Freedom
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ISO 13485:2016 Certified

Premium IOLs

- TRIFOCAL HYDROPHOBIC IOL
- TORIC & TORIC MULTIFOCAL HYDROPHOBIC IOLs
- MULTIFOCAL HYDROPHILIC & HYDROPHOBIC IOLs
- 3-PIECE HYDROPHOBIC IOL



WHY HIDE BEHIND THE GLASSES WHEN YOU CAN SEE WITHOUT

Freedom TRIFLEX

Why choose the Freedom TRIFLEX IOL?

The advanced Trifocal Hydrophobic Intraocular Lens of Freedom is designed to provide CLEAR VISION for NEAR, INTERMEDIATE and FAR distance. Now our patients can enjoy an independent active life style, free of spectacles or other visual aids.

FREEDOM TRIFLEX IOL is designed to give patients the ability to see clear at all distances:



NEAR VISION



INTERMEDIATE VISION



FAR VISION



Unique manufacturing process

Enhanced Optical design of Freedom hydrophobic material with low refractive index over hydrophilic material ; with round edge zones provides better results against photopic conditions by reducing internal reflection and glares. 360° square edge with thicker haptic design provides dual barrier technology against lower risk of PCO formation with excellent rotational stability. The aspheric design technology allows for a negative spherical aberration of -0.15µm to offset the positive sphericity of human cornea for improved contrast sensitivity.

freedom TRIFLEX

Features:

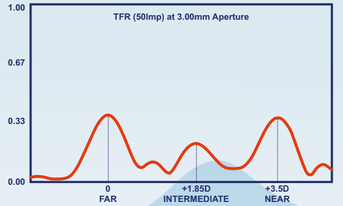
- The central zone is of 4.50 mm diameter, has 16 diffractive zones. The remaining 1.50mm portion of the lens has the refractive zone.
- Addition +1.85D (Intermediate) & 3.50D (Near)
- Diopter Range from +5.00 D to +30.0 D with 0.50 D step
- UV Filter & Blue Light Filter

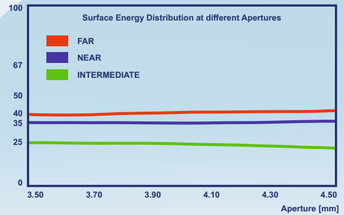


freedom TRIFLEX

- **Maximum Light Transmission under any Light Conditions**
- **Increased Bio-mechanical Stability**
- **Excellent Far, Intermediate & Near Vision RNI - Distribution for Far, Intermediate & Near 40/25/35**
- **Free of Glistening & Whitening**

Model	TRPC602SQ	TRPC602SQY
Optic Design	Single Piece, Diffractive-Refractive, Trifocal, 360° Square Edge with Aspheric Optic	
Material	Hydrophobic Acrylic	Yellow Hydrophobic Acrylic
Addition	Near addition : +3.50 D / Intermediate addition : +1.85 D	
Optic Size	6.00 mm	
Over All length	13.00 mm	
Haptic Angle	0°, Modified C	
Estimated A-Constant	A Constant : 118.4	
Recommended Optical A-Constant	A Constant SRK/T : 119.20 | A Constant SRK/II : 119.50 Hoffer Q : 5.65 | Holladay 1 : 1.87 | Haigis : a0=1.441/a1=0.400/a2=0.100	
Refractive Index	1.49	
Sterilization	EO	
Incision	2.20 - Available in Preloaded system also	







A PERFECT BULLS EYE!

TORIC & TORIC
Multifocal Hydrophobic IOL

Freedom TORIC

Treat Astigmatism

Astigmatism is very common before and after cataract surgery. Almost 40% of people who are candidates for cataract surgery have at least 1.00 diopter (D) of astigmatism, which is enough to cause noticeably blurred vision without eyeglasses or visual aids.



NORMAL VISION



ASTIGMATIC EYE



ASTIGMATIC VISION



WITH FREEDOM TORIC IOL

The correction of ASTIGMATISM OF THE CORNEA is possible by the insertion of a TORIC IMPLANT that generates an astigmatism in opposite direction of the corneal one. It allows to neutralize the entire eye astigmatism. The toric implant compensates astigmatism induced by corneal.

TORIC & TORIC Multifocal Hydrophobic IOL



Why choose the Freedom TORIC and MULTIFOCAL TORIC IOLs?

The premium design of our TORIC Hydrophobic Lenses provides distance vision for ASTIGMATIC CATARACT PATIENTS who desire spectacle independency with Cylindricity & Markers in the anterior side.

Our TORIC MULTIFOCAL Hydrophobic Lenses provides both NEAR and FAR vision with Diffractive-Refractive Element of a MULTIFOCAL lens in the anterior side and CYLINDER technology of a TORIC lens in the Posterior side.

