

UNITY 4D

CATARACT SURGERY

LATEST LAUNCH IN 2026



Mehta International Eye Institute

Managed by
KRM Eye Institute Pvt. Ltd.

Padmashree
Awardee

Prof. Dr. Keiki R. Mehta

M.B.B.S., D.O.M.S., M.S. (Ophth), D.O. (Ireland),
R.C.P. & S (Ireland), D.O. (London), R.C.P. (London),
R.C.S. (England), F.A.I.C.O, F.N.E.R.F. (USA),
F.R.S.H. (London), F.I.C.O.R, F.I.O.S (USA)

Consultant Ophthalmic Surgeon
Medical Director & Chief
Mehta International Eye Institute
Breach Candy Hospital & Research Centre
D. Y. Patil Medical College and Hospital

UNITY®

4.Dimensional Cataract Surgery

Introducing the
Next Generation
of Cataract Surgery



What is UNITY® 4D Cataract Technology ?

- UNITY® 4D cataract technology creates a true 360-degree, multi-directional motion that actively draws lens fragments toward the tip for more efficient removal.
- This advanced motion allows surgeons to remove the cataract up to twice as fast while using significantly less ultrasound energy and maintaining better control of lens fragments for enhanced safety.
- The technology sets the stage for a more efficient procedure and faster recovery.



Advantages of Using UNITY® 4D Cataract Technology?

Preoperative



Postoperative



Before



After



1. Minimal Energy used in the eye Protects the Cornea

- The transparency of the front surface of the eyes, the cornea, is due to a single layer of irreplaceable cells on its inner surface called endothelial cells. Once damaged or lost, they do not grow back.
- By removing the cataract up to twice as fast with a 41% reduction in energy, it reduces ultrasound energy in the eye translating directly to better protection for your endothelial cells.
- For patients, this means
 1. Less corneal swelling and inflammation after surgery.
 2. A lower risk of long-term corneal clarity issues, and a faster.
 3. More comfortable return to crisp, clear vision.

Advantages of Using UNITY® 4D Cataract Technology?

2. Artificial Intelligent (A.I.) Fluidics System Maintain Natural Eye Pressure

- UNITY® Intelligent Fluidics System automatically , in microseconds controls flow enhancing stability throughout your procedure.
- The UNITY® continuously monitors eye pressure using sensors positioned at the tip of the handpiece.
- This enhanced safety, particularly during complex cases, hard brown cataracts, or for patients with pre-existing eye conditions.



Advantages of Using UNITY® 4D Cataract Technology?



3. Intelligent Sentry Increases Protection for Eyes

- During cataract surgery, the aspiration line can temporarily become blocked by a hard lens fragment. When this fragment suddenly breaks free, the rapid pressure drop can trigger a fluid surge that destabilizes the eye and may lead to anterior chamber collapse.
- UNITY® features Intelligent Sentry technology, an advanced surge protection system that detects occlusion breaks instantly using high-speed sensors positioned close to the eye immediately equalize pressure and minimize surge, negating any risk to the eye.
- For patient outcome, this stability means
 1. Reduced risk of tissue trauma to the cornea, iris, and lens capsule
 2. Enhanced surgical precision as a surgeon operates with greater confidence.
 3. For patients with weak zonules, shallow chambers, or other anatomical challenges

Advantages of Using UNITY® 4D Cataract Technology?

4. Thermal Sentry offers Real-Time Heat Protection

- During UNITY® 4D cataract surgery, the ultrasound energy used to break up the lens naturally generates heat. If this heat builds up at the incision site, it can damage corneal tissue, leading to thermal burns, prolonged healing or in rare cases, permanent corneal scarring.
- The system Thermal Sentry technology continuously estimates incision temperature using advanced sensing technology and automatically adjusts ultrasound power if heat begins to rise, preventing thermal buildup before it can cause damage.
- **For the patient it means:**
 1. Reduces post-operative swelling and discomfort,
 2. Enables faster visual recovery as tissues heal more quickly,
 3. Provides particularly valuable protection for patients with dense cataracts or pre-existing corneal compromise

UNITY® 4D Phaco HP delivers 2x faster nucleus removal than OZil® with ~41% less energy^{*,†,§§}



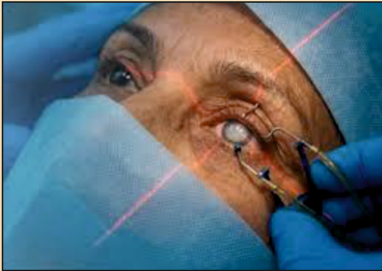
4D Phaco
Breakthrough volumetric ultrasound motion



Thermal Sentry
Real-time temperature sensing and power modulation



Who Benefits Most from UNITY® 4D Cataract Surgery?



