

INSTRUCTIONS FOR USE

TrueVue™

Hydrophobic Foldable Intraocular Lens

DEVICE DESCRIPTION:

TrueVue – Monofocal Clear & Toric - Hydrophobic Aspheric Square Edge Foldable Intraocular Lens manufactured by Excel Optics, Chennai are UV absorbing optical implants for the replacement of human crystalline lens. This special quality lens is manufactured from hi-quality clinical grade UV absorbing Hydrophobic Acrylic Blanks. Excel TrueVue lenses are targeted for implantation in the capsular bag for the visual correction of aphakia in patients whose cataracted lens has been removed. The lenses are available in powers (in situ) from -10.00 to +40.00 diopters with increments of 0.5 diopters.

Hydrophobic posterior chamber IOLs are intended to be positioned in the posterior chamber of the eye, after replacing the human natural crystalline lens. This position allows the lens to function as a refractive medium in the correction of aphakia. A hydrophobic Monofocal IOL is an intraocular lens with a fixed focus for one distance. The natural lens is protected against phototoxic UV light due to the filter properties of cornea, aqueous humour, lens, and retina. After cataract surgery, it becomes important to protect the eye from UV radiation through artificial lens. The hydrophobic Monofocal lens has a UV filter that allows transmission of <10% of light of wavelength 360 nm or lower which ensures protection of the eye from UV radiation.

Toric Hydrophobic Acrylic IOL offers combined advantage of Asphericity and Toricity. Biconvex Aspheric Optic with 360° posterior square edge. Anterior optic has additional power to offer cylindrical correction. Toric intraocular lens known to correct astigmatism, a condition in which eye does not focus light evenly on retina resulting into blurred vision. The curvature of the lens or cornea is noted to be irregular in case of astigmatism which is corrected by Toric IOL.

Optic Material: UV Absorbing Hydrophobic acrylic foldable material.

Optic design: Aspheric, Square edge, Monofocal

Configuration: Biconvex optic

Colour: Clear


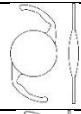

Diopter range: -10.00 to +40.0 diopters in 0.5 increments

Refractive Index: 1.56

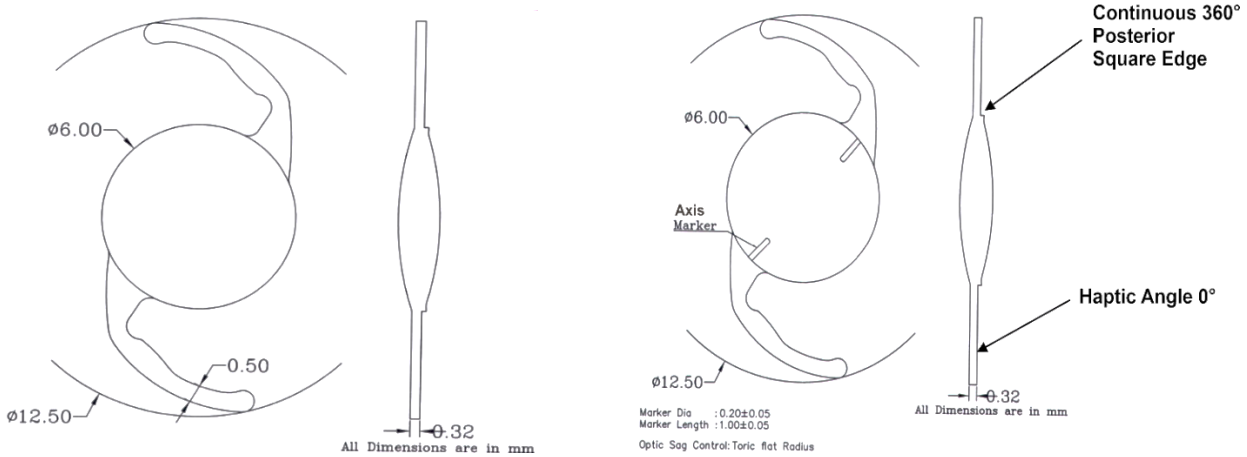
Estimated A-Constant*: 118.5 A/C depth :4.9

