPERATION



Fig. 13



Fig. 14







Powering On - (Fig. 13)

With the microscope plugged in, locate and push the I/O toggle button (1) on the back of the microscope to the ON (I) position.

Powering On LED Illuminator & Adjusting Brightness - (Fig. 14)

Push the illuminator On/Off button to turn on the transmitted light 1.

Adjust the brightness by turning the Iluminator Adjustment Knob (2) clockwise for brighter illumination, counter clockwise for less illumination.

Placing A Specimen - (Fig. 15)

Push the left side of the Specimen Holder (1) on the top of the stage place to open the holder. Place your slide in and release the holder to allow it to close firmly against the slide.

Adjusting the Stage - (Fig. 15)

The stage has a coaxial X-Y Stage Movement Knob (1) which allows you to move your specimen in any direction: top knob - forward/back (Y), and bottom knob - left/right (X).

Adjusting the Stage Tension - (Fig. 16)

The stage control tension can be adjusted according to user preference. To adjust the tension, pull the bottom Stage Movement Knob (1) down to expose the tension adjustment rings (2) for the X-Y direction.

To loosen, turn each ring counter-clockwise, or clockwise to tighten.

Push the bottom knob up when you reach the desired tension.



Fig. 17

Adjusting Interpupillary Distance - (Fig. 17)

To adjust the interpupillary distance, hold the left and right eyetubes while observing a specimen. Rotate the eyetubes around the central axis until the fields of view of both eyetubes ① coincide completely. A complete circle should be seen in the viewing field when viewing the specimen slide. An improper adjustment will cause operator fatigue and will disrupt the objective parfocality.

Where "•" (2) on the eyepiece tube lines up to the interpupillary scale (3), then that is the number for the interpupillary distance. Range: $47 \sim 75$ mm.

Remember your interpupillary number for future operation.

NOTE: The eyepiece tubes can be rotated 180° to increase the eyepoint height by 34mm to accommodate the needs of different users.

Adjusting The Light Path - (Fig. 18)

(For Optional Trinocular Viewing Heads)

For trinocular viewing heads, your camera port allows you to view 100% through the eyepieces, 20/80% to eyepiece/camera, or 100% through the camera port.

To adjust the light path, push the Light Path Selector Knob (1) in or out to select the desired viewing path.

Knob Position	Eyepiece Path	Camera Port Path
All the way in	100%	0%
Half-way in	20%	80%
All the way out	0%	100%



Fig. 18



Fig. 19

Adjusting the Focus - (Fig. 19)

To ensure that you obtain sharp images with both eyes (since eyes vary, especially for those wearing glasses) any eyesight variation can be corrected in the following manner: set both diopter collars to "0". Using your left eye only and the 10X objective, focus your specimen by adjusting the coarse adjustment knob ①. When the image is in view, refine the image to its sharpest focus by turning the fine adjustment knob ②. Rotate the diopter collar to obtain the sharpest focus. To obtain the same sharp image using your right eye, do not touch the coarse or fine adjustments. Instead, rotate the right diopter collar until the sharpest image appears. Repeat several times to check.

NOTE: do not counter rotate the focusing knob as this will cause severe problems and damage to the focusing system.



Fig. 20

Adjusting the Focus Stop - (Fig. 20)

Once you have adjusted the focus, turn the focus stop clockwise to set your objective levels to a stop position so they will not come into contact with your slide.













Centering the Condenser - (Fig. 21-23)

The top height of the condenser was pre-set at the factory. It is adjustable using the condenser adjustment knobs on either side of the condenser. To adjust, follow the steps below.

Rotate either of the condenser knobs (1) to raise it to the highest position.

Rotate the 10x objective into the light path and focus the specimen.

Rotate the field iris diaphragm adjustment ring (2) to put the field iris diaphragm to the smallest position.

Rotate the condenser knob and adjust the image to be its sharpest.

Using the Hex wrench provided, adjust the center adjustment screws (3) and move the specimen to the center of the field of view.

Open the field iris diaphragm gradually. If the image is in the center all the time and inscribed to the field of view, the condenser has been centered correctly. On the front of the condenser, select the number that matches your objective lens.

Adjusting the Aperture Diaphragm –

(Fig. 24)

The aperture size is increased or decreased by rotating the condenser aperture diaphragm ring (1). When the aperture is closed, the brightness and resolution are decreased but the contrast and range of focus are increased. If the aperture diaphragm is opened, the brightness and resolution are increased; however, the contrast and range of focus are diminished. For optimal viewing conditions set the condenser aperture diaphragm ring to match the magnification of the objective in the optical path.