Freedom provides large DIOPTER range of astigmatism correction IOLs with custom made PRECISION. Spherical power is from 10.00D to 30.00D and cylinder power range is upto 6.0 D with 0.75 diopter increments.

Following cylinder options are available to suit the requirement of any patients

IOL Cylinder Power	Recommended Corneal Astigmatism Correction Ranges
1.50D	0.75 - 1.50D
2.25D	1.50 - 2.00D
3.00D	2.00 - 2.50D
3.75D (monofocal only)	2.50 - 3.00D
4.50D (monofocal only)	3.00 - 3.50D
5.25D (monofocal only)	3.50 - 4.00D
6.00D (monofocal only)	4.00D and UP

Toric Success Parameters

Patient with regular pre-operative astigmatism with an intact capsular bag, and no pre-existing ocularpathology who desire spectacle independency are good candidates for Toric surgery. Patient with keratoconus, or irregular astigmatism are recommended against Toric lenses.

Toric IOL Power calculation

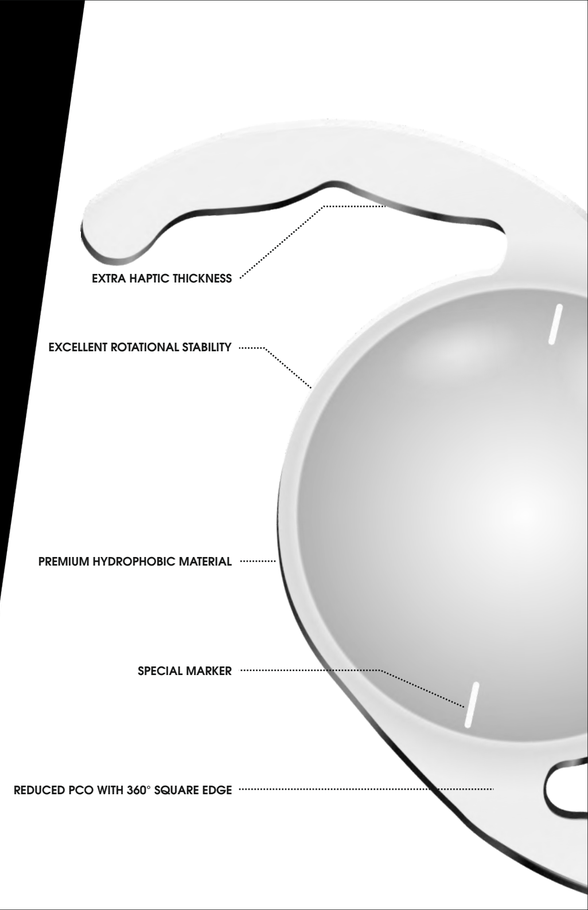
- SPHERICAL POWER – Is determined by using the preferred method such as optical biometry for conventional IOLs using personalized A-constant.
- CYLINDRICAL POWER - Steep K & Flat K values are determined through Keratometry and corneal topography for corneal measurements
- With Freedom Toric Calculator determine the appropriate Toric IOL model, power, & axis of placement using default SIA measurements: 0.50 D if your incision is 2.50 mm or smaller.

Preoperative Marking: Reference marks are made at 3, 6 and 9'o clock in upright position to limit cyclotorsional effect using marking tools such as level/bubble marker or free-hand marker.

Intraoperative Marking: Calculated steep axis is marked using fixation rings as Mendez at two positions (180° apart) with the guide of reference axis in supine position for alignment of Toric IOL.

Primary/GROSS IOL Alignment: After a standard cataract implantation in the capsular bag, manipulate the IOL into place within15 to 20 degrees short of the intended axis. Remove all the residual viscoelastics gently with care.

Final IOL alignment: Rotate clockwise to align with intended axis on the cornea.





Model	TPC602SQ	TPC602SQY	MTPC602SQ	MTPC602SQY
Optic Design	Single Piece, TORIC, 360° Square Edge with Aspheric Optic		Single Piece, TORIC, Diffractive-Refractive, 360° Square Edge with Aspheric Optic	
Material	Hydrophobic Acrylic	Yellow Hydrophobic Acrylic	Hydrophobic Acrylic	Yellow Hydrophobic Acrylic
Near Addition	N/A		+1.85 / +3.50 D	
Optic Size	6.00 mm			
Over All length	13.00 mm			
Haptic Angle	0°, Modified C			
A-Constant	A Constant : 118.4			
IOL Master	A Constant SRK/T : 119.20 | A Constant SRK/II : 119.50 Hoffer Q : 5.65 | Holladay 1 : 1.87 | Haigis : a_0=1.441/a_1=0.400/a_2=0.100			
Sterilization	EO			
Incision	2.20 - Available in Preloaded system also			

