Subjective refraction

HDR-7100P

Refractor for distance and near subjective examination.

A dual cross cylinder that is 30% faster allows quick, precise astigmatism testing and cylinder axis assessment. Presbyopia and myopia examinations can be performed at the centre of the HDR-7100P window.



HDR-7100P · Equipment view

Sources and documentation · Source checked on 2026-10-18

Request a quote

View product

Generated on 2026-11-29

> This product sheet is prepared by ASEM. It does not replace the manufacturer’s official documentation or instructions for use.

Key advantages

Subjective refraction

Sphere from −29 to +26.75 D for visual examination.

Sources and documentation · Source checked on 2026-10-05

Near vision

Working distance adjustable from 35 to 70 cm.

Sources and documentation · Source checked on 2026-10-05

Prism correction

Prism power up to 20 Δ.

Sources and documentation · Source checked on 2026-10-05

Capabilities in practice

Subjective refraction

Sources and documentation

Explore sphere and cylinder corrections

The standard sphere range is −29 to +26.75 D, with cylinder up to ±8.75 D. The brochure specifies a reduced sphere range during cross-cylinder or prism tests.

- Standard sphere: −29 to +26.75 D.
- With cross cylinder or prism: −19 to +16.75 D.

Sources and documentation

Select the retinoscopy lens

The auxiliary lenses account for the working distance used in retinoscopy.

- +1.5 D lens for a 67 cm distance.
- +2.0 D lens for a 50 cm distance.

Sources and documentation

7100P refractor

Monocular PD adjustment supports personalised refraction. A sensor built into the headrest checks whether the patient is correctly positioned.

Measurement range

Spherical lens:

Standard range: -29.00D to +26.75D
During cross or prism tests (XC): -19.00D to +16.75D
Available increments: 0.12D / 0.25D / 0.5D / 1D / 2D / 3D / 4D
Cylindrical lens:

Range: 0.00D to ±8.75D
Available increments: 0.25D / 0.5D / 1D / 2D / 3D
Cylinder axis:

Range: 0˚ to 180˚
Available increments: 1˚ / 5˚ / 15˚
Pupillary distance (PD):

Range: 48 mm to 80 mm
Available increments: 0.5 mm / 1 mm
Near PD: 50 mm to 74 mm
Near working distance:

Range: 35 cm to 70 cm
Rotary prism lens:

Range: 0△ to 20△
Available increments: 0.1△ / 0.2△ / 0.5△ / 1△ / 2△
2. Specific lenses:

Cross cylinder:

±0.25D
±0.50D
Split lens with ±0.25D prism (dual cross cylinder).
Retinoscopy lens:

Options: +1.5D / +2.0D
Corresponding working distances: 67 cm (for +1.5D) and 50 cm (for +2.0D).

An information system for practices and clinics

• Comprehensive network solution:
Integration and centralised management support an efficient IT environment.
• Multiple interfaces for straightforward installation:
Compatibility with different instruments accommodates varied requirements.
• Connection to different chart displays:
Integration with projectors, vision charts and LCD charts.
Wired and wireless options provide flexibility.
• Integrated data management:
A PC communication interface integrates patient data.
Centralised, organised management simplifies workflows.
• Efficient connection of multiple systems:
Integration with autorefractometers/keratometers and automatic lensmeters.
Shared connections between digital systems optimise costs and reduce hardware requirements.
• Simultaneous data sharing:
Organises and manages the refraction testing environment.
Supports collaboration between instruments and systems.
• Greater efficiency:
Designed to optimise operating efficiency and costs in modern practices and clinics.

Integrated image gallery

Colour vision tests, Amsler grids, near vision charts, progressive lens guides and eye/refraction diagrams provide visual resources for detailed, informative examinations.

Designed for a smoother workflow

Compare with the dual cross cylinder

Cross-cylinder lenses include ±0.25 D and ±0.50 D powers and a prism-separated dual cross cylinder. Rotary prisms cover 0–20 Δ.

- Cross cylinders ±0.25 D and ±0.50 D.
- Rotary prisms from 0 to 20 Δ.

Sources and documentation

Designed for daily practice

Set up the near examination

Near working distance adjusts from 35 to 70 cm. The brochure specifies a 48–80 mm pupillary-distance range and a separate 50–74 mm near range.

- Near working distance from 35 to 70 cm.
- Near pupillary distance from 50 to 74 mm.

Sources and documentation



HDR-7100P · Equipment view

Sources and documentation

Technical specifications & documentation

Minimum sphere
-29 D

Standard examination.

Sources and documentation

Maximum sphere
26.75 D

Standard examination.

Sources and documentation

Maximum cylinder
8.75 D

Sources and documentation

Maximum prism
20 Δ

Sources and documentation

Adjustment ranges
Pupillary distance 48–80 mm; near distance 35–70 cm

Sources and documentation

Power supply
100–240 V AC ; 50–60 Hz

Sources and documentation

Dimensions
368.7 × 106.4 × 345.5 mm

Refractor head only.

Sources and documentation

Weight
4.2 kg

Head only, panel and control box excluded.

Sources and documentation

Standard examination.

Refractor head only.

Head only, panel and control box excluded.

Downloads & resources

- https://huvitz.com/wp-content/uploads/2024/10/20230721_HDR-7100P_kor_catalog_v1_.pdf
  Source checked on 2026-10-05
- https://huvitz.com/wp-content/uploads/2024/10/20230721_HDR-7100P_kor_catalog_v1_.pdf
  Source checked on 2026-10-18

Your questions about HDR-7100P

What is the documented Minimum sphere of HDR-7100P?

-29 D — Standard examination.

Sources and documentation

What is the documented Maximum sphere of HDR-7100P?

26.75 D — Standard examination.

Sources and documentation

Which configuration should I confirm for HDR-7100P?

Standard examination.

Sources and documentation

Is the sphere range unchanged with prisms?

No. The brochure gives −29 to +26.75 D for standard examination and −19 to +16.75 D for cross-cylinder or prism testing. This distinction needs to be retained in the protocol.

Sources and documentation

Which retinoscopy lenses are documented?

The specification gives +1.5 D for 67 cm and +2.0 D for 50 cm. The choice corresponds to the practitioner’s working distance.

Sources and documentation

Which settings apply specifically to near vision?

Working distance runs from 35 to 70 cm and near pupillary distance from 50 to 74 mm. These are distinguished from the general 48–80 mm pupillary-distance range.

Sources and documentation

Related products



Refractor 900

Haag-Streit

Subjective refraction

Refractor for subjective refraction with connectivity.

View product



HDR-9000

Huvitz

Subjective refraction

Digital refractor for subjective examination and measurement transfer.

View product

Explore the ASEM clinical catalogue

Browse related areas of the ASEM catalogue. These links do not extend the indications of this device.

Diagnostics and biometry

More than a device, a long-term partnership

Discuss your project with ASEM: equipment selection, installation, training and technical support.



Service illustration

Installation

Discuss the installation requirements and configuration with our technical team.

Learn more

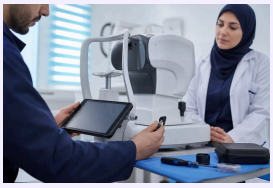


Service illustration

Training

Ask about the training and familiarisation available for your equipment.

Learn more



Service illustration

After-sales service

Contact ASEM for technical assistance and the support appropriate to your equipment.

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Service illustration

Expert advice

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