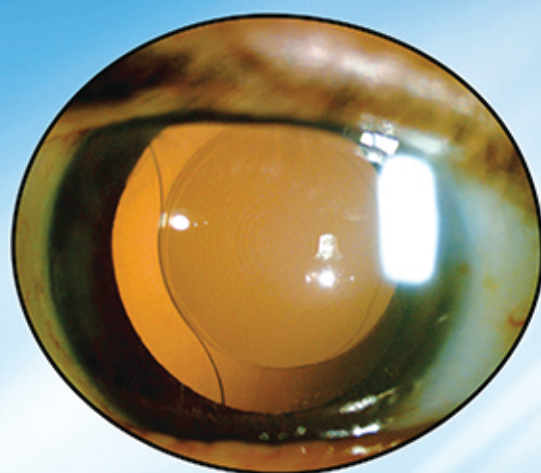


# CATAPULSE®

THE FUTURE OF LENS REMOVAL  
WITHOUT MECHANICAL ULTRASOUND



ACTUAL PATIENT  
3 HOURS POST-OP

# BENEFITS OF THE CATA PULSE®

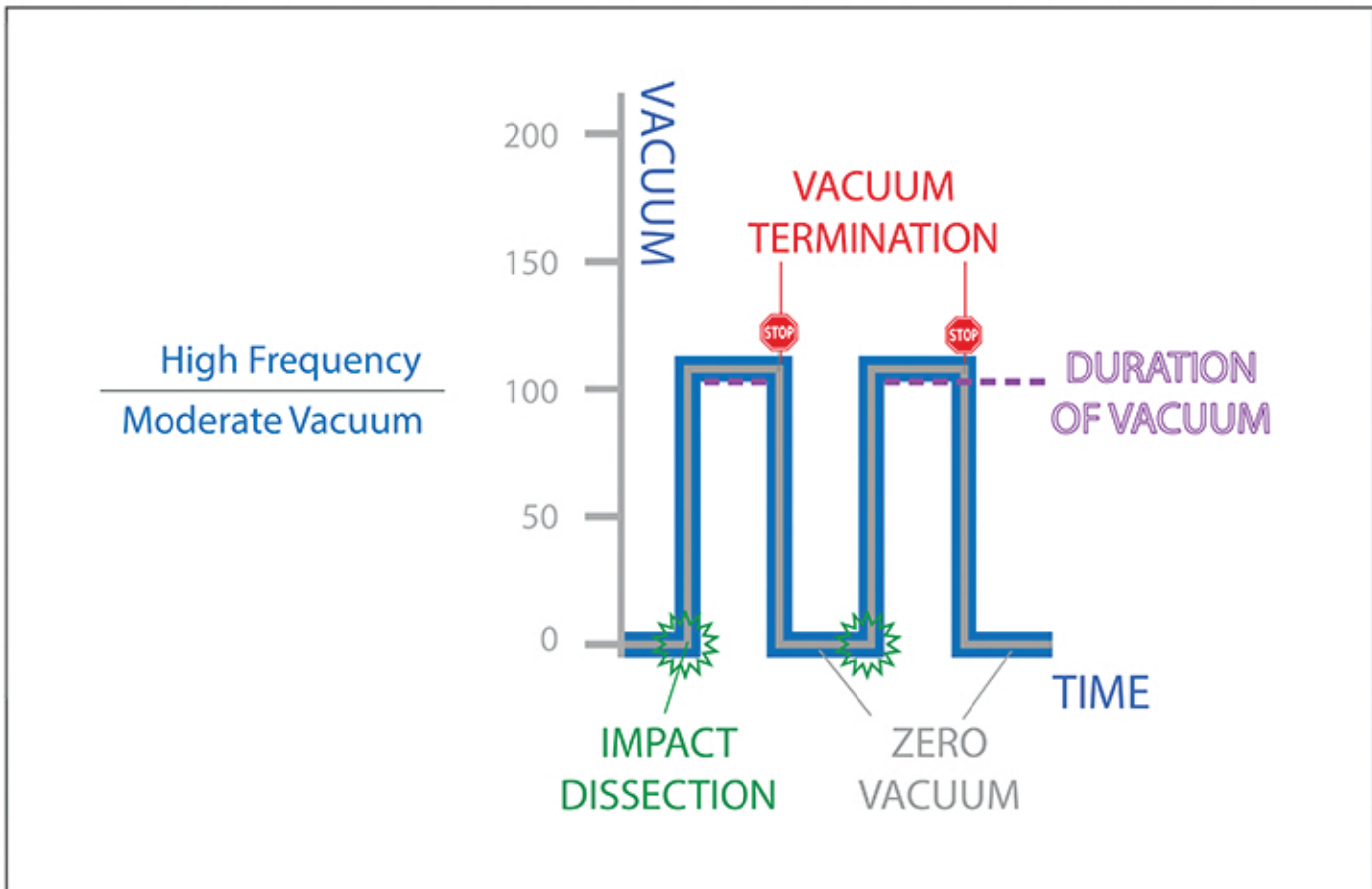
Many of the world's leading cataract surgeons have recognized the patient benefits of avoiding phacoemulsification energy in the eye. Below are some of the ways the CataPulse® addresses the issues caused by phacoemulsification.

