

# Axio Lab.A1

**Ergonomic. Easy-to-Use. Durable.**

Developed for bio-medical laboratories, for universities and training courses: Axio Lab.A1 is unmatched when it comes to performance and optics. Highly ergonomic, easy to operate and brilliant image quality for versatile medical applications.

Particularly in laboratory use, reliable microscopic images are crucial. With Axio Lab.A1 you are guaranteed to work with a microscope that combines maximum performance and cost-effectiveness. The special plus for long-term microscope users: **TUV-approved ergonomics**.

Axio Lab.A1 has been designed for daily laboratory applications. All applications in brightfield, darkfield, phase contrast or fluorescence can be performed readily – with the full range of ZEISS IC<sup>2</sup>S objectives.

## Key benefits at a glance

- TUV-approved ergonomic configuration for maximized comfort and a stress-free working position
- Special features for laboratory use, such as convenient position of all main operating elements and the use of soft-touch materials
- Excellent optical quality for reliable results
- Long term durability through the use of high quality materials
- Numerous tubes, including multi-observation and accessories for a wide range of applications
- Transmitted light illumination alternatively HAL 35 W, LED daylight or LED warmth



**High reliability for continuous microscopy work.**



We make it visible.

# The First Laboratory Microscope - With Approved Ergonomics

A number of attractive details are designed to guarantee the ergonomic and reliable handling of Axio Lab.A1.

**TUV-approved ergonomics.** Axio Lab.A1 places strong emphasis on ergonomic features, because continuous microscope use is often associated with discomfort, particularly in the neck. With Axio Lab.A1 users are able to examine slides with a favorable viewing position, keeping the neck and shoulder muscles relaxed. The height of the microscope is continuously adjustable by 50mm. In addition the tube can be swiveled from 8°-33° continuously.

**IC<sup>2</sup>S optics,** the Infinity colour-corrected system, is available only from Carl Zeiss. The system guarantees brilliant, colour-corrected and high-contrast results, meeting all the demands placed on image quality.

**Guaranteed durability.** The more a microscope is used, the more worthwhile it is to invest in quality. Axio Lab.A1 guarantees long lasting value and a long operating life.

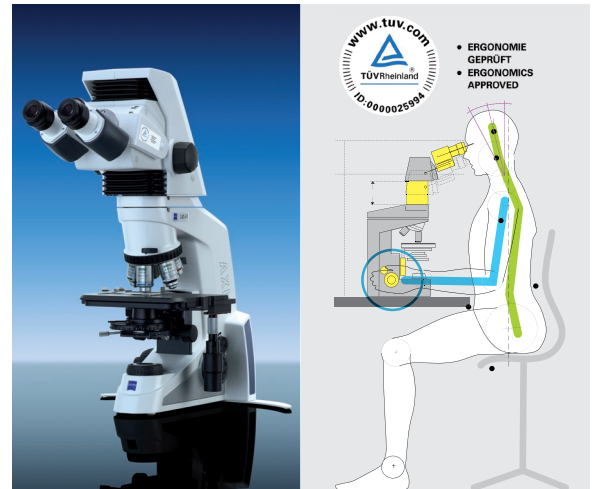
**The new multi-discussion system** from Carl Zeiss is also compatible for Axio Lab.A1. It is possible to achieve identical image orientations for all co-observers. All co-observers see the same image as the main observer. And a luminous pointer facilitates the identification of specimen details for discussion.

**Skin-friendly materials enhance comfort.** Many parts of the stand are coated with soft-touch material: These materials offer superior properties in comparison to metal surfaces: less cold and higher friction.

**Modular illumination.** Convenient and easy-to-change bulbs. The use of the novel warmlight LED in particular offers the advantages of a long lifetime, energy saving and halogen-like colour impressions in stained slides.

**Integrated tool storage and cable rest** in the stand back flap. Tools, e. g. for centring of phase rings are always at hand and cannot get lost. In addition, the tilted flap can be used as cable rest.

