



Optical Bench to Check Optical Quality & Optical Powers

Smart_OptiBench XXL
High-Performance Digital Bench

About Smart_OptiBench XXL

Optical Bench to Check Optical Quality & Optical Powers



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

Automatic & Fast

Smart_OptiBench XXL performs fast and **fully automatic tests equivalent to Telescope Method** to check **Optical Quality and Optical Powers** of SunLenses, SunGlasses with frame, SkiGoggles, Masks and Helmet Visors **in a short time**.

This innovative System takes objective, **accurate and repeatable high precision measures** for any kind of Afocal Lenses, including Polarized Thermoformed and Mirrored Lenses, and it has an adjustable interpupillary distance.

Easy & Productive

An **Easily and Quickly Configurable Instrument**, thanks to two boxes and four Dedicated Smart Fixing Tools interchangeable with each other, **suitable for Unskilled Operators use**.

The Smart_OptiBench XXL software **check the measurements complies with the main International Standards** and does not need input of T%. The intuitive and user-friendly graphical interface **shows a simple « Pass / Fail » lamp output** avoiding operator's interpretation and evaluation.

Accurate & Complete

Smart_OptiBench XXL 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.

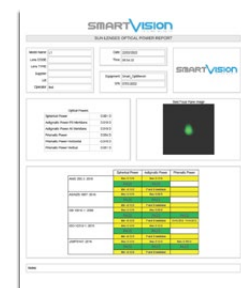
Ideal for any environment, Easy to maintain, with Fast and easy update of all International Standards through Teleservice.

Dedicated All-in-One PC



- Powerful All-in-One PC
- Full HD Touchscreen
- Monitor resolution 1920x1080 pixels
- Height adjustable & tilt swivel rotate position
- Genuine Windows 11 PRO 64-bit
- Pre-installed TeamViewer app Support

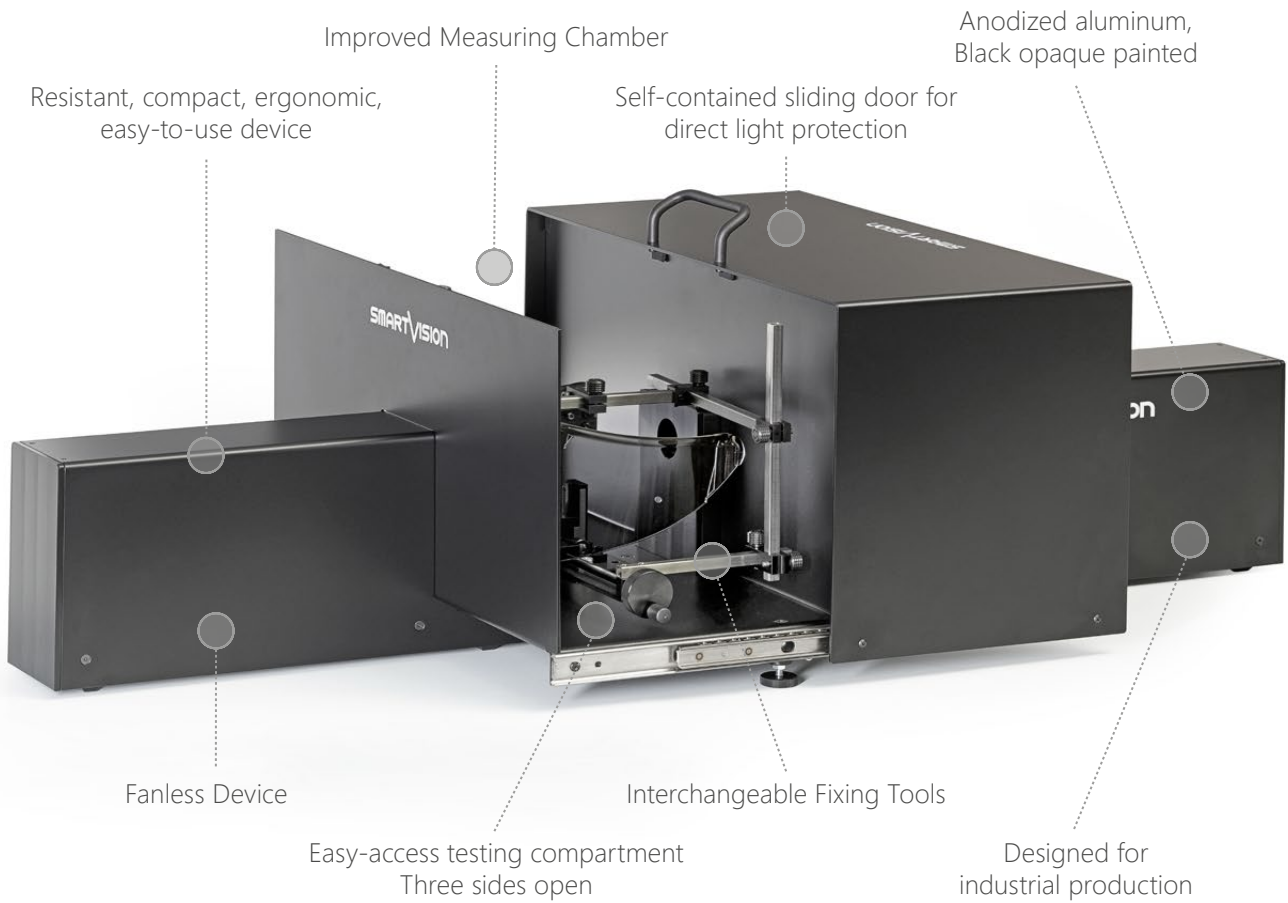
Dedicated Software



- Easy-to-use with an intuitive GUI
- Customizable setting parameters
- Full automatic data report
- Remotely managing Software Options
- Upgradability for future Standards
- Hardware License Key