Fig. 25





Fig. 27

"ECO" (Economy) Setting - (Fig. 25)

The EXC-500 Microscope is equipped with an auto shut-off feature, or "ECO" mode, to preserve the life of the bulb. ECO mode activates when the microscope is unattended for fifteen (15) minutes.

The ECO sensor (1) is located on the front of the microscope base. While in ECO mode the red light of the ECO sensor will flash once every three (3) seconds.

To reactivate the illumination, press the ECO button 2 once.

To **DISABLE** the ECO feature, PRESS and HOLD the ECO button for three (3) seconds.

To **REACTIVATE** the ECO feature, PRESS and HOLD the ECO button for three (3) seconds.

Replacing the Fuses - (Fig. 26 & 27)

The fuse holder drawer is located underneath the AC power cord receptacle on the back of the microscope.

To replace the fuses, turn the power off and unplug the microscope from the wall outlet and then from the power cord receptacle on the back of the microscope.

Insert a small flat head (-) screwdriver into the top of the fuse holder drawer (1) and carefully slide it open to expose the two fuses.

(Fig. 27 shows the view looking up from the bottom of the microscope with the fuse holder drawer open.)

Being careful not to break the glass of either of the fuses, gently insert the screwdriver up through the bottom openings of the drawer as shown and push each fuse up to remove.

Replace the fuses with 250v T2.5A fuses, CAT# 500-3277

Slide the fuse holder drawer back in place.

LED BULB: 3w S-LED INPUT: AV 100 ~ 240v 50/60Hz FUSE: 250v T2.5A

SPECIFICATIONS

Viewing Bodies	Binocular or trinocular (0:100, 100:0, 80:20 split), 30° inclined Siedentopf or ergonomic (0° to 35° adjustment angle) type viewing head, rotatable 360°; interpupillary distance adjustment 47-78mm. <i>Optional multi-viewing platforms are available</i>
Optical System	Infinity optical system, f = 200mm, anti-mold
Objectives	Standard configurations include NIS Infinity Corrected Plan 4x, 10x, 40xR* and 100xR* oil (*spring-loaded)
Eyepieces	WF10x/22mm focusable eyepieces with eyeguards are locked-in to prevent tampering; eyepiece accepts a 26.5mm reticle. <i>Optional 15x and 20x eyepieces are available</i>
Nosepiece	Reversed sextuple ball bearing nosepiece with positive click stops to ensure parcentration
Focusing System	Coaxial focusing system with adjustable tension control and upper limit stop to prevent accidental damage to slides; al metal gears, brass for fine focus gear
Stand	Cast alloy aluminum
Stage	Mechanical stage with Gorilla™ glass insert and tension adjustable controls; size 302mm x 152mm with X-Y movement range of 78mm x 54mm
Condenser	Achromat swing-out condenser, N.A. 0.9/1.25 (2x—100x) on a rack and pinion with iris diaphragm
Illumination	3 watt LED Eco-illumination with variable intensity control; LED bulb is rated for over 25,000 hours of continued use; universal power supply 110-240v
Accessories	Dust cover, instruction manual included
Optional Accessories	Fluorescence attachments; Phase contrast attachments; NIS Plan achromat objectives, infinity corrected: 2x, 20x, 50xR oil, 60xR or 100xR oil with iris diagphragm; NIS S-Plan APO objectives: 4x, 10x, 20x, 40xR, 100xR oil; 6-position phase contrast turret condenser, BF & DF positions: 10x, 20x 40x & 100x phase annuli; condensers; reticles; gout kit; microscope carry case
Warranty	5 year limited warranty for parts, labor and electronic components; 1 year warranty on LED bulb

TROUBLESHOOTING

Under certain conditions, performance of this unit may be adversely affected by factors other than defects. If a problem occurs, please review the following list and take remedial action as needed. If you cannot solve the problem after checking the entire list, please contact your local dealer for assistance.

