



*Optical Bench to check Optical Quality & Refractive Powers*

**Smart\_OptiBench**  
High-performance Digital Bench

# About Smart\_OptiBench

Optical Bench to check Optical Quality & Refractive Powers



*"Smart\_OptiBench automatically checks the Refractive Powers of SunLenses and Prismatic Imbalance of SunGlasses & SkiGoggles"*

## Automatic & Fast

Smart\_OptiBench performs fast and fully automatic tests equivalent to Telescope Method to check Optical Quality and Refractive Powers of SunLenses, SunGlasses with frame and SkiGoggles 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 a adjustable interpupillary distance.

## Easy & Productive

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

The Smart\_OptiBench 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 indicator avoiding operator's interpretation and evaluation.

## Accurate & Complete

Smart\_OptiBench 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.

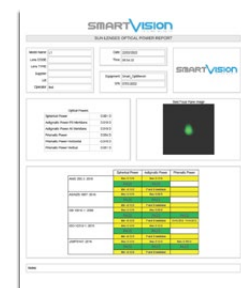
Ideal for any environment, Easy to maintain, with Fast and easy update of all International Standards through Teleservice.

## 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

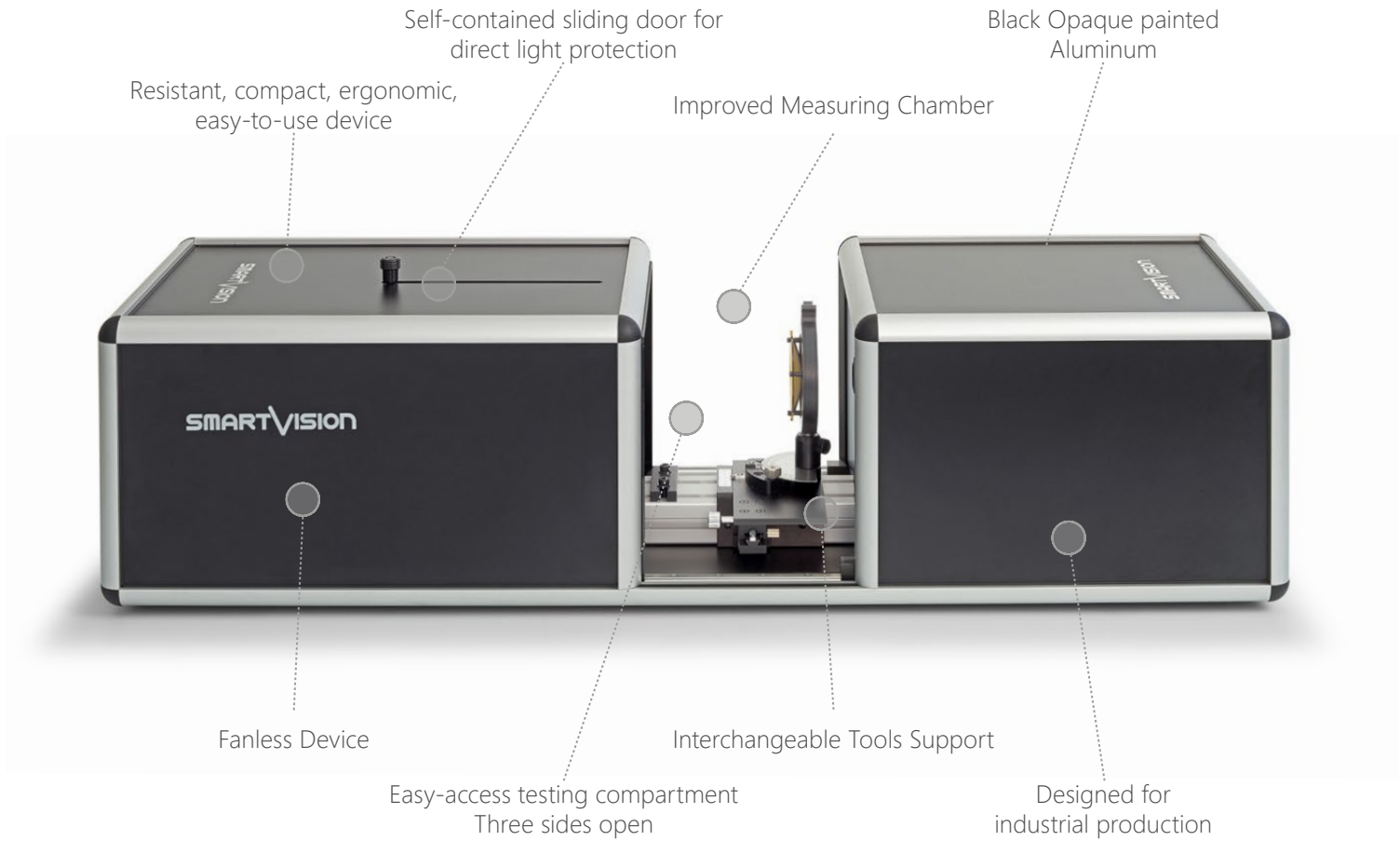
## Dedicated Software



- 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: High-performance Digital Bench



# Dedicated Smart Tools

Smart\_OptiBench: Wide Range of Optional Fixing Tools



Lens\_Holder



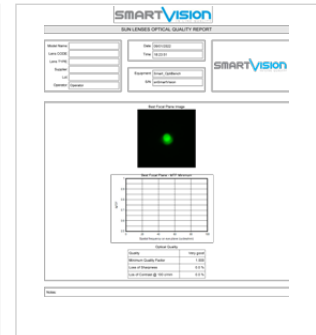
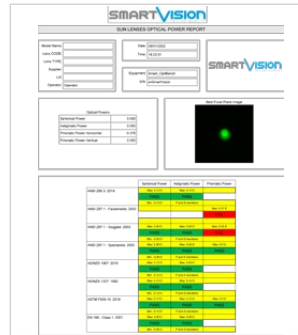
Lens\_Holder\_Enhanced