Hardware Features

Smart_OptiBench XXL: High-Performance Digital Optical Bench



Dedicated Smart Tools

Smart_OptiBench XXL: Wide Range of Optional Fixing Tools



Usage Configurations

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



Box Regular



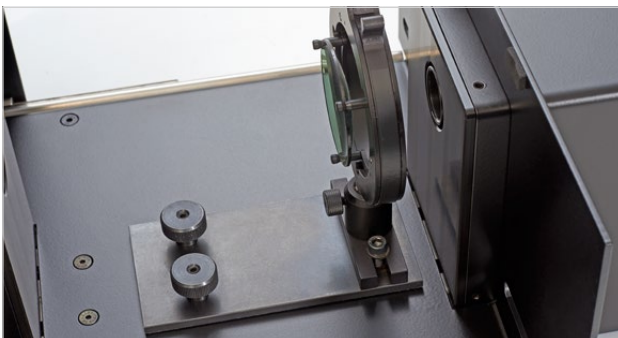
Available Configurations



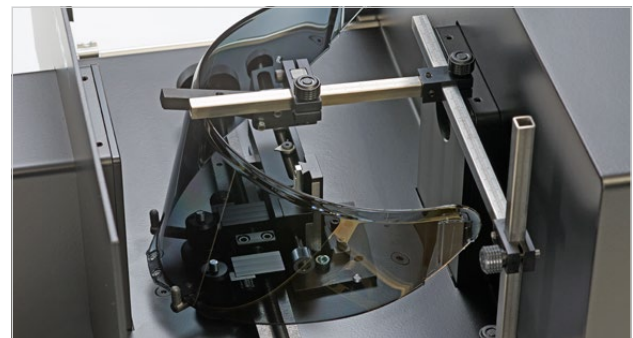
Box XXL



Available Configurations



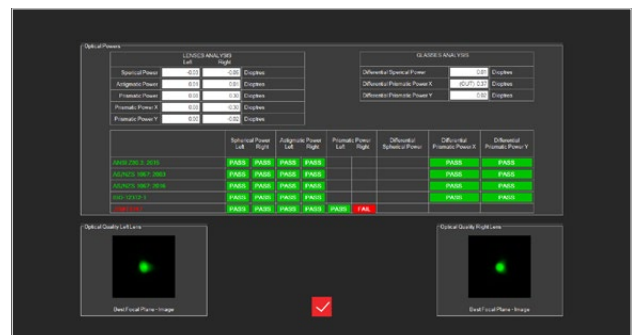
Example of Smart_OptiBench XXL configuration with the Lens_Holder



Example of Smart_OptiBench XXL configuration with the Mask & Helmet Visor Holder



Example of a Lenses "Test Passed" check to the main International Standards.



Example of a SunGlasses "Test Failed" check to the International Standard JIS T8147

Optical Quality Option (OQC)

Optical Bench to check Optical Quality & Refractive Powers

Smart_OptiBench is the first Optical Bench that, in addition to measuring Refractive 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.

New Optical Quality Measurements

- Loss of Sharpness
- Loss of Contrast at 100 cycles/mm



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 unique instrument for both Adults and Kids Sunglasses• Adjustable interpupillary distance• Unique instrument for both SunGlasses and SunLenses (Combo Version)• Complete set of accessories to measure Lenses, 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: ISO 12312-1, ANSI Z80.3, AS/NZS 1067.1, EN 1836, GB 39552.1, QB 2457, EN 174, EN ISO 18527-1, ASTM F659-10, ISO 18527-2, ISO 18527-3, ISO 12312-3, GB 10810.3, ISO 16321-1, ANSI/ISEA Z87.1, EN 166, AS/NZS 1337.1, JIS T 8147, Z94.3, ECE 22-06• Quality of the lens check (<i>Optional</i>):<ul style="list-style-type: none">- Sharpness Index: based on MTF (Modulation Transfer Function)
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
Dimensions (mm)	Box Regular: 1130 x 350 H.290 mm Box XXL: 1130 x 560 H.380 mm
Weight (kg)	Box Regular: 26 kg Box XXL: 30 kg
Operation ambient	+10° to +40° C
Power supply	110-230 Vac 50-60 Hz
Power consumption	2 A (12 Vcc Included)
Communication interface	USB 3
Case	Black Opaque painted Aluminum
Scan Type	2 Meridians Scanner or 360°
Measurement Area	20 mm
Optional PC Device	Powerful All-in-One PC with FULL HD touchscreen with Windows 11 PRO 64-bit, monitor resolution 1920x1080
Software Interface	Language: English
Data Report	pdf
Data Export	csv
Print Report	Windows installed Printer (optional pdf), xps
PC Software Backup	USB stick containing the backup system (bootable system startup)

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