*\*TUV Rheinland is a world-renowned independent organization which certifies product safety and ergonomics.*



*TUV\*-approved ergonomics: The ergo-version of Axio Lab.A1.*



*Comfortable and convenient: Working with supported arm and all main elements within reach of one hand.*



*Everything at hand: Tool bar on the back of the scope.*

# Explore the Possibilities - Axio Lab.A1 Wide Range of Applications

With the help of Axio Lab.A1 diverse diagnostic applications can be carried out easily and efficiently.

Axio Lab.A1 is designed for many uses. Microbiology, cytology, hematology and pathology labs as well as those in school and colleges will benefit particularly.

## Fluorescence microscopy in the lab

Axio Lab.A1 ensures easy-to-use LED-fluorescence with 2 LED positions and the well known standard push-and-click-modules from Carl Zeiss. In comparison to standard HBO illumination the LED fluorescence is much safer, more energy efficient, quicker and easier to use.

Additional advantages: No warm-up and cool-down times and no need to change or adjust lamps.

The fluorescent marker FITC is primarily used for antigen-antibody reactions in the field of immunology. FITC binds to the antibody molecules and emits an intense green fluorescence upon excitation with the 470 nm LED.

## Brightfield and darkfield microscopy

In the field of hematology, the usual diagnostic approach to blood disorders is blood counting and blood film examination. During blood film examination in brightfield microscopy, the individual types of white blood cells are counted. Axio Lab.A1 makes this task easier, because the

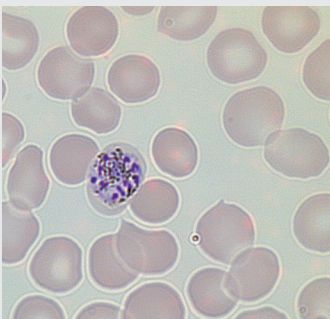
main operating elements of the microscope, such as the stage drive, fine focus drive and light intensity are all reach of one hand. This frees up the other hand.

Darkfield blood analysis is very useful for the early detection of serious health conditions, because fine and unstained structures can often not be seen in front of a bright background. This situation changes if the structures are illuminated from the side and viewed in front of the darkest possible background. The structures then really seem to light up. Darkfield is a useful detection method for minute details, not easily detectable brightfield. It is produced by indirect sample illumination resulting in bright structures on a dark image background. Main fields of applications are hematology and dermatology.

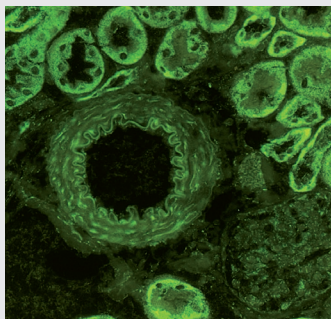
Axio Lab.A1 presents a five position Abbe turret condenser with darkfield and Phase contrast 1,2,3.

Polarization contrast is used to detect birefringent structures, such as crystals or fibres. In medical microscopy it helps to detect gout or asbestos.

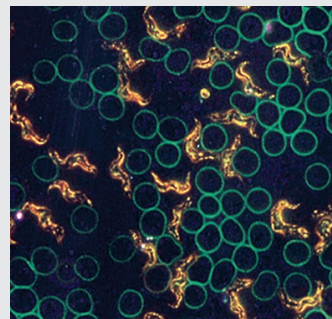
*Hematology: Plasmodium malariae, daisy-head stage in brightfield. Specimen: Andrea Michelsen, Ortenau Klinikum Lahr-Ettenheim, Germany.*



