Technician Quick Reference Guide

Distributed by:

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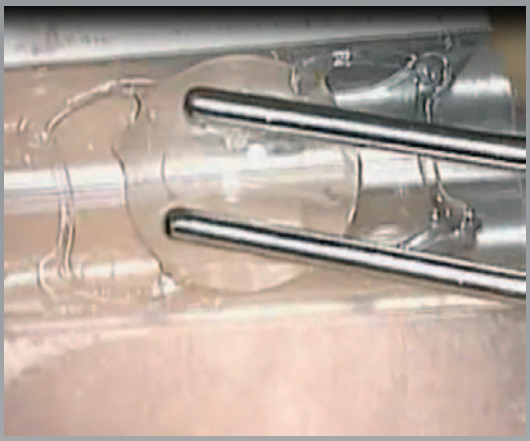
Tetraflex 1D™

Active Lifestyle Lens

Bi - Aspheric • Quarter Diopter



Loading the Tetraflex HD™

- Carefully place the silicone sleeve over the end of the injector plunger.
- If using disposable forceps, try to avoid touching the optic since these instruments may leave metallic debris on the optic surface.
- Open the cartridge and lubricate the nozzle and loading deck with BSS. **DO NOT USE VISCOELASTIC**
- With the cartridge nozzle to your left, place the Tetraflex HD™ on the loading deck with the positioning tab to your distal left. Using the loading fork, press on the optic and slowly lift on the cartridge wings as if you were to close the cartridge. Make sure that the optic and the haptics are tucked under the edges of each channel. Once you are sure the optic and the haptics are under the edge, close the cartridge completely.

Preoperative Measurements

Keratometry (Ks)

- Optical or manual keratometry should be performed on all patients
  - Contact lens wearers should discontinue use for a period of time long enough to ensure corneal stability
- Three sets of Ks should be taken with no more than 0.25 D of deviation between them

**** Helpful Hints ****

- Keratometer should be calibrated regularly as well as the eyepiece adjusted prior to every use
- Keratometry has a 1:1 dioptric ratio between measurement error and power miscalculation (if K measurement is off by 1 D then surgical outcome will be off by 1 D)
- Repeatable consistent measurements are those within 0.25 D in each meridian
- Measurements should be taken on an untouched cornea (ie: no drops or applanations)

Biometry

- Non-contact methods only
  - **Optical:** 5 out of 20 measurements should be within 0.02 mm/SNR (signal to noise ratio) should be >2.0
  - **Immersion:** SD should be < 0.09 mm

**** Helpful Hints ****

- A 0.10 error in axial length will result in a 0.25 D postoperative refractive error in a long (myopic) eye. (1mm ERROR = 2.50 Diopter ERROR)
- A 0.10 error in axial length will result in a 0.75 D postoperative refractive error in a short (hyperopic) eye. (1mm ERROR = 7.50 Diopter ERROR)

Recommended Lens Calculation Formulas

- SRK-T formula for eyes measuring 22.01 mm or longer
- Holladay II formula for eyes measuring 22.0 mm or shorter
- Holladay II formula for eyes with a mean K value flatter than 42.00 D or steeper than 47.00 D independent of the axial length

Targeting

- **Near (Non-Dominant):** select a lens that predicts between –0.25 D and –0.50 D
- **Distance (Dominant):** select a lens that predicts between plano and –0.25 D
- When necessary, adjust target for second eye based on the refractive outcome of the first eye
- Residual cylinder < 0.50 D will yield optimal outcomes
- All patients benefit from elimination of residual refractive errors, especially astigmatism. Some patients may benefit from additional vision correction to achieve best outcomes.

Specifications

Optic Size:	5.75 mm
Optic Style:	Bi-Aspheric
Length:	11.50 mm (from 5D to 27.5D) 10.75 mm (from 28D to 36D)
Haptic Style:	Tetraflex
Angulation:	5°
Position Holes:	None
Construction:	Single Piece
Optic Material:	Acrylic (26% Water)
A/C Depth:	5.10
Constants:	
SRK-T:	**A = 118.54**
Holladay 1:	**sf = 1.53**
Hoffer Q:	**pACD = 5.28**
Keratometry Refractive Index: 1.3375	

Diopter Increments:
Whole: +31.0 to +36.0
Half: +5.0 to +14.5 and +25.5 to +30.0
Quarter: +15.0 to +25.0

0.25 Diopter Precision
Active Lifestyle Lens
360° Square Edge Technology
Micro Incision

Constants are figures shown as guidelines for calculation of implant power. Lenstec recommends that surgeons develop their own values based on individual technique, measuring equipment and desired postoperative results.

Postoperative Measurements

- It is important to measure all distances - Near, Intermediate, and Distance. After both eyes are implanted, it is important to check binocular visions
- Ensure patient has sufficient tear film prior to checking VAs or refractions
- **DO NOT** use auto-refractors as a starting point for the sphere as they tend to over-minus
- If performing retinoscopy, ensure patient is focusing on a letter on the chart and not accommodating on the retinoscope
- After starting point is determined, perform a maximum plus refraction
- Always threshold test patient's VAs
- If a Cycloplegic refraction is warranted, perform a true Cycloplegic refraction
  - Verify refraction
  - Administer 1 gtt 1% Cyclo followed by an additional drop 5 minutes later, then wait 30 minutes to refract
- Limit reading for the first 10-14 days. This contributes to long-term stability
- Tetraflex improves over time and with exercise after surgery. The more the patient challenges his/her muscles, the stronger and larger the amplitude of accommodative effect

Day-1 Post-op

- UCVA
- IOP
- Ocular health exam

10-14 Day Post-op

- UCDVA, UCIVA (80cm/32 in.) and UCNVA (40cm/16 in.)
- Maximum plus refraction
  - Add power should not be > +1.50 D (this is a double check of over minusing)
- Cycloplegic refraction if VAs have changed from one day post-op
- IOP
- Ocular health exam