OPTICAL

Problem	Cause	Corrective Measure
Darkness at the periphery or uneven brightness of view field	Revolving nosepiece not in click stop position	Revolve the nosepiece to click stop position by swinging the objective correctly into the optical path
Dirt or dust on the view field	Dirt or dust on the lens - eyepiece, condenser, objective, collector lens or specimen	Clean the lens
Poor image quality	No cover glass attached to the slide	Attach a 0.17mm cover glass
	Cover glass is too thick or thin	Use a cover glass of the appropriate thickness (0.17mm)
	Slide maybe upside down	Turn slide over so the cover glass faces up
	Immersion oil is on a dry objective (especially the 40xR)	Check the objectives, clean if necessary
	No immersion oil used with100xR objective	Use immersion oil
	Air bubbles in immersion oil	Remove bubbles
	Condenser aperture is closed or open too much	Open or close properly
	Condenser is positioned too	Position the condenser slightly lower than the upper limit

TROUBLESHOOTING (continued)

IMAGE PROBLEMS

Problem	Cause	Corrective Measures
Image moves while focusing	Specimen rises from stage surface	Secure the specimen in the slide holder
	Revolving nosepiece is not in the click-stop position	Revolve the nosepiece to the click-stop position
Image tinged yellow	Lamp intensity is too low	Adjust the light intensity by rotating the intensity control dial and/or iris diaphragm
	Blue filter not used	Use daylight blue filter
Image is too bright	Lamp intensity is too high	Adjust the light intensity by rotating the intensity control dial and/or iris diaphragm
Insufficient brightness	Lamp intensity is too low	Adjust the light intensity by rotating the intensity control dial and/or iris diaphragm
	Aperture diaphragm closed too far	Open to the proper setting
	Condenser position too low	Position the condenser slightly lower than the upper limit

TROUBLESHOOTING (continued)

MECHANICAL PROBLEMS

Problem	Cause	Corrective Measures
Image will not focus with high power objectives	Slide upside down	Turn the slide over so the cover glass faces up
	Cover glass is to thick	Use a 0.17mm cover glass
High power objective contacts slide when changed from low power objective	Slide upside down	Turn the slide over so the cover glass faces up
	Cover glass is to thick	Use a 0.17mm cover glass
	Diopter adjustment is not set properly	Readjust the diopter settings as outlined in section 4.3
Lamp does not light when switched on	No electrical power	Check power cord connection
	Lamp bulb burnt out	Replace bulb
	Fuse blown out	Replace fuse
Slippage of focus when using	Tension adjustment is set too	Increase the tension on the
the coarse focusing knob	low	focusing knobs
Fine focus is ineffective	Tension adjustment is set too high	Loosen the tension on the focusing knobs

EXC-500 MICROSCOPE SERIES

PRE-CONFIGURED MODELS



EXC-500 Series

CATALOG #	DESCRIPTION
EXC-500	Binocular with NIS Infinity Plan Objectives
	Binocular viewing head, inclined 30°, IPD 47 - 78mm, rotatable 360°
	WF 10x/22mm focusing eyepieces with eyeguards
	Reversed sextuple nosepiece
	NIS Infinity Corrected PLAN 4X, 10X, 40XR & 100XR oil objectives
	Achromat swing out condenser NA 0.90 (2x - 100x)
	Coaxial coarse and fine focusing controls
	Koehler illumination - 3 watt variable S-LED illuminator
	Dust cover, power cord, instruction manual, UL Approved
EXC-500-BE	Ergo Binocular with NIS Infinity Plan Objectives
	Same as EXC-500 except with Ergo tilting binocular viewing head, 5° to
	35°, IPD 47 - 78mm, rotatable 360°
EXC-500-T	Trinocular with NIS Infinity Plan Objectives
	Trinocular viewing head, inclined 30°, IPD 47 - 78mm, rotatable 360°
	Viewing split: 100% T / 0% B; 20% T / 80% B; and 0% T / 100% B
	WF 10x/22mm focusing eyepieces with eyeguards
	NIS Infinity Corrected PLAN 4x 10x 40xR & 100xR oil objectives
	Gorilla™ glass mechanical stage, tension adjustable controls
	Achromat swing out condenser, N.A. 0.90 (2x - 100x)
	Coaxial coarse and fine focusing controls
	Koehler illumination - 3 watt variable S-LED illuminator
	Dust cover, power cord, instruction manual, UL Approved
EXC-500-TE	Ergo Trinocular with NIS Infinity Plan Objectives
	Same as EXC-500-T except with Ergo Trinocular viewing head, adjustable 0° to 35°, IPD 47 - 78mm, rotatable 360°
EXC-500-MB	EXC-500 Main Body
	EXC-500 Main body frame
	Sextuple nosepiece
	Koehler illumination - 3 watt variable S-LED illuminator Dust cover, nower
	cord, instruction manual, UL Approved
EXC-500-ТЕ EXC-500-МВ	Gorilla [™] glass mechanical stage, tension adjustable controls Achromat swing out condenser, N.A. 0.90 (2x - 100x) Coaxial coarse and fine focusing controls Koehler illumination - 3 watt variable S-LED illuminator Dust cover, power cord, instruction manual, UL Approved Ergo Trinocular with NIS Infinity Plan Objectives Same as EXC-500-T except with Ergo Trinocular viewing head, adjustable 0° to 35°, IPD 47 - 78mm, rotatable 360° EXC-500 Main Body EXC-500 Main body frame Sextuple nosepiece Coaxial coarse and fine focusing controls Koehler illumination - 3 watt variable S-LED illuminator Dust cover, power cord, instruction manual, UL Approved