*Mouse kidney after staining with FITC.*



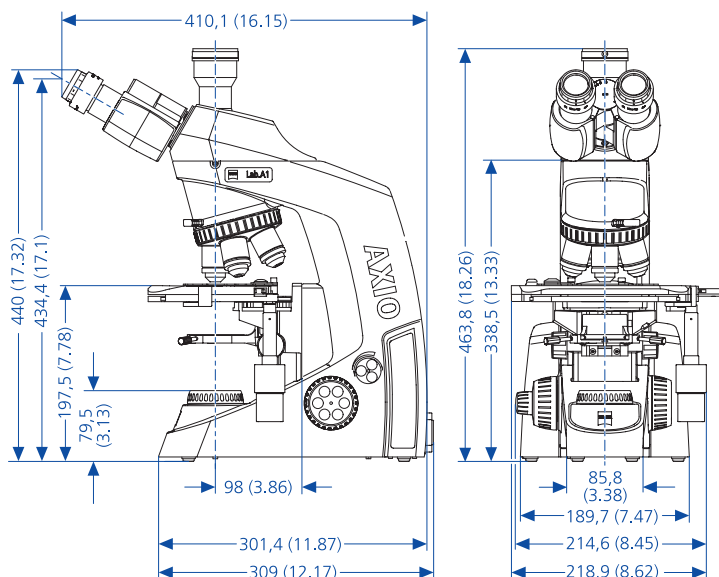
*Hematology: Blood smear in darkfield.*



*Gout inspection: Uric acid crystals under polarization contrast.*







### Axio Lab.A1 – Technical Data

<b>Contrasting techniques</b>	Brightfield, darkfield, phase contrast, simple polarization contrast, fluorescence contrast
<b>Illumination</b>	Integrated 35 W halogen lamp, 3 W LED (daylight, warmlight)
<b>Objectives</b>	A-Plan, N-Achroplan, EC-Plan-Neofluar and all other IC <sup>2</sup> S objectives
<b>Eyepieces</b>	Eyepieces 10x for field of view of 20 mm or 22 mm
<b>Stand</b>	5-position nosepiece, stage drive right
<b>Ergonomics</b>	TUV-approved ergonomics with height-adjustable and tilting tube, with ergonomic stage and stage drive, with a number of soft-touch materials to increase working comfort
<b>Co-observation</b>	One main-observer with tubes for up to 2 co-observers seated on the left side of the main observer



- **ERGONOMIE GEPRÜFT**
- **ERGONOMICS APPROVED**

- All optics in Axio Lab.A1 are anti-fungus treated
- Norms and standards met: CE, CSA(UL), IvD, DIN EN 61010-1 (IEC 61010-1), ISO 9001, ISO 13485
- Available optional accessories: mechanical stages with drives right or left or right in fixed position (ergodrive), several types of specimen holders, several condensers, several binocular tubes, phototubes and ergotubes with different adjustment possibilities in respect to height and tilt, multi-observation equipment, several interference and neutral density filters, several illumination bulbs as HAL or LED, several polarizer and analyzer moduls, several reflector modules, several FL-LED modules, several camera adapters, several microscope cameras and AxioVison microscope software.