FREEDOM TORIC CALCULATOR:

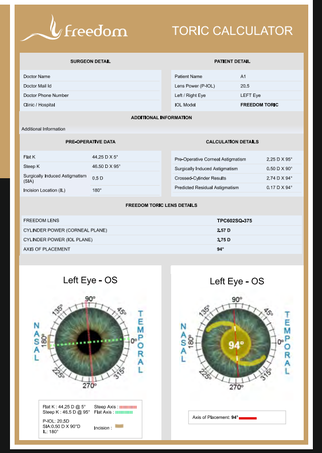
An User friendly Freedom Toric Calculator is developed to assist you in easily planning your toric surgery by providing accurate Freedom Toric IOL model recommendation, cylinder power, & intended axis of IOL placement in the capsular bag

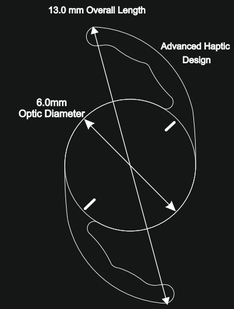
New Users can register to create an ID, and activate the login details sent to the registered mail id to start using the calculator

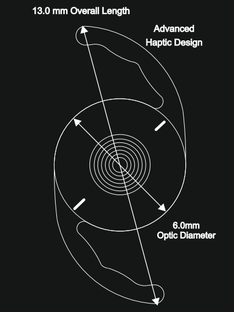
Which lens to use?
Go to FREEDOMTORICCALCULATOR.COM
and get your full report!

REQUIRED DATA FOR FREEDOM TORIC CALCULATOR

- PATIENT'S NAME
- LEFT / RIGHT EYE Selection
- SPHERICAL LENS POWER from 6.0 D to 30.0 D
- APPROPRIATE IOL MODEL
- FLAT K & FLAT AXIS
- STEEP K
- SURGICALLY INDUCED ASTIGMATISM
- INCISION LOCATION









SEE EVERYTHING ELSE EXCEPT HALOS & GLARES

FREEDOM MULTIFOCAL

Freedom to choose from 2 different multifocal IOLs

Freedom Opthalmic proposes 2 different models of Multifocal IOLs in Hydrophilic and Hydrophobic material with two different technologies to meet the needs of every patient.

Why every Multifocal IOL is not equal?

The principle of Multifocal IOLs is to split light energy to achieve sharpness for distance and near vision. The number of rings, their height, and the interval between the diffractive zones play an important role in the light distribution (RNI). Depending on the amount of energy chosen between two foci, the patient can have a high contrast or low contrast image.

Freedom Multifocal's advanced design with diffractive zones on the anterior surface and posterior aspheric surface with 360° square edge provides excellent visual performance under all light conditions.

Higher Visual comfort and Pupil Independency

Pupil dynamics decreases with age. Multifocal IOLs dependant on pupil has poor contrast sensitivity.

Freedom Multifocal Hydrophilic IOLs with smart apodization technology allows for balanced light distribution of 60% for distance vision and 40% at 5.5mm pupil aperture

Freedom Multifocal Hydrophobic unique diffractive technology provides balanced RNI of 60% for distance vison and 40% for near vision at 3.5mm pupil aperture



With CATARACT



With MONOFOCAL LENS



With FREEDOM MULTIFOCAL LENS



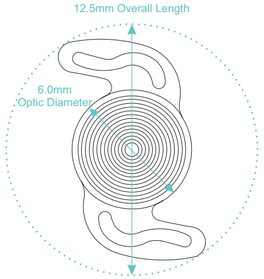
Features:

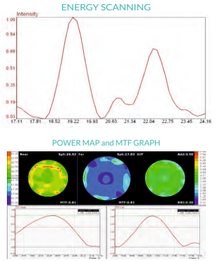
Freedom Multifocal Hydrophilic

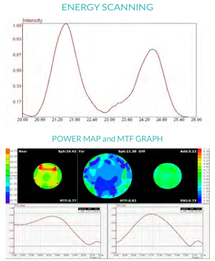
- Contaflex 26% UV 1% Hydrophilic Acrylic with refractive index 1.46 and 360° square edge
- Diffractive - Refractive Apodized Design for better RNI distribution
- 26 Diffractive zones upto 5.5mm optic diameter
- Near Addition +3.50D ; customized near addition available on demand
- Diopter Range from +5.00D to +35.00D (0.5D increments)

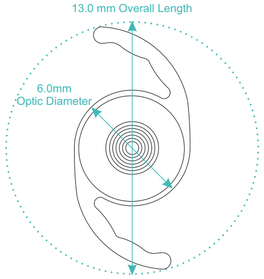
Freedom Multifocal Hydrophobic

- Hydrophobic material
- The central zone of 3.25mm diameter has 9 diffractive zones and the remaining 2.75mm portion of lens is made of refractive zone
- Near addition of +3.0D ; customized near addition available on demand
- Diopter Range from +5.00D to +30.0D (0.5D increments)