*Toric IOL Cylinder Power available:1.5 to 4.0

Product Technical Specification

Model	Optic Size (mm)	Overall Length (mm)	Position Hole	Optic Design	Placement	Haptic Design	Image
TV 6130 CV	6.00	13.00	0	Single Piece Equiconvex 360° Square Edge Aspheric Surface	Posterior Chamber	Modified "L"	
TV 6125 CV	6.00	12.50	0			Modified "L"	
TV 6125 CV - Toric	6.00	12.50	0			Modified "L"	

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Monofocal Clear & Toric Hydrophobic Lens

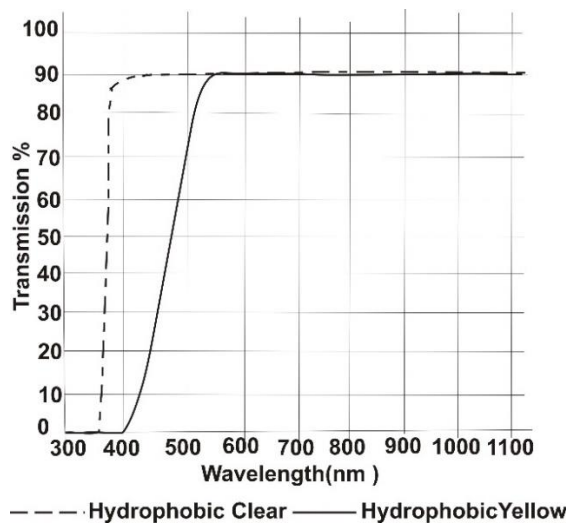


Figure 1: Transmittance graph of Hydrophobic Material

INDICATIONS

"TRUEVUE", Model is a UV absorbing Hydrophobic Acrylic Material Posterior Chamber Intraocular Lens. The intraocular lens is designed to be used for visual correction of aphakia for primary implantation for the visual correction of aphakia in adult patients where a cataractous lens has been removed by extracapsular extraction methods. It is intended for implanting in the Posterior chamber of the eye.

INTENDED USER:

Ophthalmic surgeons only.

INTENDED PURPOSE:

The Lens is intended to provide vision correction after the eyes natural lens is removed because of cataract surgery.

PATIENT TARGET GROUP:

Aphakic adult patients of age 18 years and above.

MODE OF ACTION:

When implanted in the posterior chamber of the eye, the IOL is intended to replace the natural crystalline lens and function as a refracting medium in the correction of aphakia.

CALCULATION OF LENS POWER

The power of the lens to be implanted should be determined preoperatively.

Prerequisites of successful visual outcomes of cataract surgery include accurate biometry. Pre-surgery calculation of required lens power should be determined using expertise by the surgeon as per the preference. An estimated theoretical A-Constant value is mentioned on the IOL packaging outer label. These reference A-Constants anticipate

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the use of other parameters such as corneal curvature and axial length values from respective biometry equipment, required for power calculation and a spectacle distance vision at 6 meters or 20 feet. IOL power calculation methods are often included with biometry equipment, and they are also described in the references mentioned below. It is recommended to personalize the lens A constants to compensate differences in instrumentation, surgical techniques, and IOL power calculation formulas that may exist between clinical practice.

