



Optical Refractive Properties and Optical Quality of Lens Tester

Smart_OptiBench XXL
High Performance Digital Optical Bench

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"Smart_OptiBench XXL automatically checks the Optical Powers of SunLenses, SunGlasses with frame, Masks and Visors"

Automatic and Fast

Smart_OptiBench XXL performs fully automatic tests equivalent to Telescope Method to check Refractive Powers for Afocal SunLenses, SunGlasses and Masks in a short time. This innovative System takes objective and repeatable high precision measures for any kind of Afocal Lenses, including Polarized Thermoformed and Mirrored Lenses, with full automatic data report and no need of intervention by the operator.

Easy and Productive

In one unique device, Smart_OptiBench XXL performs test on both Adults and Kids SunGlasses and Masks and has a adjustable interpupillary distance. Its user-friendly interface shows a simple « Pass / Fail » lamp output, it complies with the main International Standards and does not need input of T%.

Accurate and Complete

Smart_OptiBench XXL takes complete measurements of Refractive Powers for Afocal SunLenses, SunGlasses and Masks. Moreover, it is the only device which can determine the Optical Quality of the Lenses through a Sharpness Index based on MTF method (Optional) and to be completely compliant with International Standards and European Regulation (EU) 2016/425.

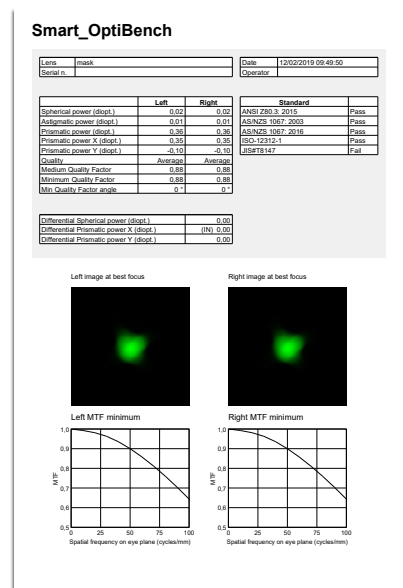
Highlights

- Test Equivalent to Telescope Method
- Fully Automatic Test with Full Automatic Report
- Spherical, Astigmatic, Prismatic Power Measurement
- Spherical and Prismatic Balancing for SunGlasses
- Objective and Repeatable High Precision Measurement
- Optical Quality Measurement (Optional)

Touchscreen All-In-One PC



- Powerful All-In-One PC Full HD
- Touch screen measurements software
- Intuitive and user friendly interface



