Subjective refraction

Refractor 900

Refractor for subjective refraction with connectivity.

Refractor 900 is Haag-Streit’s digital refractor for subjective-refraction workflows. The motorised optical head, touch control panel and central unit are separate components with their own dimensions and weights. Sphere and cylinder settings can use 1/8-dioptre steps. Patient-record and device connections must be configured for the ASEM installation. The prism compensator, Acuity Chart 900 and Converter Box are variants or options to specify, not universally included accessories.



Refractor 900 · Equipment view

Sources and documentation

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

Lens adjustments for subjective refraction examinations.

Sources and documentation · Source checked on 2026-10-17

Touchscreen examination control

Operate the examination through a touchscreen panel.

Sources and documentation · Source checked on 2026-10-17

Clinical data exchange

Exchange data with diagnostic devices and patient records.

Confirm system compatibility

Sources and documentation · Source checked on 2026-10-17

Refine refraction precisely

The optical design presents corrections within a structured refraction workflow.

Sources and documentation · Source checked on 2026-08-30

Keep controls accessible

The station design keeps functions used during consultation close at hand.



Refractor 900 · Hardware detail

Sources and documentation

Sources and documentation · Source checked on 2026-08-30

Connect the workflow

Documented connectivity supports data exchange with the refraction environment.



Refractor 900 · Hardware detail

Sources and documentation

Sources and documentation · Source checked on 2026-08-30

Objective measurement

A workflow dedicated to refraction data acquisition.

Organised settings

Useful information remains accessible in the interface.

Connected flow

Results can join the practice refraction workflow.

Capabilities in practice

Subjective refraction

Sources and documentation

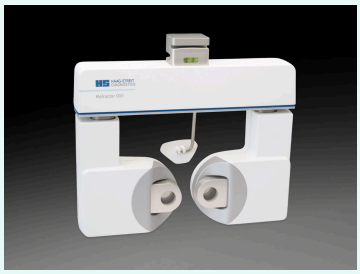
Refraction: documented ranges and increments

Sphere: −20 to +20 D Cylinder: 0–8 D Sphere and cylinder steps: 0.125 / 0.25 / 1 D Axis: 0–179° Axis steps: 1° / 10° Cross-cylinder: 0.125 / 0.25 / 0.5 D The brochure describes a Stokes-technology cross-cylinder and motorised lens changes. The 0–20 cm/m prism range applies only to Refractor 900 with a prism compensator. This option must not be attributed to the non-prism variant.

Sources and documentation

Refine subjective refraction

The phoropter head presents lenses, filters and cross-cylinders for subjective refraction. Objective measurements can be imported as a starting point.



Refractor 900 · Equipment view

Sources and documentation

Sources and documentation

Adjust in 0.125 dpt steps

The instructions specify 0.125,0.25 and 1.0 dpt steps for sphere and cylinder. Prism applies only to the version equipped with that function.

Identify the prism-equipped version separately.

Sources and documentation

Designed for a smoother workflow

Controls, screen and options

Touch screen: 10.1 inches Screen resolution: 1280 × 800 pixels Panel tilt: 30–45° The panel has a multifunction wheel and customisable refraction sequences. Optional Acuity Chart 900 can be controlled from the panel; showing it in a diagram does not make it standard equipment. Prism variant, acuity chart and accessory selections must be specified with ASEM.

Sources and documentation

Connecting the refraction workflow

The central unit documents PoE for the phoropter and panel, Bluetooth for Acuity Chart 900, RJ45 for EMR and Converter Box, and USB for the NFC system. Minimum network throughput is 100 Mbit/s. Optional Converter Box integrates compatible devices, including some third-party instruments. Versions, interfaces, security requirements and compatibility must be validated for the actual ASEM environment; universal compatibility is not promised.

Sources and documentation

Control examination from the console

Touchscreen and keys provide access to values, tests and filters. The head, control panel and central unit are three separate system components.



Refractor 900 · Hardware detail

Sources and documentation

Sources and documentation

Import and transfer results

The system exchanges refraction data with peripheral devices and patient records. Network integration and compatible devices must be defined for the installation.



Refractor 900 · Hardware detail

Sources and documentation

Sources and documentation

Designed for daily practice

Fast workflow

Steps remain easy to sequence.

Sources and documentation

Readable data

Results are easy to review.

Sources and documentation

Workflow continuity

Measurement fits into consultation.

Sources and documentation

Team comfort

Daily use remains structured.