- **Rapid Visual Recovery (RVR) through the elimination of phaco edema.**
- **Low flow and greatly reduced turbulence in the eye saves endothelial cells.**
- **Small bi-manual incision (1.4mm).**
- **Elimination of free radicals caused by ultrasound cavitation.**
- **Venturi type vacuum without Nitrogen tank.**
- **Active Cassette Design provides responsive vacuum.**
- **Same single-use handpiece performs both lens and cortical removal.**
- **Fast setup of the preassembled single-use components reducing complications related to assembly.**
- **Plastic or metal cannulas.**
- **Occlusion Based Technique (OBT) helps provide a stable anterior chamber.**



# PHACO-FREE TECHNOLOGY

## PATENTED VACUUM PULSE TECHNOLOGY

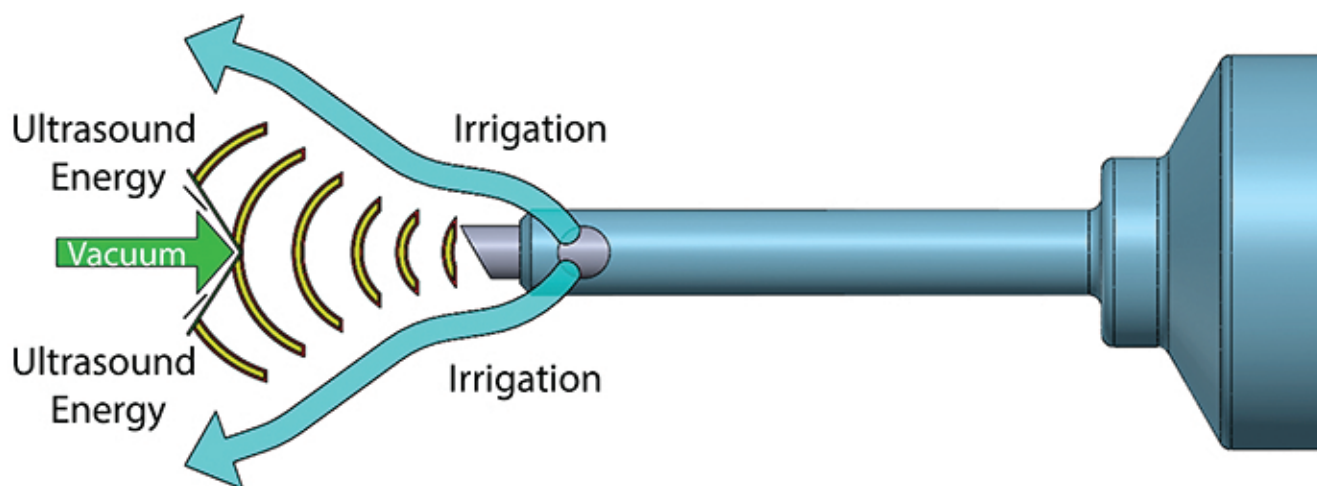


- By using no mechanical ultrasonic energy, the surgeon is able to use a single energy source (Vacuum) and gently dissect the lens and remove the material efficiently through a small incision.
- The above diagram, explains the pulse frequency, duration of pulse, and how it relates to the level of vacuum. All three variables are adjustable. The surgeon can also establish the vacuum level at which the pulse is activated.

