THE FRED HOLLOWS

INTRAOCULAR LENS LABORATORY

PRODUCT GUIDE

Tilganga | INSTITUTE OF OPHTHALMOLOGY

The **Fred Hollows** Intraocular Lens Laboratory

As an integral part of Tilganga Institute of Ophthalmology, The Fred Hollows Intraocular Lens Laboratory is an internationally recognizedmanufacturing facility which produces high quality intraocular lenses that are sold not only in Nepal, but to various countries around the world. Commissioned in 1995 with funding from the Fred Hollows Foundation in Australia, and designed and constructed by engineers and technicians from New Zealand, Australia and Nepal, the laboratory guarantees the highest quality manufacturing facility and a finished product that matches world-class standards. Products of The Fred Hollows Intraocular Lens has been sold over 70 countries of the world. Till now 5.6 million people seeing theworld with our lenses.

The Fred Hollows Intraocular Lens Laboratory is certified with Medical Device -Quality Management System (ISO 13485:2016) and MDD 93/42 EEC (CE).

Products List

- Aspheric Foldable Acrylic Intraocular Lenses with 360° Square Edge
- Sterile Foldable Acrylic Intraocular Lenses
- Sterile One Piece Rigid PMMA Intraocular Lens
- Sterile PMMA Capsular Tension Rings
- Sterile Injector & Cartridges - Tec-Jet Injector System

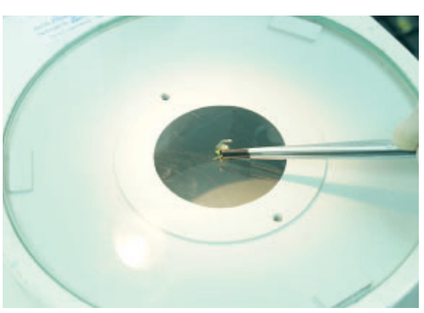
Features

Latest Precision Machines-1st of Its Kind in the Industry

Equipped with the latest innovation in computer numeric controlled (CNC) lens production equipment with automatic loading, lathing, turning and milling in one computer numeric control machine for high precision output.

This equipment is the industry's latest version of automatic equipment having the most comprehensive software which is the first of its kind in the world.

The Best IOL Designs



Having alliance with leading IOL design experts and medical research teams, the laboratory is in tune with the latest trend in IOL designs which are proven for its superior stability in the eye and accurate visual outcome for the patient. To cater to needs of different surgeons, the product line includes a range of IOL designs and supplimentary products.

Striving for Excellence

Continuously upgrading and expanding the product line to match the latest surgical innovations - The aim is to provide better social & mental quality of life to the patients. The focus is always on affordability and totally uncompromised quality.

- IDEAL BIO-MATERIAL: "The IOL material used has a much higher polymer purity (99.9%) which creates zero ionic-ity. This means possibility of calcium phosphate particles appearing over time in the IOL leading to opacification is eliminated." - BRD, USA
- Has given excellent long term post-op results & shown Low PCO scores
- Allows smooth insertion and Perfect Folding

Quality Certification for EU & Australia

Adherence to the Highest Quality Standards is a consistent feature of the laboratory. Operations are conducted in Class M5.5 (less than 10000 particles of 0.5 micron or above per cubic foot of air) (US Fed Std 209) clean room Final packing in class M3.5 laminar Flow workstation (less than 100 particle of 0.5 micron or above per cubic foot of air).

Tecsoft
FOLDABLE ACRYLIC INTRAOCULAR LENS

TECSOFT "FlexQY"

(Yellow) Aspheric Foldable Acrylic Intraocular Lenses with 360° Square Edge

- Biconvex Optic 'C' loop design
- Angulation = 4°
- Est. A-Constant = 118.6
- **Powers available from +11.0 D to +32.0 D**

TECSOFT "FlexQ"

Aspheric Foldable Acrylic Intraocular Lenses with 360° Square Edge

- Biconvex Optic 'C' loop design
- Angulation = 4°
- Est. A-Constant = 118.6
- **Powers available from +11.0 D to +32.0 D**

Benefits of Aspheric with Square Edge

- Improved contrast sensitivity and Visual Acuity
- Improved image quality
- Precise and stable refractive results
- Superior night driving ability
- Negative Spherical Aberration
- 360° Square Edge avoids Lens Epithelial Cells (LEC) migration under the IOL and prevents formation of PCO after surgery
- Protect against postoperative capsular shrinkage

Tecsoft
FOLDABLE ACRYLIC INTRAOCULAR LENS

CE 0068

TECSOFT "FLEX"

Sterile Foldable Acrylic Intraocular Lenses

Clinical Quality Poly-HEMA Acrylic with UV Blocker

- Equi Biconvex Optic 'C' loop design
- Angulation = 5°
- Est. A-Constant = 118
- Powers available from +5.0 D to +32.0 D
  Power increments by 1.0 D from +05.0 D to + 09.0 D
  Power increments by 0.5 D from +10.0 D to + 30.0 D
  Power increments by 1.0 D from +31.0 D to + 32.0 D