Sources and documentation

Optics and patient positioning

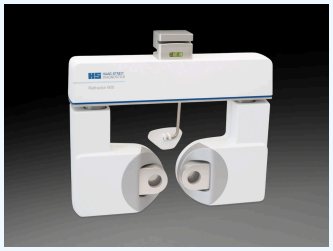
Pupil distance: 48–80 mm Pupil height: 0–13 mm Free aperture: 23 mm Convergence: 400 mm position Corneal vertex distance is visualised in real time; the table documents a 16 mm CVD marker with ±0.15 mm tolerance. Transparent lens carriers and motorised settings support examination. These construction characteristics are not a guarantee of each patient’s refraction outcome.

Sources and documentation

Check patient positioning

Forehead support, pupillary-distance settings and VD imaging assist alignment. These support positioning and do not constitute ocular biometry.

Sources and documentation



Refractor 900 · Equipment view

Sources and documentation

Installation: three separate components

Power supply: 100–240 V AC Frequency: 50–60 Hz Apparent power: 64.8 VA The phoropter head measures 309 × 75 × 235 mm (L × W × H, PD set to 64 mm) and weighs 3.3 kg. The control panel measures 241 × 280 × 213 mm and weighs 2.5 kg. The central unit measures 200 × 270 × 90 mm and weighs 2.8 kg. These dimensions and weights describe separate components, never an invented complete-system footprint or weight. Connections and supports must be specified in the quotation.

Sources and documentation

Prepare all three components

Installation connects head, console and central unit before commissioning. Visual-acuity and patient-record connections require configuration by a qualified technician.

Sources and documentation

Technical specifications & documentation

Brand
Haag-Streit

Model
Refractor 900

Technology
Refractor / auto-refractor

Clinical use
Diagnostics and biometry

Minimum sphere
-20 D

Sources and documentation

Maximum cylinder
8 D

Sources and documentation

Connectivity
Ethernet · PoE · Bluetooth · USB

System interfaces; peripherals are not assumed supplied.

Sources and documentation

Adjustment ranges
Pupillary distance 48–80 mm; forehead rest 0–20 mm; pupil height 0–13 mm

Sources and documentation

Power supply
100–240 V AC ; 50–60 Hz

Sources and documentation

Dimensions

309 × 75 × 235 mm

Head only; pupillary distance 64 mm.

Sources and documentation

Weight

3.3 kg

Head only.

Sources and documentation

System interfaces; peripherals are not assumed supplied.

Head only; pupillary distance 64 mm.

Head only.



Refractor 900 · Hardware detail

Sources and documentation



Refractor 900 · Hardware detail

Sources and documentation

Downloads & resources

Manufacturer documentation

PDF · 6,735 kB

Sources and documentation

- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-05
- https://haag-streit.com/en/products/categories/general-diagnostics/refraction-devices/refraction-900
  Source checked on 2026-10-06
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/brochures/english/BRO_Refractor_900_1511_7021017_02020_WEB.pdf
  Source checked on 2026-10-06

- https://haag-streit.com/en/products/categories/general-diagnostics/refraction-devices/refraction-900
  Source checked on 2026-10-17
- https://haag-streit.com/en/products/categories/general-diagnostics/refraction-devices/refraction-900
  Source checked on 2026-08-30
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-18
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-18
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-18
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-18
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-18
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-18
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-18
- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
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- https://haag-streit.com/2%20Products/General%20diagnostics/Refraction%20devices/refractor-900/instructions-for-use/english/1500_7221069_02010_IFU_Refractor_900_01_en_web.pdf
  Source checked on 2026-10-18

Your questions about Refractor 900

What is the documented Minimum sphere of Refractor 900?

-20 D

Sources and documentation

What is the documented Maximum cylinder of Refractor 900?

8 D

Sources and documentation

Which configuration should I confirm for Refractor 900?

System interfaces; peripherals are not assumed supplied.

Sources and documentation

Where can I find the documentation for Refractor 900?

Manufacturer documentation (PDF) — https://asem-medical.com/storage/catalogue-enrichment/haag-streit-remaining-20261006/refractor900-original.pdf

Sources and documentation

Does Refractor 900 perform objective refraction?

Its documented purpose is subjective refraction; it can import objective measurements from other devices.

Sources and documentation

Is prism available on every head?

No. The instructions reserve this specification for Refractor 900 with prism.

Sources and documentation

How many main components require installation?

The system comprises phoropter head, Control Panel and Central Unit, not three standalone measurement devices.

Sources and documentation

Related products



HDR-7100P

Huvitz

Subjective refraction

Refractor for distance and near subjective examination.

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

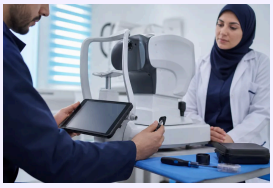


Service illustration

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.

Learn more



Service illustration

Expert advice

Tell us about your clinical needs to discuss a suitable equipment selection.

Learn more

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