Residual vacuum or uncontrolled vacuum surge has been addressed with the patented pulsing function located in the Lens Removal Handpiece. When the pulse is deactivated, there is zero vacuum within the eye. Rapidly opening the valve with awaiting vacuum provides controllable inward energy to dissect the lens material.

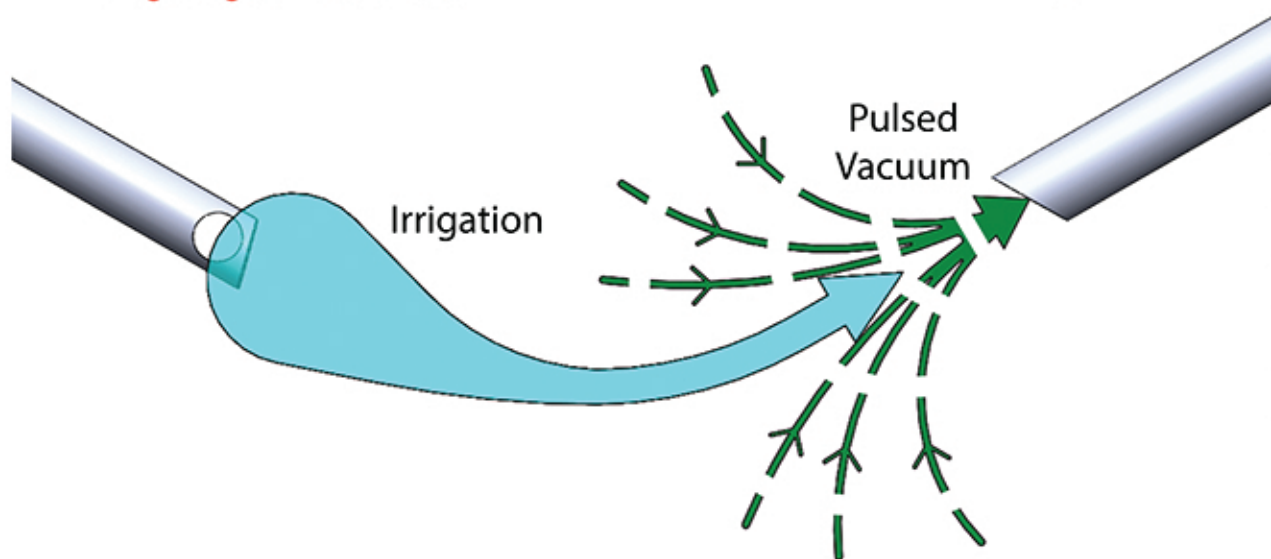
# COMPARISON OF FLUID DYNAMICS

## PHACO COAXIAL ENERGY CONFLICT



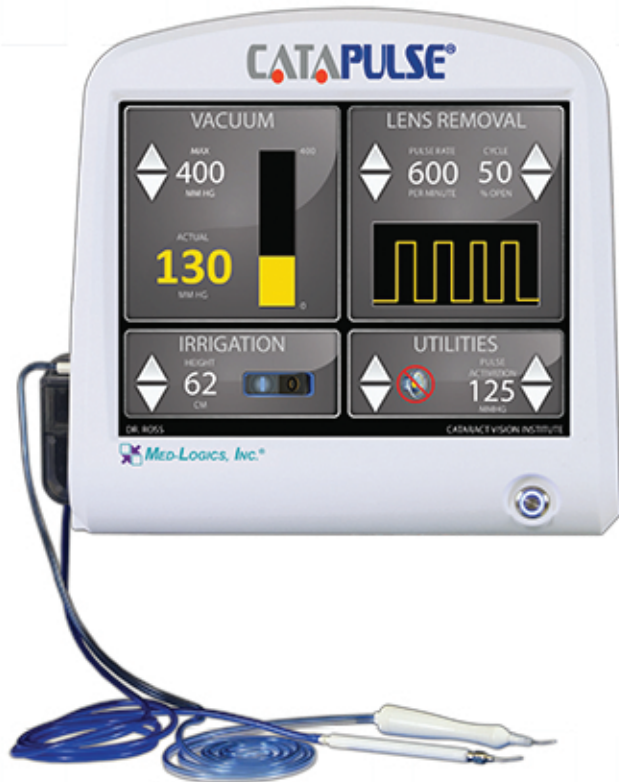
- Two outward energies fighting one inward energy.
- Irrigation required to prevent ultrasonic tip from burning corneal incision.