ADDITIONAL ACCESSORIES & PARTS

CATALOG

DESCRIPTION

TEACHING HEAD CONFIGURATIONS

(Does not include main microscope)

500-2SBS	Dual viewing head section for side by side observation, LED pointer unit with power adapter, (1) binocular viewing head and (2) WF10x/22mm focusing eyepieces
500-2FTB	Dual viewing head section for front to back observation, LED pointer unit with power adapter, (1) binocular viewing head and (2) WF10x/22mm focusing eyepieces
500-5SBS	Five viewing head unit for side by side observation, LED pointer unit with power unit, (4) binocular viewing head and (8) WF10x/22mm focusing eyepieces

Camera and Video Adapters

O-2005-35	0.35x c-mount adapter for 1/3" chip sensors, focus adjustable
O-2005-5	0.50x c-mount adapter for 1/2" chip sensors, focus adjustable
O-2005-65	0.65x c-mount adapter for 2/3" chip sensors, focus adjustable
500-2005-1	1x c-mount adapter (no lens)
500-2000	Photo tube, 23.2mm I.D.
500-2000-E	Photo/video intermediate attachment with photo tube for use with
	ergonomic binocular viewing head (CAT# 500-3155-BE)

Viewing Heads

500-3155	Binocular viewing head, 30° inclined, IPD 47 - 78mm
500-3155-BE	Ergonomic binocular viewing head, inclination from 5° to 35° (an optional
	photo/video port is available - see camera adapters)
500-3158	Trinocular viewing head, inclined 30°, IPD 47 - 78mm, rotatable 360°,
	Viewing split: 100% T / 0% B; 20% T / 80% B; and 0% T / 100% B
500-3158-TE	Ergo Trinocular viewing head, adjustable 0° to 35°, IPD 47 - 78mm,
	rotatable 360°, Viewing split: 100% T / 0% B; 20% T / 80% B; and 0% T /
	100% B

Nosepiece

500-NP	Sextuple nosepiece with analyzer slot
500-NP-PG	Nospiece plug for analyzer slot
500-NP-SP	Nospiece spacer to lower nosepiece by 20mm

Eyepieces & Eyeguards

500-3113	WF 10x/22mm focusable eyepiece with diopter adjustment and roll down eyeguard (each)
500-3112	EWF 12.5x/16mm focusable eyepiece with diopter adjustment and roll down eyeguard (each)
131-10-15	WF15x eyepiece with built-in diopter adjustment, 16mm field of view. Eyepiece accepts a 20mm reticle.
131-10-20	WF20x eyepiece with built-in diopter adjustment, 12.5mm field of view.
500-3131-SR	Eye cushion (small ring) for WF10x/22mm eyepieces
500-3131	Roll down eyeguards (pair)

ADDITIONAL ACCESSORIES & PARTS (continued)

CATALOG

DESCRIPTION

Reticles & Stage Micrometers

500-3137-26	26.5mm eyepiece reticle, 10mm/100 division with crossline
3145	Stage micrometer, 1mm/100 divisions (each division .010mm)

