

MICROSCOPIOS ZUZI SERIE 400
400 SERIES ZUZI MICROSCOPES
MICROSCOPES ZUZI DE LA SÉRIE 400

REF. - CODE - RÉF. HBB021, HBB022, HBB023

Zuzi



Este manual es parte inseparable del aparato por lo que debe estar disponible a todos los usuarios del equipo. Le recomendamos leer atentamente el presente manual y seguir rigurosamente los procedimientos de uso para obtener las máximas prestaciones y una mayor duración del mismo.

This manual should be available for all users of these equipments. To get the best results and a higher duration of this equipment it is advisable to read carefully this manual and follow the processes of use.

Ce manuel est une partie indissociable de l'appareil et doit être mis à la disposition de tous les utilisateurs de l'équipement. Nous vous recommandons de lire attentivement ce manuel et de suivre scrupuleusement les procédures d'utilisation afin d'obtenir des performances maximales et une plus longue durée de vie de l'appareil.

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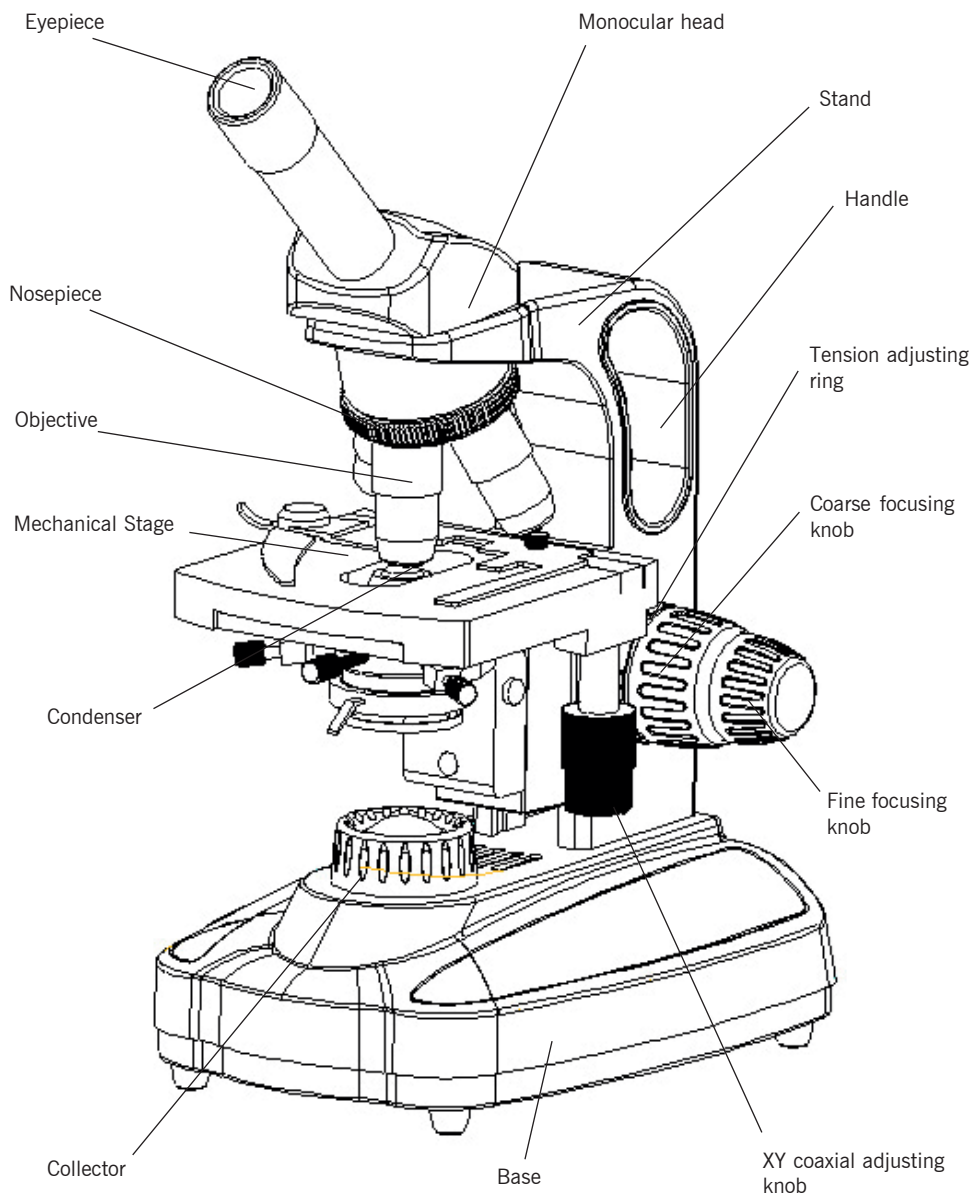
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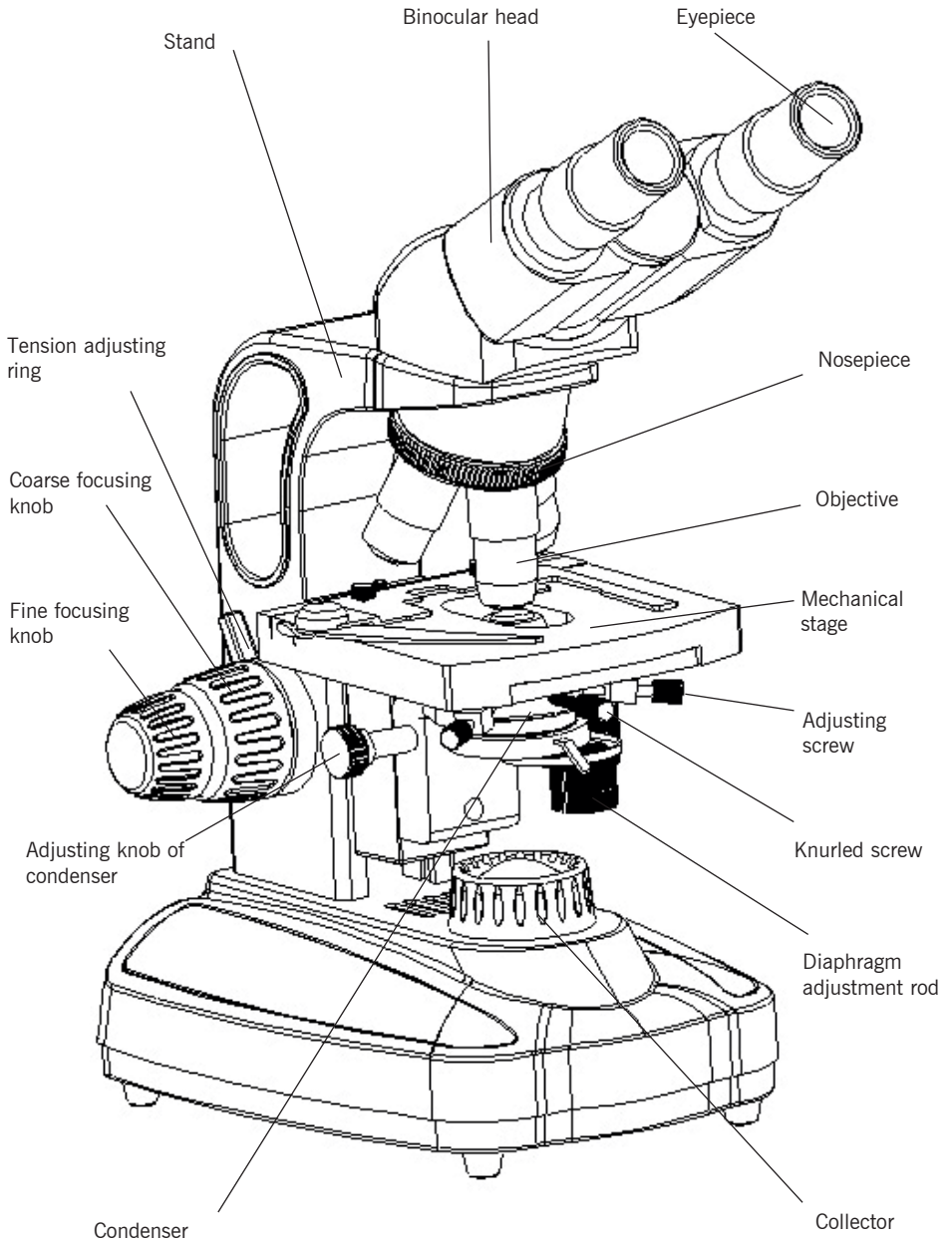
1. APPLICATION