Dioptric Power	ØOverall/Ø Optic
+5.0 D to +17.5 D	13.5mm/6.0 mm
+18.0 D to +25.5 D	13.0 mm/5.9 mm
+26.0 D to +32.0 D	12.5 mm/5.8 mm

TECSOFT "TETRA"

Sterile Foldable Acrylic Intraocular Lenses

Clinical Quality Poly-HEMA Acrylic with UV Blocker

- Equi Biconvex Optic with '4-point fixation' design
- Angulation = 0°
- Est. A-Constant = 118
- Powers available from +5.0 D to +32.0 D
  Power increments by 1.0 D from +05.0 D to + 09.0 D
  Power increments by 0.5 D from +10.0 D to + 30.0 D
  Power increments by 1.0 D from +31.0 D to + 32.0 D

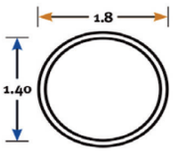
Dioptric Power	ØOverall/Ø Optic
+5.0 D to +17.5 D	11.2mm / 6.0 mm
+18.0 D to +25.5 D	11.0 mm / 5.9 mm
+26.0 D to +32.0 D	10.8 mm /5.8 mm

TEC-JET INJECTION SYSTEM

INJECTOR WITH HYDRAULIC EFFECT for Micro-Incision cataract surgery

- Specially designed to suit our products
- Facilitates a soft, precise and completely controlled forward movement of the IOL through the cartridge Uses hydraulic effect of the viscoelastic solution to push the IOL with a soft bud
- Allows to inject the IOL with delicacy through a micro incision of 2.0 mm to 2.6mm, depending upon to the insertion technique used.

CARTRIDGE



- Made to fulfil Bi–Manual Phaco Surgery needs with Micro Lenses.
- Cartridge, used with our disposable "Tec-Jet Injection System" Injector, has the same hydraulic effect on the viscoelastic solution, driving the IOL with a silicone stopper.
- The "Cartridge" allows to control the IOL injection through a sub–micro incision of only 2.0–2.6 mm.

Packed sterile

"The intraocular lens manufacturing facility is at par with the best manufacturing facility of the west- beautiful clean- room facility and excellent quality control. So this is a real service not just to the people of Nepal but to other countries as well."

Prof. David Chang, MD

David Chang, M.D., clinical professor at the University of California, San Francisco is a leader in cataract surgery technology, techniques, and teaching. He is a terrific source of information and inspiration to practicing physicians and has recently been named to the Cataract Clinical Committee of the American Society of Cataract and Refractive Surgery.

Procedure for Tec-Jet Injection System

CE 0068

1 Procedure for extracting the IOL

A IOL in Holster in Blister Pack

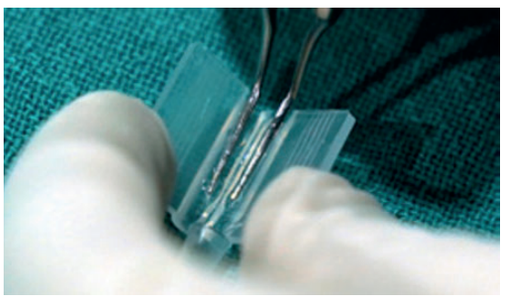
B Extracting the lens holder from the Holster

C IOL in the lens holder

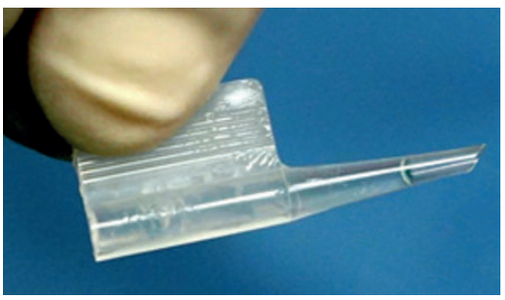
2 Procedure for loading the IOL in the cartridge

A Take out the Tec-Jet Injection System and cartridge from its blister pack in sterile environment

B After spreading Visco-elastic solution in the barrel and hinge, Place IOL so that the Lens is centered; the front haptic pointing left



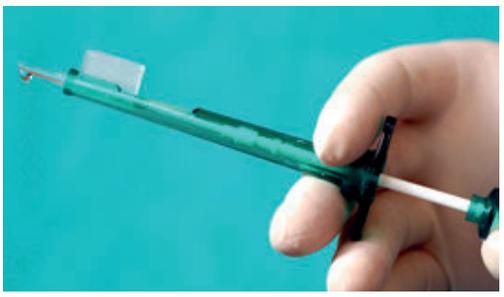
C Important:: Fold the haptic at the back, towards the optic



D Fold the flaps: Important: Ensure haptic and optics do not get caught in between the flaps

3 Procedure for Using Tec-Jet Injection System

A Gently place the cartridge loaded with the folded IOL firmly in the slot of the Tec-Jet Injection System and push the pushrod close to the barrel



B Now the Tec-Jet Injection system is ready for delivery of the IOL in to the patient's eye

Points to remember while preparing injection of Sterile Foldable Acrylic Intraocular Lens

- Always lubricate the cartridge with viscoelastic substance.
- While placing IOLs with 'C' loop, on the cartridge, ensure that the front haptic (one leading the IOL into the cartridge barrel) is always facing left and is well folded. Also ensure that the back haptic is also folded towards the optic.
- While folding the flaps of the cartridge, ensure haptics and optic do not get caught between the flaps.
- Do not keep the IOL folded in the cartridge for more than 5 minutes.