Plan Brightfield Objectives - Infinity Corrected

500-3172-PL	2x NIS Plan achromat objective, N.A. 0.06, W.D. 7.5mm
500-3173-PL	4x NIS Plan achromat objective, N.A. 0.10, W.D. 30mm
500-3174-PL	10x NIS Plan achromat objective, N.A. 0.25, W.D. 10.2mm
500-3177-PL	20xR NIS Plan achromat objective, N.A. 0.40, W.D. 12mm
500-3175-PL	40xR NIS Plan achromat objective, N.A. 0.65, W.D. 0.70mm
500-3179-PL	50xR oil NIS Plan achromat objective, N.A. 0.XX, W.D. 0.XXmm
500-3178-PL	60xR NIS Plan achromat objective, N.A. 0.80, W.D. 0.30mm
500-3176-PL	100xR oil NIS Plan achromat objective, N.A. 1.25, W.D. 0.20mm
500-3176I-PL	100xR oil NIS Plan achromat objective with iris diaphragm, N.A. 0.5 to
	1.25, W.D. 0.20mm

S-APO Objectives - Infinity Corrected

500-3173-SAPO	4x NIS S-Plan APO objective, N.A. 0.13, W.D. 16.5mm
500-3174-SAPO	10x NIS S-Plan APO objective, N.A. 0.30, W.D. 8.1mm
500-3177-SAPO	20xR NIS S-Plan APO objective, N.A. 0.50, W.D. 2.1mm
500-3175-SAPO	40xR NIS S-Plan APO objective, N.A. 0.75, W.D. 0.70mm
500-3176-SAPO	100xR NIS S-Plan APO objective, N.A. 1.30, W.D. 0.15mm

Phase Contrast

500-3221-PH	6-position N.A. 1.25 Phase contrast turret condenser, Brightfield and Darkfield positions, 10x, 20x, 40x & 100x phase annuli
500-3174-PH	10x NIS Plan phase objective, N.A. 0.25, W.D. 10.2mm
500-3177-PH	20xR NIS Plan phase objective, N.A. 0.40, W.D. 12mm
500-3175-PH	40xR NIS Plan phase objective, N.A. 0.65, W.D. 0.70mm
500-3176-PH	100xR oil NIS Plan phase objective, N.A. 1.25, W.D. 0.20mm
25-3226	Centering telescope, 30mm I.D.
350-3240-GIF	GIF 550nm, Green filter - 45mm

Condensers

500-3221-SO	Achromat swing out condenser, N.A. 0.90 (2x - 100x)
500-3229-DFD	Dry darkfield condenser N.A. 0.7 - 0.90 (4x - 40x)
500-3229-W	Oil darkfield condenser N.A. 1.25 - 1.36 for use w/CAT# 500-3176I-PL

ADDITIONAL ACCESSORIES & PARTS (continued)

CATALOG

DESCRIPTION

Mechanical Stages and Stage Mounts

500-3213-G	EXC-500 Gorilla [™] Glass stage with right hand coaxial controls, tension adjustable. Size 302 x 152mm; Moving range 78(X) x 54(Y)mm. 2 position slide holder
500-3213-GL	EXC-500 Gorilla [™] Glass stage with left hand coaxial controls, tension adjustable. Size 302 x 152mm; Moving range 78(X) x 54(Y)mm. 2 position slide holder
500-SH-1SL	Specimen holder Gorilla™ Glass stage for 1 slide
500-SH-2SL	Specimen holder Gorilla™ Glass stage for 2 slides
500-3213-RG	Glass insert replacement for Gorilla™ Glass stage
500-3213-P	Pathology plain stage 144mm x 144mm, hard anodized coating
500-TA-CS	Condenser/stage mount

Polarizer & Analyzer / Gout Kit

500-3228-AN	Simple analyzer
500-3228-POL	Simple polarizer, swing out
500-3228-L	Lambda λ plate
500-3228-QWP	1/4 λ wave plate
500-3228-R	Quartz wedge, 1st order red

Optional Accessories

350-3240-LBD	45mm LBD filter
32-3240-G	45mm Green filter
3205	Immersion Oil - Type A, 1/4 oz Cargille

Dust Covers

500-3301	Dust Cover - nylon for EXC-500
500-3301-MV	Dust cover - teaching units

FRAEN® Reflected Illuminators & Filter Sets for Fluorescence

F-1CFW-1CF	FRAEN® 1CFW - 1 color fixed light intensity, fluorescence illuminator, 30,000 hour rated life, includes 1 filter set
F-1CFW-1CV	FRAEN® 1CFW - 1 color variable light intensity, fluorescence illuminator, 30,000 hour rated life, includes 1 filter set
F-2CFW-2CF	FRAEN® 2CFW - 2 color fixed light intensity, fluorescence illuminator, 30,000 hour rated life, includes 2 filter sets
F-3CFW-2CF	FRAEN® 3CFW - 2 color fixed light intensity, fluorescence illuminator, 30,000 hour rated life, includes 2 filter sets
F-3CFW-3CF	FRAEN® 3CFW - 3 color fixed light intensity, fluorescence illuminator, 30,000 hour rated life, includes 3 filter sets
F-CFW-500	Dovetail for EXC-500 Series for Fraen® illuminators

