

# Understanding free form vs. conventional

A new form of lens surfacing has changed the way we see.

CARES  
FORESIGHT  
KNOWLEDGE

Connecting you to technology.

A new form of lens surfacing has changed the way we see: the free form lens. It's an advanced, [state-of-the-art surfacing technology](#) that utilizes highly complex computer algorithms to control a diamond tip lathe that carves the prescription into the back surface of the lens. This allows for precise lens designs that can be tailored to all types of visual demands.

## Conventional lens vs. free form

The true advantage of free form lenses is the advanced computer algorithms used to incorporate lens technologies into the lens design, maximizing binocularity and optimizing the progressive corridor. There are two patented technologies that separate HOYA from the rest.

- 1. iD Technology:** calculates the vertical components of the reading corridor and places it on the front surface of the lens and the horizontal components on the back side. This allows the eyes to rotate quicker and more efficiently, downward through the corridor to get to full reading power — and it creates a wider corridor zone in the horizontal position.
- 2. Binocular Harmonization Technology (BHT):** takes into consideration the prescription of each eye individually and designs the lenses as a pair, working together. The algorithm adjusts the power distribution and corridor lengths to allow the eyes to work equally together.

## The perks of personalization

Some of HOYA's premium lens designs are actually free form surfaces, both on the front and back sides of the lens for total [personalization](#).

With the accuracy of 1/100 of a diopter and the ability for complex computer algorithms to incorporate advanced lens technologies, such as iD and BHT, superior optics for any task can be created. This allows you to tailor the lens design around your patients daily visual demands, making adaptation much easier.

## How Hoya does free form

Accurately capturing position of wear (POW) measurements can be easily accomplished by taking one photo [with a tool like Spectangle Pro](#). The process is quick and efficient and brings a new experience for the patient that makes you look hi-tech and an ECP of the future.

Want to make sure your patients are getting precise lens designs that are tailored to their visual demands?  
Contact your local Territory Sales Manager.