WHAT MAKES THE QUALITY OF A LENS

It’s all there. And yet.



01 — THE OBJECT

On paper, it can do everything

Spoon, fork, knife. On paper, this object can do everything. At the table, it does nothing well. None of its functions is wrong: they have simply not been mastered together.

Spoon

The bowl is slotted. It holds nothing.

Fork

The tines are enclosed in a ring. They cannot pick anything up.

Knife

The blade sits in the middle of the handle. You hold it while you cut.

02 — THE LENS

Technology is no longer what is missing

The progressive lens runs the same risk. Not all factories are equal. Those equipped with recent free-form lines, able to machine a surface point by point, can produce the geometry required, with the precision required. Bod Lenses, which manufactures IKYUM® lenses, works on Schneider units of this kind. Between factories at this level, technology is no longer what makes the difference.

> *Natural vision, immediately, with no adaptation.*

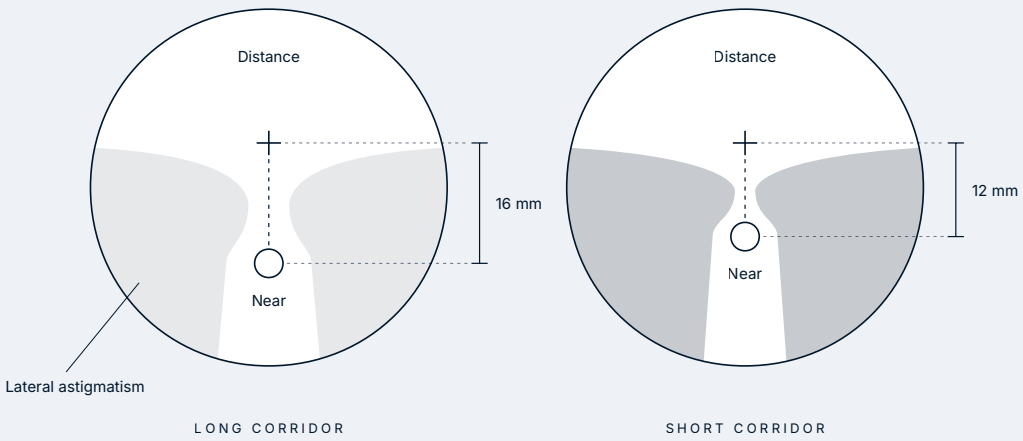
That is what advertising says. The promise is not false, it is conditional: it describes what the lens can deliver when everything around it is right.

The condition rarely appears on the poster.

03 — THE PHYSICS

What physics does not negotiate

A progressive lens places distance vision at the top, near vision at the bottom, and a progression of power between the two. Physics has its laws. The Minkwitz theorem is one of them: on either side of the corridor, surface astigmatism increases about twice as fast as the power progresses. The shorter the corridor, the faster this astigmatism builds up at the sides.



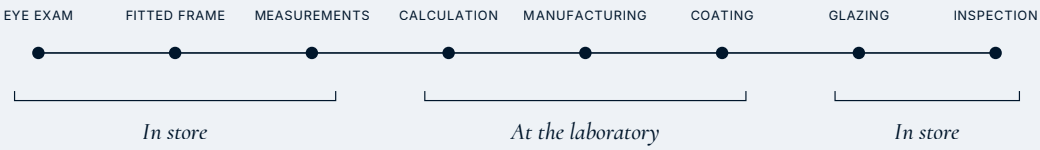
Schematic diagram. For the same addition, a shorter corridor narrows the usable zone and increases lateral astigmatism.

No algorithm removes it; it distributes it more or less well. No lens gives back the vision of a twenty-year-old. Wearers adapt, often very well, provided the lens sits where it was calculated to sit, and the corridor length was chosen for this wearer and this frame.

04 — THE MEASUREMENT

A lens is worth what its measurements are worth

The chain begins with the eye examination. It continues with a frame that is chosen, then adjusted on the face before any measurement. Then come the monocular pupillary distances taken with the frame in place, the fitting heights, the pantoscopic angle, the wrap angle, the vertex distance and the corridor length. Then calculation, manufacturing, coating, glazing and inspection.



An individualised lens is calculated for these values. If they are estimated, it is calculated correctly, for a position of wear that does not exist.

This is also why a progressive lens ordered remotely, with no professional to measure the wearer in the frame, cannot deliver what it was designed for.

05 — THE SURFACE

What the wearer touches every day

Geometry is calculated, measurements are taken. The surface is lived with: it is what the wearer cleans, looks at against the light, scratches or does not. A well-calculated lens under a coating that marks or degrades remains a disappointing lens.

No IKYUM® lens leaves the laboratory without a scratch-resistant hard coat, even the simplest one. Clarity coatings add a multilayer anti-reflective coating, an antistatic layer and a hydrophobic and oleophobic finish.

Clarity

The base coating of the range. Green residual reflection.

Clarity Achromatic

Neutral residual reflection. Reflectance below 1.5%.

Clarity UltraSlik

Reflectance below 0.5%, bluish-gold residual reflection. A surface designed to be cleaned easily.

The full range, with Clarity B-UV, Clarity Blue Pro and the mirror coatings, is presented in the Clarity Coatings brochure.

06 — THE IKYUM® CHAIN

IKYUM® does not stop at the lens

Calculation

Geometries are calculated with the algorithms of developers such as IOT.

Manufacturing

Lenses are free-form surfaced at Bod Lenses, in Vilnius.

Surface

A hard coat on every lens, then the Clarity coatings chosen by the optician.

Measurement

IKYUM® Measure by Optikam records ten parameters in a single capture. Head tilt is read by a gyroscope fixed to the frame, independently of the tablet and of the person holding it.

Support

In Switzerland, two experts in the field and a qualified optician with more than thirty years in the trade, who works directly with the laboratory's engineers.

Warranty

Three years on Clarity coatings for prescription lenses, two years on the rest of the range.

THE TEST

Anyone can do it: measure the same wearer three times, with three different people. A display to a tenth of a millimetre only has value if the three readings agree.

07 — IN SHORT

The quality of a lens does not come down to one technology. It comes down to a chain: a geometry, accurate measurements, a durable surface, support. The wearer judges only the result.

IN-STORE DEMONSTRATION

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