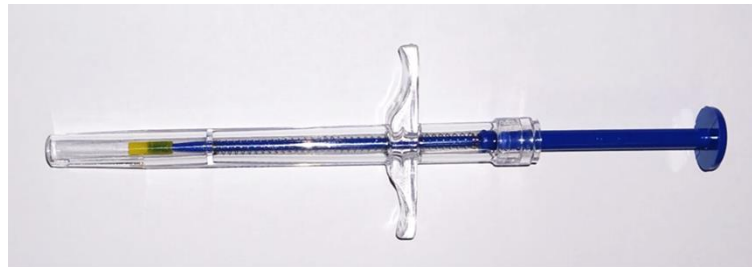
- Retzlaff, J.A., Sanders D.R., and Kraff, M.C., "Development of the SRK/T intraocular lens implant power calculation formula," Journal of Cataract and Refractive Surgery, Vol. pp. 222-240, 1990; ERRATA, Vol. 16 pp. 528, 1990.
- Hoffer KJ. The Hoffer Q formula: a comparison of theoretic and regression formulas. J. Cataract Refract Surg. 1993;19(6):700-12.
- Holladay JT. et al Standardizing constants for ultrasonic biometry, keratometry, and intraocular lens power calculations. J. Cataract Refract Surg. 1997;23(9):1356-70. Sanders, D.R., Retzlaff, J., and Kraff, M.C., "Comparison of the SRKII formula and other second-generation formulas," Journal of Cataract and Refractive Surgery Vol. 14, pp. 136- 141, 1988.

RECOMMENDATION FOR CHOOSING LENS DELIVERY SYSTEM:

The use of a lens delivery system is essential for the implantation of intraocular lens. It consists of cartridge, injector, and cushion.

"TRUEVUE" Hydrophobic IOL is supplied in Single/Regular pack,

Lens Delivery System also can be supplied in Single pack along with IOL depending upon Surgeon's requirement.



CONTRAINDICATIONS:

Patients with the following conditions are not suitable candidates for IOL operation. If doing so, it may pose unreasonable risk to the patient's eyesight.

- Prior intraocular surgery in the operative eye,
- Multiple surgical procedures,
- Acute infection or inflammation in the eye,
- Chronic use of steroids, or antineoplastic agents,
- Proliferative diabetic retinopathy
- Aniridia
- Significant corneal or external surface disease e.g. dry eye, keratoconus,
- Rubella, traumatic or congenital/ development of cataract,
- Corneal dystrophy especially endothelial dystrophy,
- Marked microphthalmous, marked microphthalmous.
- Chronic medically uncontrolled glaucoma,

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- Systemic disease with ocular manifestations (e.g. diabetes, complications of AIDS) which may contribute to postoperative confounding of data interpretation.
- Congenital bilateral cataracts,
- Patients with recurrent anterior or posterior segment inflammation or other forms of chronic angle closure glaucoma, and patients in whom IOL may interfere with the ability to observe diagnose or treat posterior segment disease.
- Patients with only one eye with potentially good vision

Certain surgical complications may occur which contraindicate the use of hydrogel lenses. They include.

- Posterior capsular rupture,
- Detached Descemet's membrane,
- Significant anterior chamber bleeding,
- Iris damage
- Vitreous loss
- Persistent bleeding
- Inability to clean the anterior chamber of vitreous.
- Uncontrollable positive pressure

WARNINGS, UNDESIRABLE SIDE EFFECTS AND RESIDUAL RISK:

- The complications listed below may occur following implantation of any IOL and may require treatment, or in severe cases can lead to secondary surgery for which the surgeon should carefully evaluate the risk/benefit ratio.
- Possible complications linked to surgery for crystalline lens removal and IOL implantation include, but are not limited to, those listed below. The risks of accidents and side effects are practically same as found during the extraction of cataract in particular: lens dislocation, non-pigment precipitates, corneal endothelial damage, high intraocular pressure, infection (endophthalmitis), corneal edema, pupillary membranes, flat anterior chamber, iris prolapse, hypopyon, and secondary glaucoma, Temporary Collapse of the anterior Chamber, Retinal detachment, Pupillary block, Iridocyclitis, Vitritis, Temporary Fistula, Cystoid macular edema, Formation of a posterior membrane, Hyphema, Vascular occlusion, Dystrophy of corneal endothelium, Striated Keratitis, Hernia of vitreous in anterior chamber, Subluxation or luxation of lens, Secondary reopacification, Evisceration or enucleation, Presence of Intra-ocular debris, Ophthalmitis, Malposition of the lens, Ablation of the lens.
- The effectiveness of UV-inhibiting intraocular lenses in reducing the incidence of retinal disorders has not been established.
- Special consideration should be given to the dimensions of lenses at the extreme ends of the power range in relation to the anatomical clearances in the patient's eye. The potential impact of factors such as optic central thickness, optic edge thickness and overall lens size on a patient's long-term clinical outcome must be carefully weighed against the potential benefit associated with the implantation of an intraocular lens. This is particularly true for anterior chamber lenses. The patient's clinical progress should be carefully monitored.
- Patient's regular follow-up is especially important after the implantation of the anterior chamber lens which includes the monitoring of the changes in the intraocular pressure and corneal endothelial cell count.