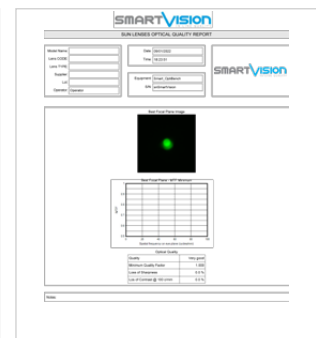
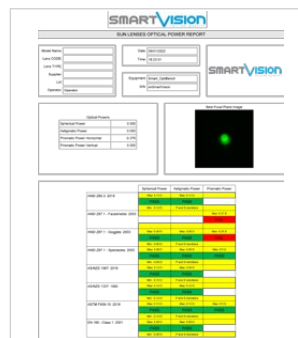
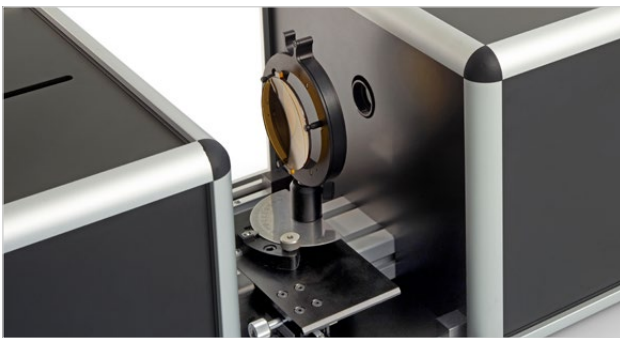
Smart\_HeadForm

# Usage Configurations

Smart\_OptiBench: Smart to Configure, Foolproof, Perfect to Use



**SunLenses:** configuration to measure Optical Quality and Refractive Powers for SunLenses. Lens\_Holder tool allow self-centering position of lenses with diameters up to 80 mm.



**SunLenses Enhanced:** configuration to measure Optical Quality and Refractive Powers for decentralized SunLenses (diameters up to 80 mm). Lens\_Holder Enhanced allows to adjust the displacement and the tilt on horizontal axis.



**SunGlasses & SkiGoggles:** configuration with a Smart\_HeadForm tool to measure Optical Quality and Refractive Powers for SunGlasses and SkiGoggles. The stage is movable to measure the both left and the right lens.



Easy access testing compartment with a practical Self-contained sliding door for direct light protection.



Resistant, Compact, Plug-and-play and Well-designed with a Fast-switching configuration.

# 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

# Technical Specifications

## Smart\_OptiBench: High-performance Digital Bench

<b>Main Functions</b>	<ul style="list-style-type: none"><li>• Test equivalent to Telescope Method</li><li>• Fully automatic test</li><li>• Objective and repeatable high precision measures for all Afocal Lenses</li><li>• Fast measuring time with full automatic data report</li><li>• No need of T% input (to be measured with a different machine)</li><li>• Reliable measure for Polarized, Thermoformed and Mirrored</li><li>• One unique instrument for both Adults and Kids Sunglasses</li><li>• Adjustable interpupillary distance</li><li>• Unique instrument for both SunGlasses and SunLenses (Combo Version)</li><li>• Complete set of accessories to measure Lenses, SunGlasses and Masks of different sizes</li><li>• Fast and easy update of all International Standards through Teleservice</li><li>• Easy Maintenance</li><li>• Analysis speed according to required precision</li><li>• Measure Refractive Powers for Afocal Lenses:<ul style="list-style-type: none"><li>- Spherical</li><li>- Astigmatic</li><li>- Prismatic</li><li>- Spherical and Prismatic Balancing (for SunGlasses)</li></ul></li><li>• 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</li><li>• Quality of the lens check (<i>Optional</i>):<ul style="list-style-type: none"><li>- Sharpness Index: based on MTF (Modulation Transfer Function)</li></ul></li></ul>
<b>Measurement Uncertainty</b>	<ul style="list-style-type: none"><li>• Spherical power: +/- 0.01 D</li><li>• Astigmatic power: +/- 0.02 D</li><li>• Prismatic power: +/- 0.005 DP</li><li>• Balance prismatic power: +/- 0.01 DP</li></ul>
<b>Measurement Range</b>	<ul style="list-style-type: none"><li>• Spherical +/- 0.25 D</li><li>• Astigmatic: 0 – 0.25 D</li><li>• Prismatic:<ul style="list-style-type: none"><li>- Horizontal base IN: 0.25 DP</li><li>- Horizontal base OUT: 0.75 DP</li><li>- Vertical UP/Down: 0.25 DP</li></ul></li></ul>
<b>Dimensions (mm)</b>	1060 x 400 x 270
<b>Weight (kg)</b>	27 (excluding PC)
<b>Operation ambient</b>	+10° to +40° C
<b>Power supply</b>	110-230 Vac   50-60 Hz
<b>Power consumption</b>	2 A (12 Vcc Included)
<b>Communication interface</b>	USB 3
<b>Case</b>	Black Opaque painted Aluminum
<b>Scan Type</b>	2 Meridians Scanner or 360°
<b>Measurement Area</b>	20 mm
<b>Optional PC Device</b>	Powerful All-in-One PC with FULL HD touchscreen with Windows 11 PRO 64-bit, monitor resolution 1920x1080
<b>Software Interface</b>	Language: English
<b>Data Report</b>	pdf
<b>Data Export</b>	csv
<b>Print Report</b>	Windows installed Printer (optional pdf), xps
<b>PC Software Backup</b>	USB stick containing the backup system (bootable system startup)

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