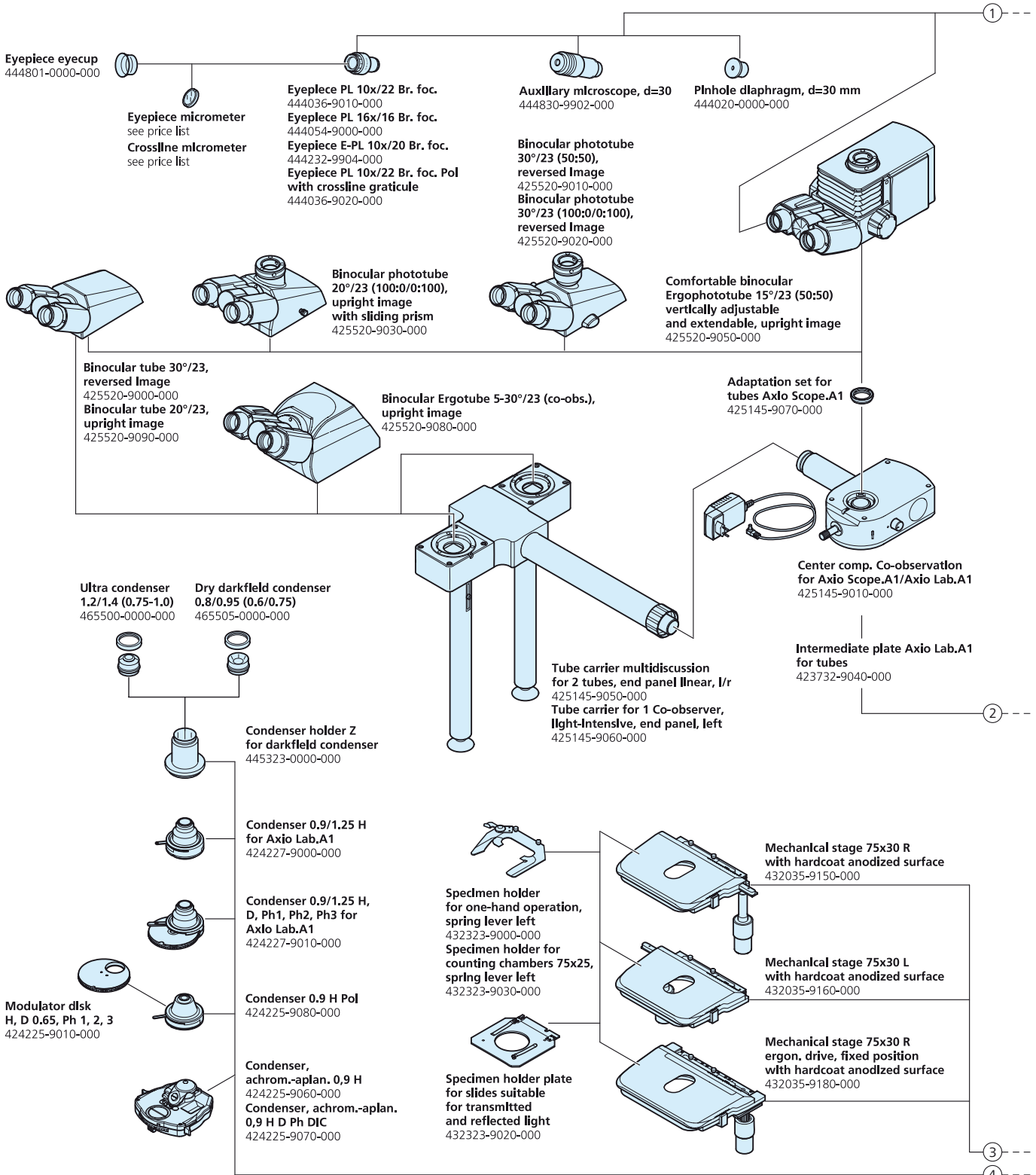
**Carl Zeiss MicroImaging GmbH**  
07740 Jena, Germany