PRECAUTIONS:

- Do not attempt re-sterilize this lens,
- Do not store the lens in direct sunlight, keep away from freezing.
- Do not use the lens if the sterile packaging has been opened or damaged.
- Do not soak the lens in solutions other than balanced salt solution or equivalent.
- A high level of surgical skill is required for intraocular lens implantation. A surgeon should have observed or assisted in numerous surgical implantations and should have completed one or more courses on intraocular lens implantation before attempting to implant intraocular lenses.

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- Use injectors supplied only by Excel optics for implanting TrueVue lenses, which minimize surgical trauma and in turn immediate post-operative inflammations.

Note: Because the lens and the packaging materials are plastic, the lens may pick up an electrostatic charge upon opening the package. The lens should be carefully examined to ensure that particles have not been attracted to it.

Implantation of intraocular lenses should not be performed in patients under the age of 18.

DIRECTIONS FOR USE:

Preparatory Steps:

- Prior to implantation examine the lens of power, type, proper configuration and optical surfaces.
- During insertion handle lenses by haptic portion only.
- Carton box contains extra labels. These are for convenience in maintaining and reporting records of implantable lenses during clinical investigation. One the labels could be affixed in patients case sheet, for future reference.
- "Rinse the lenses in sterile B.S. Solution before implantation to minimize the static discharge which enhance the microbial contamination".

Implanting Steps:

- In a sterile environment, peel apart to open the pouch and remove the lens case.
- Unscrew the lens case with care and grasp the lens optics using smooth edged forceps and lift.
- Soak or rinse lens in sterile balanced salt solution or sterile normal saline solution.
- The lens, due to some static charge produced while opening the lens case, may stick to the cap in rare instances.
- Ensure that the lens is in good condition for optic and haptic surfaces for adherence of any particles.
- Do not attempt to re sterilize this lens.
- Do not autoclave this lens.
- Handle the lens carefully. Locking forceps or needle holders should never be used to pick up lenses.
- Follow the instructions given in "INJECTING TECHNIQUE "given at the end of this IFU to Implant the IOL.

CLINICAL BENEFITS:

- The clinical benefit of the implantation of an IOL for cataract patients is the prevention of blindness.
- Hydrophobic Lens provides functional far vision, improves patients' quality of life.

HOW SUPPLIED:

Each carton box contains one IOL, an implant card (instructions for completion of implant card is given below), one Sterile Disposable Injector, one sterile Disposable Cartridge and product traceability labels. Hydrophobic Foldable Intraocular Lenses are supplied in a lens case contained within a heat-sealed Tyvek pouch and terminally sterilized using Ethylene Oxide (EO). The contents of the pouch are sterile unless the package is opened or damaged.

The outer box should be opened in sterile condition only.

IMPLANT CARD

The implant card supplied with this device is to be completed by the healthcare provider. A product traceability label also supplied with this device must be affixed to the implant card after completion of the surgery. The additional labels can be used for the patient file or clinical follow up. Completed implant cards must be provided to the patient post-procedure. Patients should be instructed to keep the card as a permanent record of their implant. The patient should also be instructed to show the card to any eye practitioner he or she may see in the future.