Model	MFR603SQ	MFR603SQY	MPC602 SQ	MPC602 SQY
Optic Design	Single Piece, Diffractive-Refractive, 360° Square Edge with Aspheric Optic		Single Piece, Diffractive-Refractive, 360° Square Edge with Aspheric Optic	
Material	Hydrophilic Acrylic	Yellow Hydrophilic Acrylic	Hydrophobic Acrylic	Yellow Hydrophobic Acrylic
Near Addition	+3.50 D (For special order near addition +2.5D - 4.0D)		+3.00 D (For special order near addition +2.5D - 4.0D)	
Optic Size	6.00 mm		6.00 mm	
Over All length	12.50 mm		13.00 mm	
Haptic Angle	0°, Dual Haptic		0°, Modified C	
Estimated A-Constant	A Constant : 118.0		A Constant : 118.4	
Recommended Optical A-Constant	A Constant SRK/T : 118.40 | A Constant SRK/II : 118.70 Hoffer Q : 5.14 | Holladay 1 : 1.35 | Haigis : a_0=0.912/a_1=0.400/a_2=0.100		A Constant SRK/T : 119.20 | A Constant SRK/II : 119.50 Hoffer Q : 5.65 | Holladay 1 : 1.87 | Haigis : a_0=1.441/a_1=0.400/a_2=0.100	
Sterilization	Steam		EO	
Incision	2.20 mm		2.20 - Available in Preloaded system also	



HARDER BETTER STRONGER

The 3-Piece Hydrophobic IOL

Sulco, 3-piece hydrophobic IOL (3HPC360) with PVDF haptics is the newest addition to the family of Freedom Premium IOLs, making Freedom the first Indian manufacturer to do so and compete with the world leaders in IOL market.

The Optics & All about the Haptics

Freedom Sulco is a UV light-absorbing posterior chamber hydrophobic acrylic lens, designed to be implanted in the capsular bag following extra capsular cataract extraction. The optic is biconvex design with 6mm Aspheric design, as well as, spherical optics with 360° Square Edge to reduce PCO, and 13mm or 14mm overall size.

Polyvinylidene fluoride monofilament haptics, PVDF have better shape recovery and loop memory compared to other haptic materials. Very malleable and resistant, PVDF haptics are designed for better capsular bag stability and to eliminate capsular bag stretching. PVDF haptics create a better flange than PMMA haptics, and can prevent conjuctival erosion during intra scleral haptic fixation.

Cap C haptics design with 5° angulation are best suited to the capsular bag for long term optimal centration, refractive stability and minimal zonular stress



Reusable Titanium Injector

Freedom Sulco Jet with 2.6mm cartridge size

freedom SULCO

DESIGN FEATURES

3HPC360 is primarily intended for implantation in the capsular bag of the eye for the visual correction of aphakia in patients where a cataractous lens has been removed by phacoemulsification. It can also be implanted in the ciliary sulcus, in case of phaco emulsification complicated by posterior capsular rupture.

Sulco, 3-piece IOL is recommended and preferred for glued intrascleral haptic fixation over a one-piece IOL, cause of difficulty incurred in externalizing their haptics. A foldable 3-piece IOL can be easily employed in the glued IOL technique.

HANDLING Instructions

Freedom SULCO can be delivered through an incision as small as 2.6 mm with FREEDOM SULCO JET implantation system. Freedom recommends using equivalent appropriate equalified insertion instrument or system to insert FREEDOM SULCO 3-PIECE. For further information and video, please contact your local distributor



Model	3HPC630	3HPC640
Optic Design	Biconvex - 360° Square Edge with Aspheric Optic	
Material	Hydrophobic Acrylic	
Optic Size	6.00 mm	
Over All length	13.00 mm	14.00 mm
Haptic Angle	5°	
Estimated A-Constant	A Constant : 118.0	
Recommended Optical A-Constant	A Constant SRK/T : 118.40 | A Constant SRK/II : 118.70 Hoffer Q : 5.14 | Holladay 1 : 1.35 | Haigis : a_0=0.912/a_1=0.400/a_2=0.100	
Diopter Range	6.00 D to 30.00 D (0.5 Diopter increments)	
Cartridge Size	2.60 mm	
Sterilization	Ethylene Oxide	

Original IOL Power	Adjustment to IOL Power for Sulcus Placement
0.0 to 8.5	None
9.0 to 17.5	-0.5D
18.0 to 26.5	-1.0D
27.0 and higher	-1.5D