Fluorescence Attachments & Components

(Connect to One of the Illumination Sources Below & Select Filter Sets)

500-3231 Fluorescence attachment with 6 position filter turret, shutter mechanism, aperture stop, iris, UV protection plate

ADDITIONAL ACCESSORIES & PARTS (continued)

CATALOG

DESCRIPTION

ScopeLED Fluorescence Illuminators

SLF110-LX	ScopeLED single wavelength LED excitation fluorescence light source, control pod and power source - See ScopeLED wavelengths below to select wavelengths
SLF120-PX	ScopeLED F120 package - choice of two fixed wavelengths, control pod and power source - See ScopeLED wavelengths below to select wavelengths
SLF140-GX	ScopeLED F140 package - four fixed wavelengths, control pod, power source - See ScopeLED wavelengths below to select wavelengths
SLAF-OL1	ScopeLED collimating adapter for EXC-500/EXC-350
	(Specify wavelength required when ordering ScopeLED products)

ScopeLED Wavelengths: 390±5, 440±5, 470±10, 525, 540±5, 560P(±10), 595±5, 640±5, 660±5,

Metal Halide Illumination System for Fluorescence

25-LM-75	Direct mount metal halide illuminator, 340-800nm output range, 1500 hour
	bulb life

MAINTENANCE

Please remember to *never* leave the microscope with any of the objectives or eyepieces removed and always protect the microscope with the dust cover when not in use.

SERVICE

ACCU-SCOPE[®] microscopes are precision instruments which require periodic servicing to keep them performing properly and to compensate for normal wear. A regular schedule of preventative maintenance by qualified personnel is highly recommended. Your authorized ACCU-SCOPE[®] distributor can arrange for this service. Should unexpected problems be experienced with your instrument, proceed as follows:

1. Contact the ACCU-SCOPE[®] distributor from whom you purchased the microscope. Some problems can be resolved simply over the telephone.

2. If it is determined that the microscope should be returned to your ACCU-SCOPE[®] distributor or to ACCU-SCOPE[®] for warranty repair, pack the instrument in its original Styrofoam shipping carton. If you no longer have this carton, pack the microscope in a crush-resistant carton with a minimum of three inches of a shock absorbing material surrounding it to prevent in-transit damage. The microscope should be wrapped in a plastic bag to prevent Styrofoam dust from damaging the microscope. Always ship the microscope in an upright position; **NEVER SHIP A MICROSCOPE ON ITS SIDE**. The microscope or component should be shipped prepaid and insured.

LIMITED MICROSCOPE WARRANTY

This microscope and its electronic components are warranted to be free from defects in material and workmanship for a period of five years from the date of invoice to the original (end user) purchaser. The LED lamp is warranted for a period of two years from the date of invoice to the original (end user) purchaser. This warranty does not cover damage caused in-transit, misuse, neglect, abuse or damage resulting from improper servicing or modification by other then ACCU-SCOPE approved service personnel. This warranty does not cover any routine maintenance work or any other work, which is reasonably expected to be performed by the purchaser. Normal wear is excluded from this warranty. No responsibility is assumed for unsatisfactory operating performance due to environmental conditions such as humidity, dust, corrosive chemicals, deposition of oil or other foreign matter, spillage or other conditions beyond the control of ACCU-SCOPE INC. This warranty expressly excludes any liability by ACCU-SCOPE INC. for consequential loss or damage on any grounds, such as (but not limited to) the non-availability to the End User of the product(s) under warranty or the need to repair work processes. Should any defect in material, workmanship or electronic component occur under this warranty contact your ACCU-SCOPE distributor or ACCU-SCOPE at (631) 864-1000. This warranty is limited to the continental United States of America. All items returned for warranty repair must be sent freight prepaid and insured to ACCU-SCOPE INC., 73 Mall Drive, Commack, NY 11725 – USA. All warranty repairs will be returned freight prepaid to any destination within the continental United States of America, for all foreign warranty repairs return freight charges are the responsibility of the individual/company who returned the merchandise for repair.

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