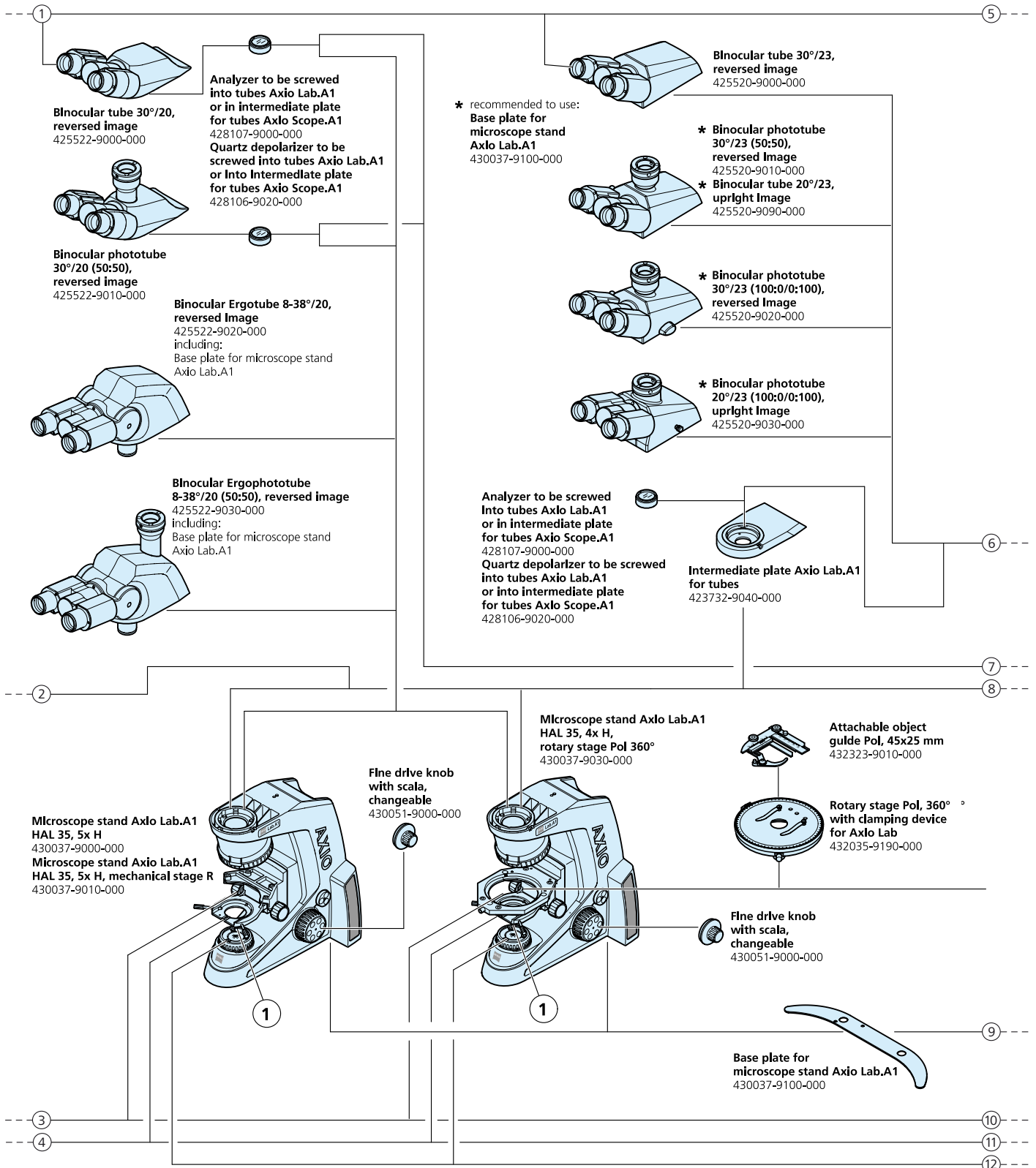
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Phone : +49 551 5060 660  
Telefax: +49 551 5060 464  
E-Mail : micro@zeiss.de

[www.zeiss.de/micro](http://www.zeiss.de/micro)

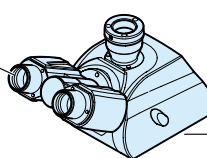


# Axio Lab.A1 System Overview

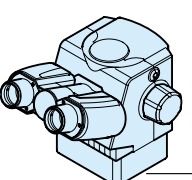




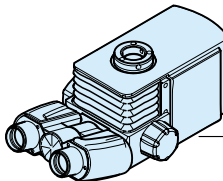
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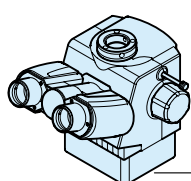
**Binocular Ergophototube 5-30°/23**  
(100:0/0:100), upright image  
425520-9040-000  
recommended to use:  
**Base plate for microscope stand Axio Lab.A1**  
430037-9100-000



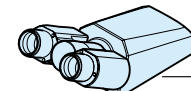
**Binocular Ergotube 20°/23,**  
reversed image variable,  
continuous vertical adjustment  
425511-0000-000  
mandatory:  
**Base plate for microscope stand Axio Lab.A1**  
430037-9100-000