1. **Patients with Dense or Hard Cataracts**

Not all cataracts are the same. Dense, advanced cataracts require more energy and effort to remove. The 360-degree multi-directional motion of UNITY® 4D excels at breaking down even the toughest cataracts efficiently, reducing surgical time and minimizing stress on the eye when it matters most.

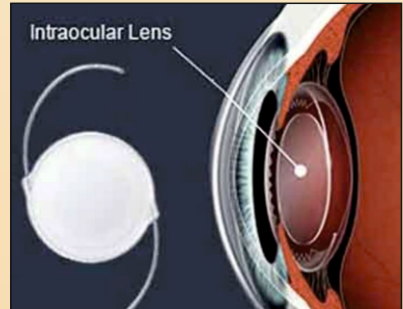
2. **Elderly Patients**

With age, eyes become more fragile, and corneal endothelial cells naturally decline in number. For older adults, protecting these irreplaceable cells is essential. The gentler energy delivery and real-time pressure control of UNITY® 4D provide an extra layer of protection for aging eyes.

Who Benefits Most from UNITY® 4D Cataract Surgery ?

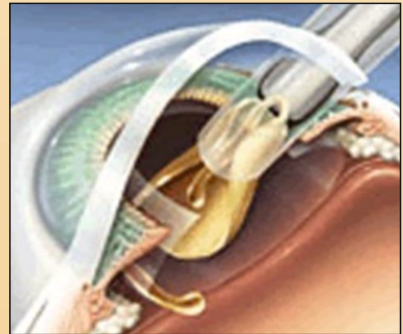
3. **Patients Opting for Premium Intraocular Lenses (IOLs)**

If you are choosing a premium lens, such as a multifocal, extended depth of focus, or toric lens, you are investing in exceptional visual outcomes. These advanced lenses perform best in an eye that has experienced minimal trauma and inflammation. The stability, precision, and corneal protection offered by UNITY® 4D help ensure your premium lens delivers the clarity you expect.



4. **Individuals Seeking Faster Recovery and High-Quality Visual Outcomes**

It's ideal if you lead an active life, have a demanding career, or simply do not want to wait weeks for your vision to stabilize. UNITY® 4D utilizes true micro-incisions of just 1.6-2.2 mm, among the smallest used in cataract surgery today. The smaller incisions, reduced inflammation, and faster healing associated with UNITY® 4D mean you can return to your routine sooner, with clearer vision in a matter of days, not weeks.



Mehta International Eye Institute

Managed by **KRM Eye Institute Pvt. Ltd.**

Knowing Prof. Dr. Keiki R. Mehta



M.B.B.S., D.O.M.S., M.S. (Ophth), D.O. (Ireland),
R.C.P. & S (Ireland), D.O. (London), R.C.P. (London),
R.C.S. (England), F.A.I.C.O, F.N.E.R.F. (USA),
F.R.S.H. (London), F.I.C.O.R, F.I.O.S (USA)

Consultant Ophthalmic Surgeon

Medical Director & Chief

Awarded **PADMASHREE** by the

President of India in 2008

for Exemplary Surgical Skills and his
outstanding Achievements and Research
in Ophthalmology

◆ Prof. Dr. Keiki R. Mehta is India's foremost Consultant Ophthalmic Surgeon, and is The Surgical Chief & Medical Director of The Mehta International Eye Institute, Colaba, Mumbai, considered to be Asia's most advanced and foremost Ophthalmic Institute, and specializes in Cataract, LASIK, Glaucoma, Squint, Lazy Eyes, Keratoconus, Retinal surgeries and treatment. An outstanding researcher and clinician, he has extensive experience of Excimer Laser, PRK and LASIK techniques which he has done on over 11000 patients over the last 15 years.