For Doctors

- Gently push the push-rod a little, and push further until a part of lens comes out from cartridge, Now gently pull back the push-rod a little and push forward to finally deliver the lens to the capsular bag.
- Do not move the push rod of the injector until you are ready for IOL insertion.

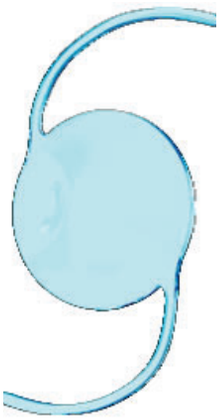
PMMA INTRAOCULAR LENSES

CE 0068

Sterile One Piece Rigid PMMA Intraocular Lens

Material: Clinical Quality PMMA material with UV Blocker

Modified 'C' loop Posterior Chamber IOLs



S.N.	Model	ØTotal / Ø Optic	StepVaulting (Angulation)	Positioning Holes
1	FH106	13.0 x 6.0 mm	0.6 mm (10°)	No
2	FH105	12.5 x 5.5 mm	0.3 mm (5°)	No

A- Constant: 118.3 AC Depth: 5.2 mm

Powers Available: +8.0 to +30.0 with increments of 0.5 Diopter;
A-constant and AC depth are estimates only. It is recomended that each surgeon develop his or her own value based on experience and post operative results.

Modified 'C' loop Posterior Chamber IOLs with Positioning Holes

S.N.	Model	ØTotal / Ø Optic	StepVaulting (Angulation)	Positioning Holes
1	TG60H	13.0 x 6.25 mm	0.6 mm (10°)	2

A- Constant : 118.3 AC Depth : 5.2 mm

Powers Available: +8.0 to +30.0 with increments by 0.5 Diopter.
A-constant and AC depth are estimates only. It is recomended that each surgeon develop his or her own value based on experience and post operative results.

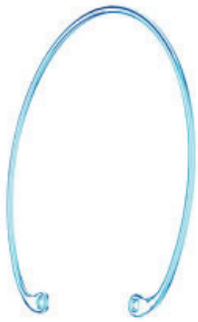
"It was fascinating to see the (IOL manufacturing) facility. The process of making sure the IOLs are of high quality...well polished it was amazing that the standards are so high. I don't think there's a lens factory in the world that is of a higher standard."
Dr. Edward Wilson, Chairman, Storm Eye Institute, South Carolina, USA

Prof. Wilson is also the executive editor of the American Journal of Ophthalmology. He also serves as a consultant to the National FDA Ophthalmic Device panel of USA.

PMMA Capsular Tension Ring

Clinical Quality PMMA material

Code	Indication	Ø Overall/Ø Body
C13	High Myopia	13.0 x 10.7 mm
C12	Myopia to Standard	12.0 x 9.9 mm
C11	Standard to Hyperopia	11.0 x 9.4 mm



CE 0068

Kelmann Type Anterior Chamber IOLs

Code	Model	Ø Overall/Ø Body	StepVaulting (Angulation)
1	FA60B	12.5 x 6.0 mm	0.24 mm
2	FA55B	12.5 x 5.5 mm	0.24 mm

A- Constant: 114.3

Powers available: +15 to +25 with increments by 0.5 Diopter.

A-constant is estimate only. It is recommended that each surgeon develop his or her own value based on experience and post operative results.

UNIQUE, ROBUST, AND ERGONOMIC LENS CASES FOR PMMA IOLS & CTR'S

OPENING PROCEDURE

- Open the sterile pouches in a sterile field and remove the lens case from the pouch.
- To open the lens case, grasp the lens case such that the index, second & third fingers support the lens case, and the thumb is placed on the grips of the lens case lid. Press the lid slightly and steadily draw the lid back towards the centre of the lens case to expose the FRED HOLLOWS rigid intraocular lens.

  Caution: Before sliding the lid, slightly tap the top of the lid to ensure the lens firmly places itself in its room (i.e. in the pins that holds the lens).
- Carefully remove the lens vertically from the case using a sterile forceps. Be careful to grasp only the distal portion of the haptic and lift it straight up from the lens case.

Tilganga | INSTITUTE OF OPHTHALMOLOGY

The Fred Hollows Intraocular Lens Laboratory

Office address
The Fred Hollows Intraocular Lens Laboratory
Tilganga Eye Centre
Gaushala, Bagmati Bridge
Kathmandu, Nepal

Postal address
The Fred Hollows Intraocular Lens Laboratory
Tilganga Eye Centre, P.O.Box 561
Kathmandu, Nepal
E-mail: sales@tilganga.org
Phone: +977-1-4493775, Fax:+977-1-4474937
www. tilganga.org | www. fhiol.com