WARNINGS:

- As with any surgical procedure, there is risk involved. Potential complications accompanying cataract or implant surgery may include, but are not limited to the following: Lens dislocation, nonpigmented percolate, corneal endothelial damage, high intraocular pressure, infection, iritis, corneal edema etc.
- The safety of intraocular lens implantation has not been substantiated in patients with pre-existing ocular conditions (chronic drug myosis, glaucoma, amblyopia, diabetic retinopathy, previous corneal transplant, history of retinal detachment or iritis etc.) Physician considering lens implantation in such patients should

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explore the use of alternative methods of aphakic correction and consider lens implantation only if alternative is deemed unsatisfactory to meet the needs of the patient.

- The long-term effect of intraocular lens implantation has not been determined. Therefore, physicians should continue to monitor the patient's post-operative on a regular basis.
- Patients with ocular pathology e.g. glaucoma or corneal diseases may not achieve the visual acuity of patients without such problems. The Intraocular pressure of implant patients with ocular pathology should be monitored post-operatively.
- Patients who experience operative complications should be carefully monitored for occurrence of these complications.
- The safety effectiveness of the lens. The IOL can be placed in posterior chamber.
- The need for secondary iridectomy for pupillary block may be prevented by one or more iridectomies at the time of intraocular implantation.
- The effectiveness of UV absorbing lenses in reducing the incidence of retinal disorder has not been established.
- Improper handling or folding techniques may cause damage to the haptic or optic portions of hydrophobic foldable lenses. If lenses are not folded according to directions, optic tears may result. Physicians should not attempt to implant to implant lenses that have radial optic tears.

REPORTING OF SERIOUS INCIDENTS:

Users should report the serious incident with medical device information to the manufacturer and/or to the national competent authority depending on the national practice. Once corrective (or other) action is identified from the manufacturer, hospital administrators, medical practitioners, and other health-care professionals, and USER representatives responsible for the maintenance and the safety of MEDICAL DEVICES, can take the necessary steps. Such steps should, where practicable, be taken in co-operation with the MANUFACTURER. For the purposes of Medical Devices Vigilance System in member states are represented by appointed National Competent Authorities, their vigilance contact points being listed on the European Commission web site:http://ec.europa.eu/growth/sectors/medicaldevices/contacts/index_en.html

SUMMARY OF SAFETY AND CLINICAL PERFORMANCE:

Summary of Safety and Clinical Performance (SSCP) of this device will be available on the EUDAMED website <https://ec.europa.eu/tools/eudamed> after notified body acceptance of SSCP.

CAUTION:

GOVERNMENT LAWS RESTRICTS THIS DEVICE TO SALE BY OR ON THE ORDER OF A PHYSICIAN.

DISPOSAL

Discarded IOLs (used or unused) are classified as medical (clinical) waste that harbours a potential infection or microbial hazard and must be disposed of accordingly.

STORAGE CONDITIONS:

Store between 0°C to 40°C temperature.

EXPIRATION DATE:

- The expiration date on the lens package is the sterility expiration date.
- Do not use the IOL after the expiration date.

LIMITATION OF WARRANTY AND LIABILITY
























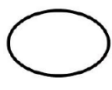

EXCEL OPTICS (P) LIMITED accepts no liability for any injury suffered to patients as a result of:

- Any implantation method or technique used by a physician to implant the lens.
- Any prescription, and use of the lens for any individual patient or patient's conditions.

Excel Optics (P) Limited, makes no expressed or implied warranties in connection with the sale of the IOL.