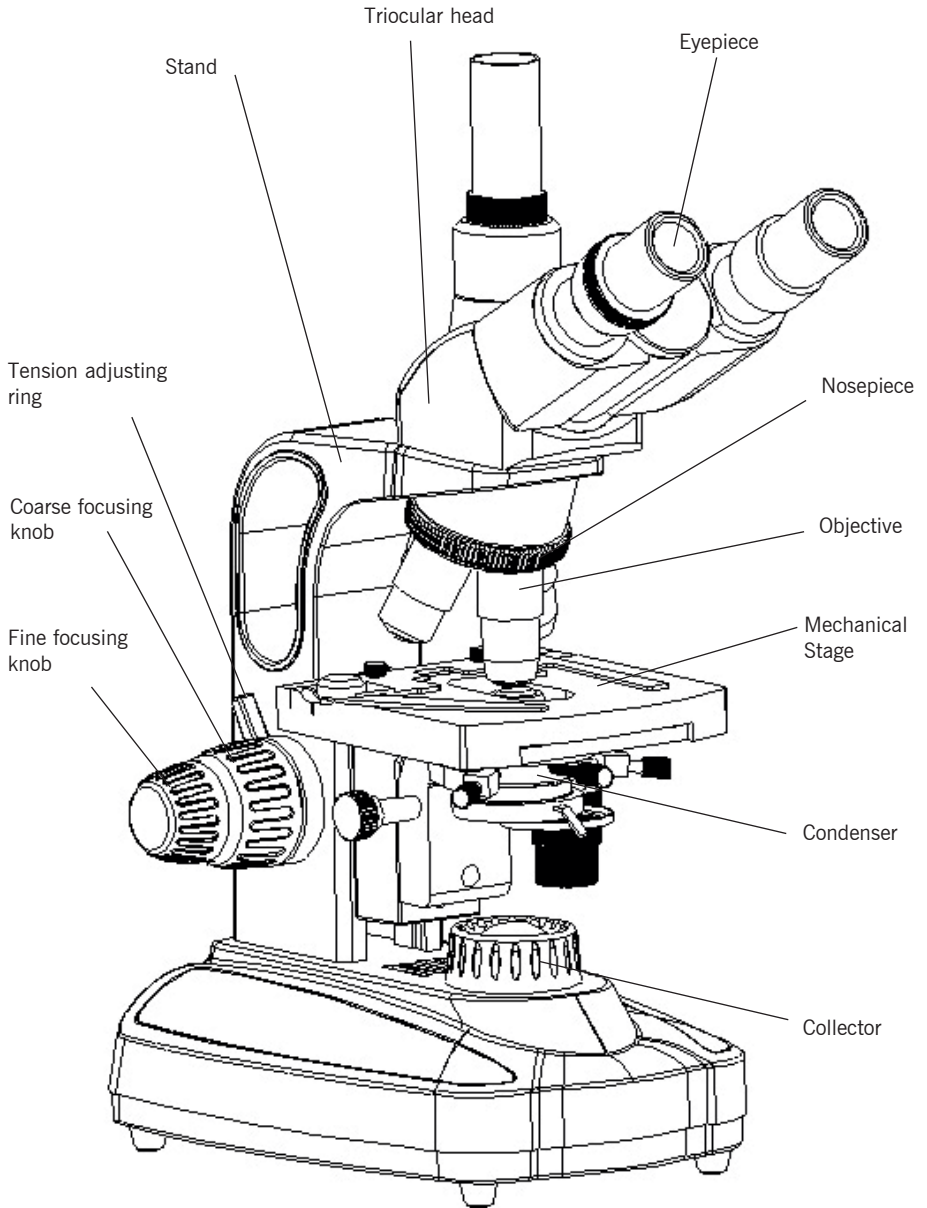
These microscopes are specifically designed for use in clinical examinations and educational activities in laboratories. They are also perfect for research in the fields of biology, bacteriology, pathology and pharmacy.

2. CONFIGURATION

CODE: HBB021 MODEL: 400M







3. SPECIFICATIONS

Head	Ref.: HBB021 model 400M: monocular 45° inclined, 360° rotatable Ref.: HBB022 model 400B: binocular compensation free, inclined at 30°, 360° rotatable Ref.: HBB023 model 400T: triocular compensation free, inclined at 30°, 360° rotatable	
Eyepiece	WF10X (20 mm)	
Revolver	Quadruple	
Objectives	S. Plan achromatic: 4X, 10X, 40Xs, 100Xs (oil)	
Platina	Double-layer mechanical stage, 130x130 mm	
Capacitor	Abbe Condenser N.A. 1.25 with diaphragm and filter	
Approach	Coaxial coarse and fine adjustment with rack and pinion mechanism	
Light source	LED 1W	
Optional accessories	Eyepieces: WF16X, WF20X, WF25X	
	Objectives	Achromatic: 20X, 60Xs
		Achromatic plan: 4X, 10X, 20Xs, 40Xs, 60Xs, 100Xs (oil)
	Dark-field condenser, phase contrast	

