



VARILUX® X series™



THE SCIENCE BEHIND
VARILUX® X SERIES™

INNOVATION.

Truly groundbreaking products
come from constantly reimagining
how to meet consumers' needs.

This consumer-focused approach
to innovation led Essilor to a
better understanding of today's
presbyope and a new way of
designing progressive lenses.

Today's presbyopes spend most of
their time with arm's length activities
and thus, the way to measure their
near vision needs had to evolve.

VARILUX® X SERIES™

TODAY'S PRESBYOPE NEEDS TO SEE MULTIPLE DISTANCES WITHIN ARM'S REACH

1990
STATIC
Near Vision



A Single Distance:
16 in

2018
DYNAMIC
Near Vision



Multiple Working Distances
Sphere at Arm's Length: 16 to 28 in

ESSILOR R&D CREATED NEW TOOLS TO MEASURE TODAY'S NEAR VISION NEEDS

Essilor R&D developed new tools and methodologies to quantify the modern presbyope's dynamic near vision needs. For example, Essilor created the **Movis™** lab, a new state of the art facility that captures data by monitoring and analyzing progressive lens wearers' movements and posture both in real time and in 3D. Essilor even had wearers make video selfies to show the day-to-day situations modern presbyopes encountered with their progressive lenses.

A NEW APPROACH TO PROGRESSIVE LENS DESIGN

Essilor was able to quantify the **Volume of Vision** needed by today's presbyope; this is a brand new measure that has never been defined for a progressive wearer until now. By measuring the acuity necessary to see sharply during multiple important arm's length tasks, Essilor R&D was able to model and define the total space where a patient wearing progressive lenses most needed to have sharp, clear vision. Put simply, Essilor was now able to design a progressive lens that maximizes the range of sharp vision needed at arm's length.

Maximizing the Volume of Vision at arm's length:
a new way of designing a lens



VARILUX® X SERIES™ LENSES ARE DESIGNED TO MAXIMIZE THE PROGRESSIVE WEARERS' VOLUME OF VISION



Area needed for sharp vision within arm's length



Bifocal Lenses



Ordinary Progressive Lenses



Varilux X Series Lenses



XTEND™

XTEND® TECHNOLOGY MAXIMIZES THE VOLUME OF VISION FOR TODAY'S PRESBYOPE

Maximizing the volume of vision delivered by a lens led Essilor to completely reinvent how to design a progressive lens. *Xtend* technology is a result of this **new design philosophy** and resulted in exclusive software calculations that were so innovative that Essilor was able to file **15 patents** on this new process.

FOUND ONLY IN *VARILUX X SERIES* LENSES,
XTEND TECHNOLOGY ALLOWS THE WEARER TO:

- See multiple distances through any point in the near and intermediate zones of the lens
- Experience reduced head movement
- Have a better overall visual experience



THE MOST ADVANCED VARILUX® LENS. EVER.

No other progressive lens on the market has the technology found in *Varilux X Series* lenses.

This innovation is the result of:

- » 5 years of research and development
- » 19 studies among thousands of wearers
 - » 15 pending patents

“*Varilux X Series* lenses are by far the most natural and comfortable progressive lens I have ever tried. No looking for ‘just the right the spot’ and there is no unnatural vision in any part of the lens. I am pretty critical when it comes to my vision. I give the *Varilux X* an A+.”

- Harkins & Karsten, OD

Varilux X Series lenses also include:

CUSTOMIZED
NEAR VISION

W.A.V.E
TECHNOLOGY 2®

SYNCHRONEYES™
TECHNOLOGY

NANOPTIX®
TECHNOLOGY



Better Sight.
Better Life.

Transitions™

Crizal®

VARILUX®

Eyezen™

Xperio™