

PASCAL[®]

DYNAMIC CONTOUR TONOMETER

True IOP – No doubt



"The PASCAL DCT is the first totally new concept in tonometry in over 100 years. It is probably the most accurate of all the tonometers and is relatively independent of corneal biomechanical properties unlike its predecessors."

R. Stamper; Optom Vis Sci. 2011 Jan

PASCAL DCT: DYNAMIC CONTOUR TONOMETER

IOP and OPA measurement without corneal influence



4th World Glaucoma Consensus on IOP 2007:

“Correction nomograms that adjust GAT IOP based solely on CCT are neither valid nor useful in individual patients.

The corneal modulus of elasticity likely has a greater effect on GAT IOP measurement error than CCT.”

R. Weinreb, J. Brandt, T. Garway Heath, F. Medeiros 2006

Excerpts from original studies:

“According to our data, the DCT measurements came close to the true IOP.”

A. Böhm et al. IOVS 2009

“The PASCAL DCT shows excellent measurement precision, displaying the best repeatability and reproducibility of the 3 tonometers.” [GAT, ORA, DCT]

A. Kotecha et al. Ophthalmology 2009

“These findings suggest that DCT-IOP is correlated with glaucomatous damage, and moreover, DCT-IOP is more closely related to extent of glaucoma damage than is GAT-IOP.”

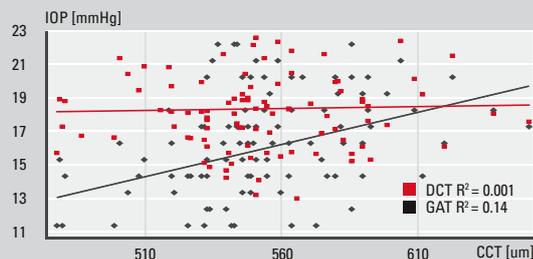
M. Sullivan Mee et al. J Glaucoma 2007

- (1) DCT-Sensor tip: no applanation but relaxation
- (2) Constant apposition force of only 1g
- (3) LCD display shows: IOP (True IOP), OPA (ocular pulse amplitude) and Q (measurement quality index)
- (4) Easy handling with just one knob

PASCAL'S CLINICAL BENEFITS

True IOP – No doubt

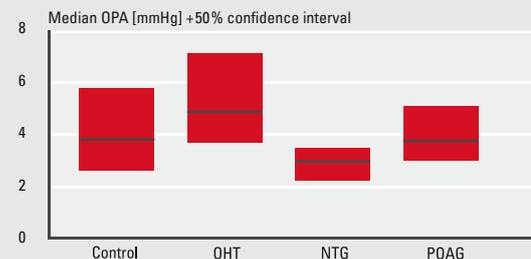
Independent from corneal properties like CCT and corneal rigidity.



DCT, in opposition to GAT, is near to independent of CCT. (Schneider E, Greh F; J Glaucoma. 2006)

Ocular pulse amplitude OPA

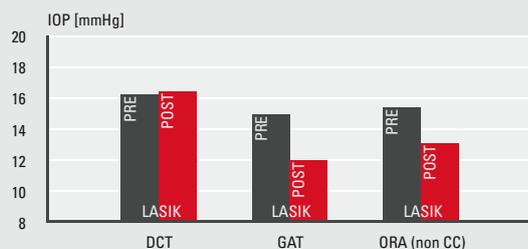
PASCAL measures both static pressure (IOP) and pressure fluctuation (OPA).



Ocular pulse amplitude is reduced in patients with NTG or POAG. (Pfeiffer et al. Br. Journal Ophthalmology 2002)

Elimination of late or missed diagnosis

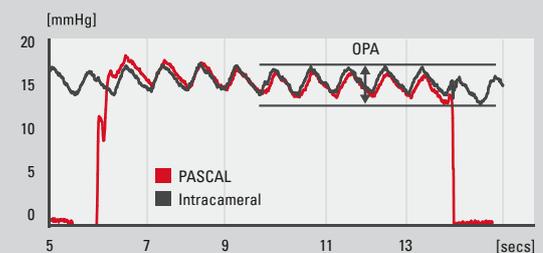
Due to false negatives from Goldmann tonometry.



IOP after LASIK: Surgery changes corneal biomechanics – not IOP. (E. Kirstein et al. Optometry 2005)

Highest repeatability

Allows a refined IOP progression analysis.

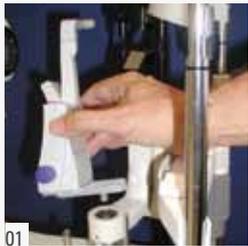


Cannulation study: "DCT measurements (black) come close to the true IOP (red)". (A. Böhm; IOVS 2009)

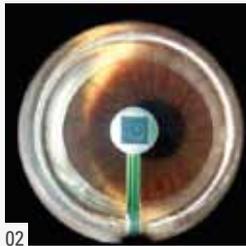
Additional advantages

- ☑ PASCAL can optionally be connected to a wireless printer or PC and is EMR compatible.
- ☑ Due to the automatic self-calibration no additional calibration steps are needed.
- ☑ No fluorescein has to be used. The sterile sensor caps enable a fast and convenient workflow and avoid any risk for cross infection.
- ☑ "Relaxation" of the cornea by contact with the concave tonometer tip allows to measure the IOP directly and without corneal influence.

Mounting and Tonometer tip



01



02



03

01 Mountable on all slit lamps
03 One-knob handling



04

02 View through tip
04 Sterile cap

Consumables and optional accessories



05

05 DataWizard software



06

06 Wireless printer



07

07 Slit lamp adapter kit



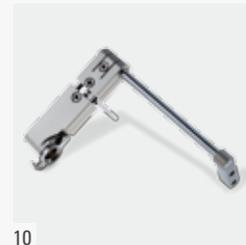
08

08 Rechargeable battery kit



09

09 Sterile sensorcaps



10

10 Swingarm

For technical specifications please visit our homepage at www.ziemergroup.com

PASCAL is CE marked, FDA 510(k) cleared and fulfils the international standard for tonometers ISO 8612.

ziemer 
OPHTHALMOLOGY

Manufacturer:

SMT Swiss Microtechnology AG
a Ziemer Group Company

Ziemer Group is a privately owned, Switzerland-based med-tech company, whose activities are focused exclusively on ophthalmology.

At Ziemer we strive to empower ophthalmologists and optometrists to deliver better vision care to their patients by creating superior surgical and diagnostic tools.

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Federal (U.S.) law restricts this device to sale by or on the order of a physician.
Article No. 311.941.001

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