- Automatic data report
- TXT / PDF

Smart Features

Hardware

Resistant, compact, ergonomic,
easy-to-use device

Easy-to-move sliding door
for external light protection

Anodized aluminum,
Black opaque painted



Box Regular: Available Configurations



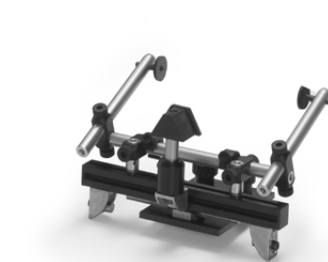
Box XXL: Available Configurations



Accessories




 Lens Holder



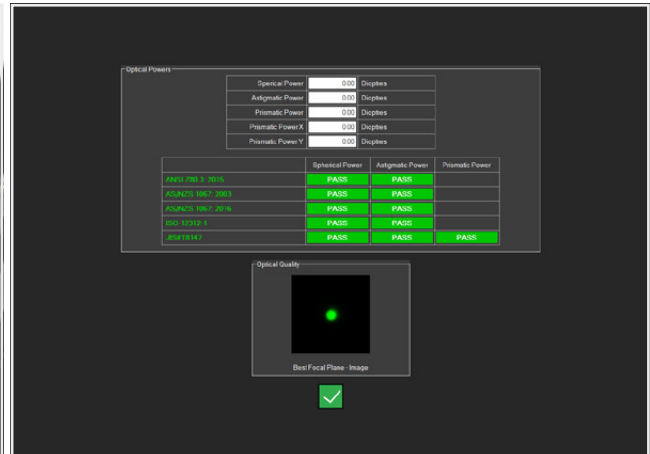
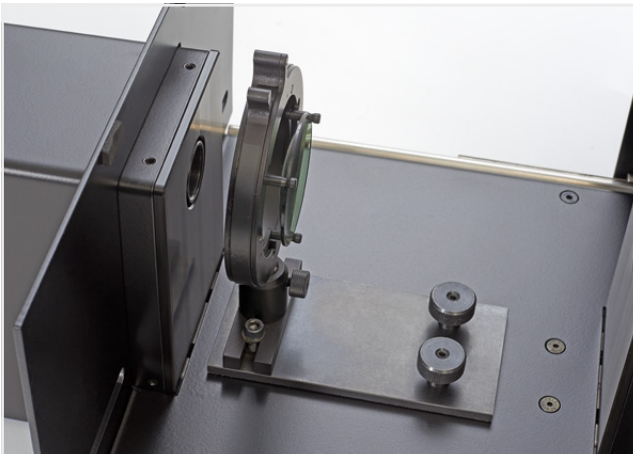
 SunGlasses Holder



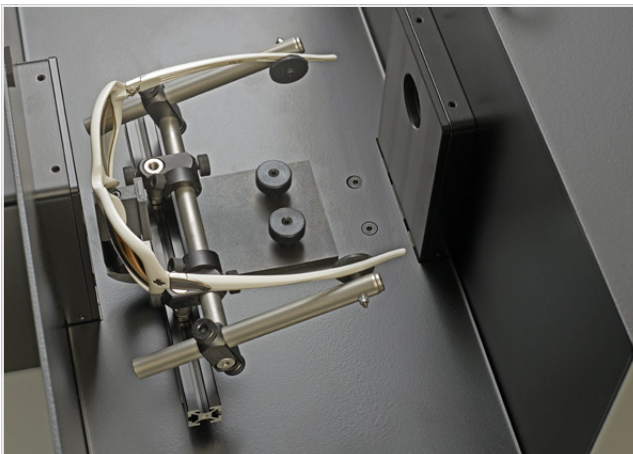
 Mask + Visor Holder

Configurations

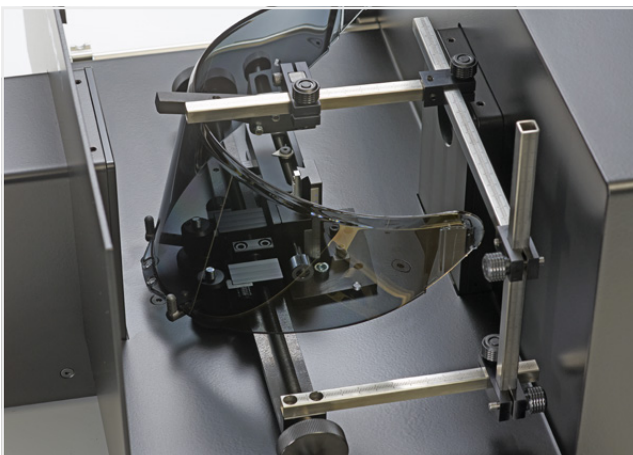
Smart_OptiBench XXL: Smart to Configure, Foolproof, Perfect to Use



Smart_OptiBench XXL SunLenses: configuration with a Lens_Holder to measure Optical Refractive Properties and Optical Quality for SunLenses. Self-centering Support to position lenses with diameters up to 80 mm.



Smart_OptiBench XXL SunGlasses: configuration with flexible fixing tool to measure the Optical Refractive Properties and the Optical Quality of SunGlasses with frame. Free interaxle spacing between SunGlasses Lenses.



Smart_OptiBench XXL Masks + Visors: configuration with flexible fixing tool to measure the Optical Refractive Properties and the Optical Quality of Masks and Visors (only available with Box XXL).

