



CATS™ Tonometer Prism - Frequently Asked Questions (FAQs)

The below FAQs are based on seven peer-reviewed journal articles. Refer to Reichert.com/cats for a complete listing.

Q. What improvements does CATS™ Tonometer Prism have over traditional Goldmann prisms?

A. The CATS Tonometer Prism features an optimized dual-curved prism surface that significantly reduces IOP measurement errors by compensating for central corneal thickness (CCT), corneal hysteresis (CH), and tear film.¹

Q. How does the CATS Tonometer Prism design allow for improved IOP measurements over the traditional Goldmann tonometer prism?

A. The CATS Tonometer Prism surface design “cups” the cornea while the traditional Goldmann prism “flattens” it. Flattening the cornea amplifies intracorneal stress, leading to errors in IOP measurement related to corneal biomechanical properties. The CATS surface design effectively negates errors associated with central corneal thickness (CCT) and corneal hysteresis (CH). In addition, the tapered edges of the CATS Tonometer Prism also reduce errors related to tear-film adhesion that plague traditional Goldmann prisms.²

Q. What provides the clinician with confidence that the CATS Tonometer Prism produces accurate, improved IOP accuracy when the IOP is different from the traditional Goldmann prism IOP measurement?

A. CATS Tonometer Prism was intentionally designed to measure the same as a traditional Goldmann prisms in normal corneas. The absence of an IOP bias between CATS and traditional GAT maintains long-standing IOP benchmarks of normal and high pressures allowing clinicians to seamlessly integrate the new CATS IOP readings in comparison to their historic GAT IOP readings.

Q. Why do the mires appear distorted until the clinician centers the prism’s position?

A. CATS Tonometer Prism was designed to indicate prism alignment and centration with the corneal surface, whereas a traditional Goldmann prism is subjectively centered. Only when the CATS Tonometer Prism is centered on the cornea is a measurement possible allowing the mires to intersect. At that point, the visualization appears like the normal semicircular mires familiar to clinicians. With an objective centration indicator, the CATS Tonometer Prism improves accuracy and repeatability.

Q. Why do the CATS Prism mires appear brighter and easier to visualize?

A. The clear flange at the base of the CATS Tonometer Prism tip works as a light pipe concentrating the cobalt blue filtered light to the prism’s applanation surface illuminating the mires. When the cobalt light is placed at a 45-degree angle to the CATS prism flange, the mires will be optimally illuminated.

Q. Will clinicians need to buy additional equipment and/or change their current IOP measurement protocol if they use the CATS Prism?

A. No. The CATS Tonometer Prism integrates seamlessly with any applanation and Perkins tonometers and is designed for easy and sterile prism installation. Additionally, there is no need to recalibrate an existing tonometer, alter measurement techniques, or adjust the interpretation of results.

Q. What is the significance of curved shape of the CATS Tonometer Prism body?

A. The curved finger and thumb hold of the CATS Tonometer Prism body allows for true single-hand, no-touch operation.

1. McCafferty S, Lim G, Duncan W, et al. Goldmann tonometer prism with an optimized error correcting applanation surface. *Transl Vis Sci Technol* 2016; 5:4–5.

2. McCafferty S, Tetrault K, McColgin A, Chue W, Levine J, Muller M. Modified Goldmann prism intraocular pressure measurement accuracy and correlation to corneal biomechanical metrics: multicentre randomised clinical trial. *Br J Ophthalmol*. 2019 Dec;103(12):1840-1844. doi: 10.1136/bjophthalmol-2018-313470.