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Symbols and their explanations

	Authorized Representative in the European community		Intraocular Lenses
	Sterilized using Ethylene Oxide		Do not re-sterilize
	Storage Condition between 5°C to 40°C		Keep away from sunlight
	Manufacturer		Consult Instructions for Use
	Sterile Batch No		Keep Dry
	Unique device identifier		Medical Device
	Serial Number		Single sterile barrier system with protective packaging inside
	Model Number		Use By Date
	Do not Use If package is Damaged		Date of Manufacturer
	Country of Manufacture		Posterior Chamber
	Ultraviolet		Do Not re-use
	Caution		For Cartridge - Single sterile barrier system
	For Injector - Double sterile barrier system		

EC REP

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CE 1434

ISO 13485:2016

Certified Company

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Intraocular Lens INJECTING TECHNIQUE

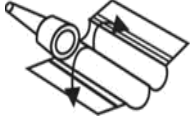


Fig.01

1. The Cartridge is to be opened 180° open position for most suitable position for loading the Lens.

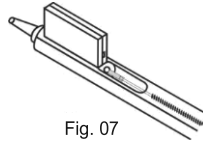


Fig. 07

7. Load the cartridge into the injector as shown in Fig .07 only if there is no gap between the shutters.

2. Apply a thin layer of Viscoelastic in the lens loading chamber and a very small amount in the barrel and hinge will serve as a lubricant for the free movement of lens during the injection process.

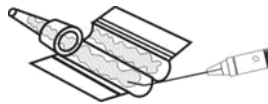


Fig.02

Recommendation: Do not push the plunger tip forcefully till the end of Cartridge - as shown in Fig.08.It may damage the cartridge and lens.

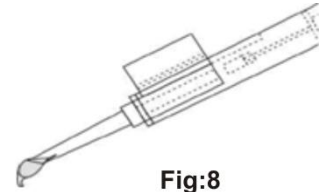


Fig:8

Note: Pushing the plunger tip till the end of cartridge tip is not necessary to deliver the lens. While pushing if you feel any resistance release the thumb and take the lens out. Immense the lens in BSS solution. Again, reload the lens as per step no. 3,4 &5

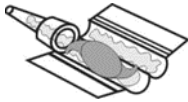
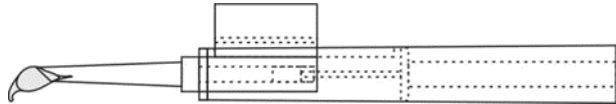


Fig.03

3. After the lens is well placed in the cartridge, ensure that it is correctly centered (PI. See Fig.03)



8. Gently push the lens and release the thumb, the same action can be repeated until the lens moves towards the cartridge tip end – as shown in Fig.09.

4. Applying a few drops of BS solution on the surface of the lens, as in Fig.04, will help to keep the lens in hydrated condition. As the lens is Hydrophobic in nature, this is helpful.

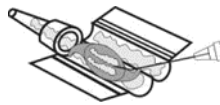


Fig.04

9.Gently release the thumb pressure given to plunger, when 80% of the lens is out.The Plunger will automatically come back, and at the same time the lens will pull itself out from the cartridge.If required, small push may be given to get the lens out fully.To avoid rotating of Lens while it is coming from the cartridge the lens has to be properly loaded in center of cartridge and near by barrel area.

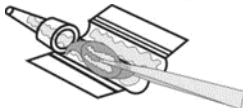
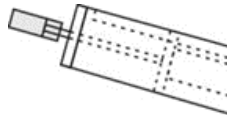


Fig.05

5. Using Flat Forceps gently press the center of the lens and at the same time closes the cartridge without pinching the loop or the sides of the optic.



Applicable for soft disposable injectors only

Disposable tip has a soft silicone sleeve attached to one end of the plunger tip.

Hold the silicone covered end and insert the other end into the tip of the plunger and straighten it tightly.

6. Make sure neither the haptic nor the optics is caught in between the shutters (if it happens some gap will be observed between the shutters after closing the cartridge) as shown in Fig.06.If the gap is observed, repeat step no. 3,4 & 5.

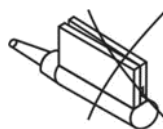


Fig.06

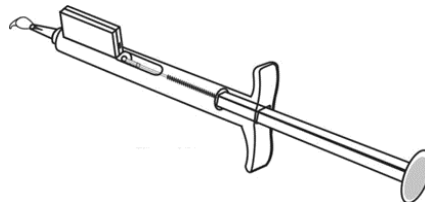


Fig.10