Optional Functions

Optical Refractive Properties and Optical Quality of Lens Tester

Smart_OptiBench XXL is the first Optical Bench that, in addition to measuring Optical Powers according to International Standards, carries out an **assessment of perception of the contrast** as required by new European Regulation Reg. (EU) 2016 / 425.

Test Methods established by the current harmonized European Standards do not fully cover all the essential requirements described by new regulation.

“Annex II – Essential health and safety requirements

Clause 3.9.1 Non-ionising radiation

PPE designed to prevent acute or chronic eye damage from sources of non-ionising radiation must be capable of absorbing or reflecting the majority of the energy radiated in the harmful wavelengths without unduly affecting the transmission of the innocuous part of the visible spectrum, the perception of contrasts and the ability to distinguish colours where required by the foreseeable conditions of use.”

31.3.2016 L 81/82 Official Journal of the European Union EN (Abstract)

Harmonized Standards guarantee the presumption of compliance with the EU Regulation only for the characteristics specifically considered by the Standard. Therefore, the producer must also prove that the essential requirements included in the Regulation have been satisfied, even if not included in the Standards.



Full Exportable Data Result

Specifications

Smart_OptiBench XXL - High Performance Digital Optical Bench

Main Functions	<ul style="list-style-type: none">• Test equivalent to Telescope Method• Fully automatic test• Objective and repeatable high precision measures for all Afocal Lenses• Fast measuring time with full automatic data report• No need of T% input (to be measured with a different machine)• Reliable measure for Polarized, Thermoformed and Mirrored• One Single Instrument suitable for Adult & Child Sunglasses simultaneously• Adjustable interpupillary distance• One Single Instrument suitable for SunGlasses and SunLenses through easy and fast interchangeable clamps• XXL configuration box to measure the Optical Refractive Properties and the Optical Quality of Masks and Visors• Complete set of accessories to measure SunLenses, SunGlasses and Masks of different sizes• Fast and easy update of all International Standards through Teleservice• Easy Maintenance• Analysis speed according to required precision• Measure Refractive Powers for Afocal Lenses:<ul style="list-style-type: none">- Spherical- Astigmatic- Prismatic- Spherical and Prismatic Balancing (for SunGlasses)• Compliance with main International Standards: ANSI Z80.3, ANSI Z87.1, AS/NZS 1067, AS/NZS 1337, ASTM F659, EN 166, EN 174, EN 1836, ISO 12312-1, JIS T8147, Z94.3, Z94.5• Quality of the lens check (<i>Optional</i>):<ul style="list-style-type: none">- Sharpness Index: based on MTF (Modulation Transfer Function) method
Measurement Uncertainty	<ul style="list-style-type: none">• Spherical power: +/- 0.01 D• Astigmatic power: +/- 0.02 D• Prismatic power: +/- 0.005 DP• Balance prismatic power: +/- 0.01 DP
Measurement Range	<ul style="list-style-type: none">• Spherical +/- 0.25 D• Astigmatic: 0 – 0.25 D• Prismatic:<ul style="list-style-type: none">- Horizontal base IN: 0.25 DP- Horizontal base OUT: 0.75 DP- Vertical UP/Down: 0.25 DP
SmartVision PC Device	Powerful All-in-One PC with FULL HD touchscreen with Windows 10 PRO 64-bit, monitor resolution 1920x1080
PC Backup	USB stick containing the backup system (bootable system startup)
Dimensions	Box Regular: 1130 x 350 H.290 mm Box XXL: 1130 x 560 H.380 mm
Weight (excluding PC)	Box Regular: 26 kg Box XXL: 30 kg
Operation ambient	+10° to +40° C
Storage temperature	-20° to 60° C
Relative humidity	< 80%
Power supply	110-230 Vac 50-60 Hz
Power consumption	2 A (12 Vcc Included)
Communication interface	USB 3.0
Case	Black Opaque painted Anodized Aluminum Case
Scan Type	2 Meridians Scanner or 360°
Measurement Area	20 mm
Interface Language	English
Data Report	txt, pdf
Print Report	Windows installed Printer (optional pdf), xps

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