

Manual Lensometer / Focimeter, Portable

Operating Manual

Ophthalmic Diagnostic Instrument

Intended use

Measuring the vertex power of spectacle lenses (sphere, cylinder, axis and prism) by direct scale reading, for prescription verification and quality control of finished eyewear.

Intended users

For use by trained eye-care professionals and optical staff (optometrists, ophthalmologists, opticians, dispensing technicians and supervised students). Follow your facility's protocols and applicable regulations.

Read this manual completely before first use and keep it with the product. This document provides general operating, care and safety guidance. Where the product is supplied with manufacturer labeling or instructions, those take precedence. For questions, a replacement copy, or a digital copy of this manual, email sales@scimedstore.com.

1. Safety

Safety warnings and cautions

- For use by trained eye-care professionals and optical staff. Follow your facility's protocols and applicable regulations.
- When using AC power, connect only to a grounded outlet with the supply voltage marked on the unit (220V AC).
- Unplug the unit or remove the batteries before cleaning or replacing the bulb.
- Do not allow liquids to enter the housing.
- Allow the bulb to cool before replacing it; replace only with a bulb of the type specified for the unit (2.3V).
- Remove batteries if the unit will not be used for a long period to prevent leakage damage.
- Handle spectacle lenses carefully in the lens holder to avoid scratching the lens or the instrument's lens stop.

2. Specifications

Type	Manual direct scale reading lensometer
Target	Corona target
Vertex power range	0 to ± 20 D
Graduations	0.25 D
Prism scale	0-180-0, 5 D graduations on main scale
Axis scale	0-180°
Lens diameter accepted	30-80 mm
Tilt	0-90° adjustable
Power source	2 x AA batteries (1.5V) or 220V AC
Illumination	2.3V bulb
Cover	Protective cover included with unit design

3. Unpacking and setup

- 1 Place the lensometer on a stable, level surface.
- 2 Fit 2 x AA batteries observing polarity, or connect to a grounded 220V AC outlet.
- 3 Adjust the tilt (0-90°) to a comfortable viewing angle.
- 4 Switch on the illumination.
- 5 Focus the eyepiece: with no lens in place, turn the eyepiece fully counterclockwise, then slowly clockwise until the reticle appears sharp. Record this setting for your eye.
- 6 With no lens in place and the power wheel at zero, confirm the target is in sharp focus. If not, the instrument needs calibration by qualified personnel.

4. Operation

Measuring a single-vision lens

- 1 Place the spectacles with the back surface of the lens against the lens stop, temples pointing away from you, and lower the lens holder to hold the lens.
- 2 Center the lens so the target is centered on the reticle.
- 3 Turn the power wheel until the target lines come into sharp focus. For a spherical lens, all corona lines focus together; read the sphere power.
- 4 For a cylindrical lens, focus the first set of lines, rotate the axis wheel until they are continuous and sharp, and record the power and axis.
- 5 Turn the power wheel until the second set of lines (perpendicular) is sharp and record the power. The difference between the two readings is the cylinder power.
- 6 Record the result as sphere, cylinder and axis in your chosen cylinder convention.
- 7 Repeat for the other lens.

Measuring prism

- 1 Position the lens at the patient's measured pupil position or the marked optical center.
- 2 Note the displacement of the target center from the reticle center and read the prism value and base direction from the reticle.
- 3 Use the prism compensator if the target falls outside the reticle scale, and add the compensator reading to the reticle reading.

Measuring progressive or multifocal lenses

- 1 Measure the distance power at the distance reference point.
- 2 Move the lens to the near reference point or segment and measure the near power.
- 3 Use the tilt adjustment as needed for comfortable alignment, following the lens manufacturer's measurement guidance.
- 4 The add power is the difference between near and distance readings.

5. Cleaning and disinfection

- Switch off and unplug or remove batteries before cleaning.
- Wipe the housing with a soft cloth lightly dampened with mild detergent.
- Clean the eyepiece and lens stop optics with lens tissue only. Do not use abrasive cleaners or solvents on optical surfaces.
- Fit the protective cover when the instrument is not in use.

6. Maintenance and storage

- Store covered in a clean, dry place away from direct sunlight.
- Check zero calibration periodically with no lens in place, and with a reference lens of known power if available.
- Replace the bulb when illumination becomes dim or fails.
- Refer calibration and optical repairs to qualified service personnel.

7. Troubleshooting

Problem	Likely cause	What to do
No illumination	Batteries flat, no AC power or bulb failed	Replace batteries or check the AC connection; replace the bulb if needed.
Reticle is blurred	Eyepiece not focused for the user	Refocus the eyepiece as described in Setup.
Target not sharp at zero with no lens	Eyepiece set incorrectly or instrument out of calibration	Refocus the eyepiece; if still not sharp, contact service for calibration.
Target cannot be found	Lens not centered or high prism	Re-center the lens; use the prism compensator.
Readings inconsistent	Lens not seated flat against the lens stop	Reposition the lens with its back surface flat against the stop and re-measure.

8. Disposal

- Remove batteries and dispose of them at a battery recycling point.
- Dispose of the instrument as electronic waste in accordance with local regulations.

9. Warranty and support

Products are covered by SciMed's standard warranty (12 months from purchase unless a different period is stated on your invoice). Warranty terms: scimedstore.com/pages/warranty.

Support, spare parts and additional copies of this manual: sales@scimedstore.com. Please include your order number and a photo of the product or issue.

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