- ◆ Received the "ASCRS Honored Guest Award", the highest recognition award by the American Society of Cataract and Refractive Surgeons, (ASCRS), the world's largest ophthalmic society, at the ASCRS Annual Symposium held in Boston, USA this April, 2014 by the President of the Society, Prof. Dr. Eric Donnenfield.
- ◆ Awarded the Antonio SCARPA Medal and Oration of the Italian Ophthalmic Society, which is the highest honor given by the Italian Ophthalmic Society for outstanding Work, Research, Outstanding Surgical Skills in Ophthalmology by the President of the Society, Prof. Matteo Piovella in Milan, Italy, May 2014.
- ◆ He has been honored by the Swiss Eye Research Foundation, by the President of the Swiss Ophthalmic Society, Prof. Bojan Pajic at the recently concluded Congress EyeAdvance Focus conference, June 2014.
- ◆ He is the only Indian to be elected a Member of the Legion d' Honor of the Instituto Barraquer, Barcelona, Spain
- ◆ Prof. Dr. Keiki Mehta is the only distinguished Indian Ophthalmic surgeon to be ever invited to Operate Live at Video Cataracta in Milan, Italy, where only the best of the best are invited, at Europe's biggest Live Surgery Conference
- ◆ Prof. Dr. Keiki R. Mehta is considered India's foremost Ophthalmic surgeon, and has conducted Live Surgical workshops in every major city in India, and has trained thousands of doctors in Intraocular implant surgery and Phacoemulsification and Laser refractive surgery including Lasik.

Mehta International Eye Institute

Managed by **KRM Eye Institute Pvt. Ltd.**

Knowing Prof. Dr. Keiki R. Mehta



Prof. Dr. Keiki R. Mehta
receives the Grand Honors award from the
ASCRS in Boston at the hands of the
President Prof. Eric Donnenfield



Prof. Dr. Keiki R. Mehta
receives Leading International
Ophthalmological Award from
Swiss Eye Research Foundation Award



Prof. Dr. Keiki R. Mehta
presented the Prestigious
Antonio Scarpa Medal in Italy.

- ▶ The American Implant Society awarded him its Appreciation Award, at San Francisco for pioneering Soft Intraocular implants for the first time in the world.
- ▶ He has received Grand Honors Award from the National Eye Research Foundation, Chicago, USA, the only Indian to be ever awarded.
- ▶ Presented the prestigious Lim International Award from the Asia Pacific Intraocular Implant Association for outstanding work in Ophthalmology in the Asia Pacific Region, the only Indian to be presented this award.
- ▶ Awarded the Triple Ribbon Award of the American Society for Cataract and Refractive Surgery, USA, for Outstanding Research presentations in Ophthalmology.
- ▶ Presented the Outstanding Recognition Award by International Council of Cataract Surgeons for Outstanding Research & Development in Cataract Surgery, award presented at Barcelona, Spain. Presented advanced research papers on Lasik Internationally and won the Outstanding Presentation Award at San Diego, USA.
- ▶ He is the winner of 11 Gold Medals in India, having received virtually all the Honors possible, has been the President of the All India Ophthalmologists Association and President of the Intraocular Implant and Refractive Society among many others.
- ▶ Chairman and Organizing Secretary of the very successful EyeAdvance Congresses for the last 26 years 1996–2023 These have now reached an iconic status and are recognized worldwide.

Notes



A series of horizontal dashed lines for writing notes, spanning the width of the page.



Padmashree

Awardee

Prof. Dr. Keiki R. Mehta

M.B.B.S., D.O.M.S., M.S. (Ophth), D.O. (Ireland),
R.C.P. & S (Ireland), D.O. (London), R.C.P. (London),
R.C.S. (England), F.A.I.C.O, F.N.E.R.F. (USA),
F.R.S.H. (London), F.I.C.O.R, F.I.O.S (USA)

**Consultant Ophthalmic Surgeon
Medical Director & Chief**

Mehta International Eye Institute

Breach Candy Hospital & Research Centre

D. Y. Patil Medical College and Hospital



Mehta International Eye Institute

Managed by

KRM Eye Institute Pvt. Ltd.

Sea Side Building, 147, Shahid Bhagat Singh Road,
Just ahead of Sassoon Dock, Opp Woman's Graduate,
Union Hostel, Colaba, Mumbai 400005, India



+91-22-22151303 | 22151676



+91-9372631041 | 9321731041 | 9137211660



+91-9820021041



admin@mehtaeyeinstitute.com



**www.mehtaeyeinstitute.com
www.mehtaeye.com**



Scan for website



Scan for Location