Objectives

Type	Magnification	Numerical aperture (N.A.)	Working distance (mm)	Thickness of coverslip (mm)
Achromatic objectives	4X	0.1	37.5	0.17
	10X	0.25	6.54	0.17
	40Xs	0.65	0.63	0.17
	100Xs (oil)	1.25	0.195	0.17

4. OPERATION

1. Installation:

- Place the microscope carefully on a stable work surface.
- Remove the plastic bags and dustproof cover from each adapter.
- Place the head into the adapter, tighten the fixing screw.
- Familiarise yourself with the mechanical parts of the microscope. Gently operate each part by hand to see how it behaves and what results it produces.
- Connect the power cable to the main socket.

Notes:

- The microscope must be earthed.
- Make sure that the supply voltage matches the voltage indicated on the microscope label.

2. Use of the instrument:

- Turn on the power switch, turn the brightness adjustment knob to make the brightness 70% of full load.
- Place the specimen (slide) to be viewed smoothly onto the stage, cover slip to face to the objective. Clamp the specimen (slide) carefully with the movable spring clip.
- The magnitude of the incident light beam can be changed by adjusting the aperture diaphragm. The highest resolution of the objectives can be reached when the fitted aperture diaphragm is adjusted. When changing lenses, to get the best resolution of the objective, please remove the eyepiece to observe the size of the aperture diaphragm on the eyepiece tube. It is better to adjust the aperture diaphragm until it is slightly smaller than the aperture of the objective.
- Note: The aperture diaphragm is not for adjusting the brightness, the brightness is adjusted by the brightness adjusting knob.
- Swing out the filter holder, according to the user's needs, place the filter in the filter holder and then swing back.
- Turn the nosepiece to change the objective and make sure that the objective moves into the light path until you hear a click.
- When adjusting the focus, to prevent that objective touch the specimen, turn the coarse focusing knob until the specimen is approximately 3.2 mm from the objective.
- Slowly rotate the coarse focusing knob until a clear image is obtained, then use the fine focusing knob to enhance the observation of the sample until the clearest image is obtained. If the magnification is increased, you can obtain clear image with a little fine adjustment.
- When using the 100X objective to observe, lift the condenser to the highest position, and then drop a little cedar oil on the surface of the 100X objective and the specimen (coverslip). If there is an air bubble in the oil, it will influence the observation. Remove the air bubble by swinging the nosepiece several times. The 100X oil immersion objective and the specimen should be wiped with a clean, soft cloth or lens tissue with xylene to remove the cedar oil immediately after using.
- By turning the transverse and longitudinal direction adjusting knobs just below the stage, the specimen can be moved to the centre of the eyepiece's viewing field for observation.
- Replacement of bulbs and fuses (power cable must be disconnected):

1) Bulb replacement: Loosen the knurled screw at the bottom of the microscope and open the panel to expose the bulb. Remove the old bulb after it cools down (the bulb is very hot during use and immediately after use). Do not touch the new bulb with your fingers, if there is a fingerprint and dirt, this will diminish the brightness and shorten the life of the bulb, wipe it with a clean, soft cloth. Hold the

new bulb of the same specification with clean gloves or gauze and insert the pins vertically into the socket. Close the panel and tighten the knurled screw by hand.

2) Fuse replacement: Open the fuse holder with a flat screwdriver in the direction of the arrow. Remove the old fuse and install a new one with the same specification. Replace the fuse holder and screw it into place.

5. MAINTENANCE

■ The microscope should be placed in a shaded, dry, clean place, free from the presence of acids, alkalis and water vapour in the environment. Do not expose it to direct sunlight.

■ Working environment: indoor temperature 0-40°C and maximum relative humidity: 85%.

■ The microscope has been calibrated and strictly inspected before leaving the factory, users should not disassemble the equipment.

■ If there is dust on the lens, blow it off with a rubber ball blower, then clean the lens gently with a soft brush. Carefully wipe off any oil or fingerprints on the lens surface with a lens tissue or cotton wool dampened with a little organic solvent (7:3 ether/alcohol mixture).

■ Do not clean the lens surface regularly, as this may scratch the lens surface, reducing transmission and image quality. Please keep the instrument clean.

■ Keep mechanical parts clean and clean them regularly.

■ Turn the microscope off and unplug it when not in use, set the brightness knob to minimum and cover it with a dust cover.