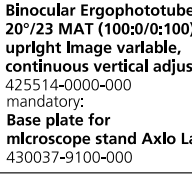
**Comfortable binocular Ergophototube 15°/23** (50:50)  
vertically adjustable and extendable, upright image  
425520-9050-000  
mandatory:  
**Base plate for microscope stand Axio Lab.A1**  
430037-9100-000



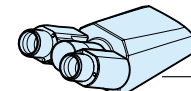
**Binocular Ergophototube 20°/23** (100:0/0:100),  
reversed image variable,  
continuous vertical adjustment  
425512-0000-000  
mandatory:  
**Base plate for microscope stand Axio Lab.A1**  
430037-9100-000



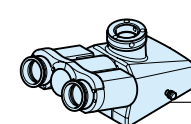
**Binocular tube 30°/23,**  
reversed image  
425520-9000-000



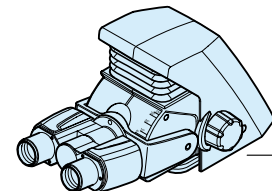
**Binocular Ergophototube 20°/23 MAT** (100:0/0:100),  
upright image variable,  
continuous vertical adjustment  
425514-0000-000  
mandatory:  
**Base plate for microscope stand Axio Lab.A1**  
430037-9100-000



**Binocular tube 20°/23,**  
upright image  
425520-9090-000




**Binocular phototube Pol 20°/23** (100:0/0:100),  
upright image  
425520-9100-000  
recommended to use:  
**Base plate for microscope stand Axio Lab.A1**  
430037-9100-000

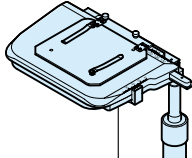


**Comfortable binocular Ergotube 8-33°/22,**  
50 mm high, reversed image variable,  
continuous angle adjustment 8-33°  
and vertical adjustment 50 mm  
425522-9040-000  
including:  
**Base plate for microscope stand Axio Lab.A1**

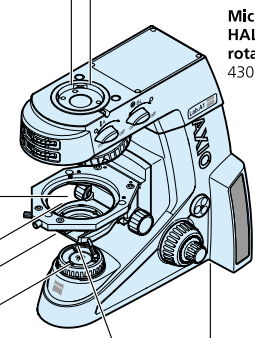
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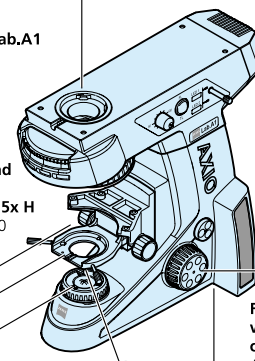
**Dust cover G**  
459306-0000-000  
**Dust cover for Primo Vert/Axio Lab.A1**  
415510-1901-000



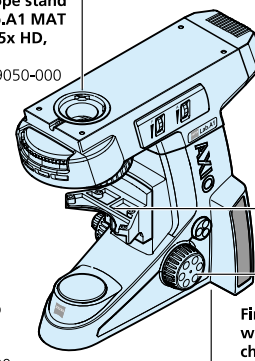
**Mechanical stage 75x30 R for reflected light**  
432035-9170-000




**Microscope stand Axio Lab.A1 HAL 35,** 4xH, conoscopy,  
rotary stage 360°  
430037-9040-000




**Microscope stand Axio Lab.A1 MAT HAL 50,** 5x HD,  
stage A  
430037-9050-000




**Microscope stand Axio Lab.A1 HAL 35, FL-LED,** 5x H  
430037-9020-000



**Fine drive knob with scala, changeable**  
430051-9000-000



**Fine drive knob with scala, changeable**  
430051-9000-000



**Filter holder**  
430037-1037-000

**Interference wide-band filter green, d=32x4**  
467803-0000-000  
**Band pass interference filter green 546, d=32x3**  
467807-0000-000  
**Heat absorbing filter KG 1, d=32x2**  
467830-0000-000

**Neutral-density filter 0.06, d=32x2**  
467848-0000-000  
**Neutral-density filter 0.25; d=32x2**  
467849-0000-000  
**Polarizing filter 32 mm**  
473600-0000-000

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