## CATAPULSE® BI-MANUAL TECHNIQUE



- No energy conflicts in the eye.
- Vacuum level and flow volume though the eye is greatly reduced.

# COMPACT CONSOLE



- Portable and simple to use.
- 2 surgical operating screens (Lens Removal & Ant. Vitrectomy) and multiple different language options making communication very efficient for the surgeon.
- A self-contained vacuum & pressure system with 28 software controls specifically reading and reacting to changes in the vacuum 1,000 times per second.
- Each CataPulse® Console is hand-assembled by a Master Technician.

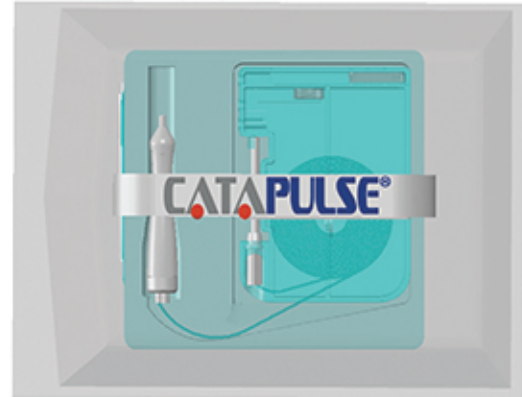
# ERGONOMIC FOOTSWITCH

- Allows the surgeon a hands free option for adjusting a variety of performance values at the console.
- Water resistant.
- Linear pedal dedicated to vacuum control only for maximum control.



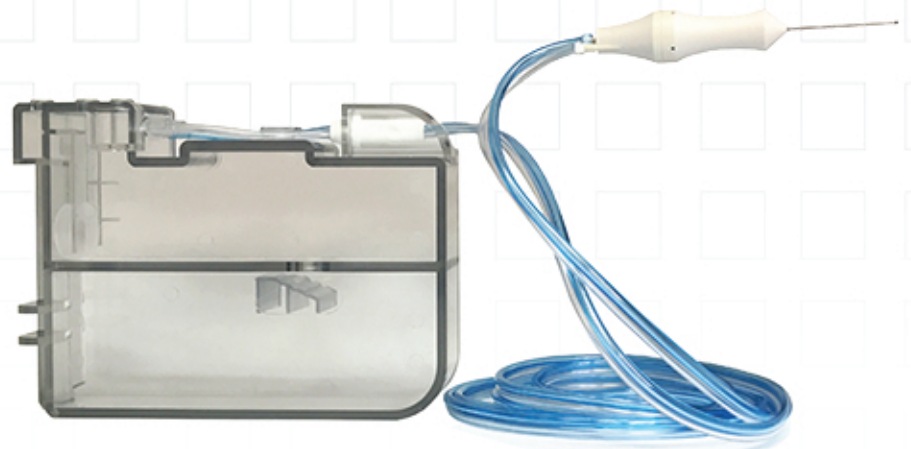
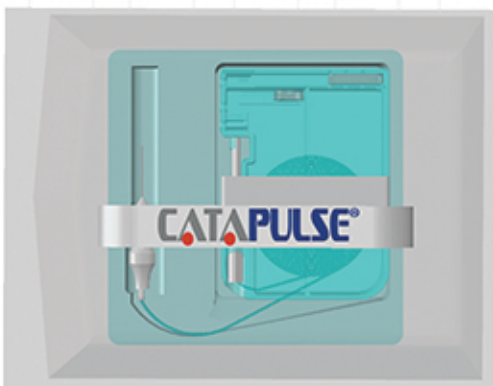
# LENS REMOVAL SINGLE-USE KITS

- Features a complete disposable kit containing the sterile screen cover, irrigation tubing with spiker & handpiece, preassembled active cassette with tubing attached to the lens removal handpiece.
- The lens/cortical removal handpiece incorporates a sophisticated patented pulse vacuum control that amplifies the dissection and aspiration of the cataract material.

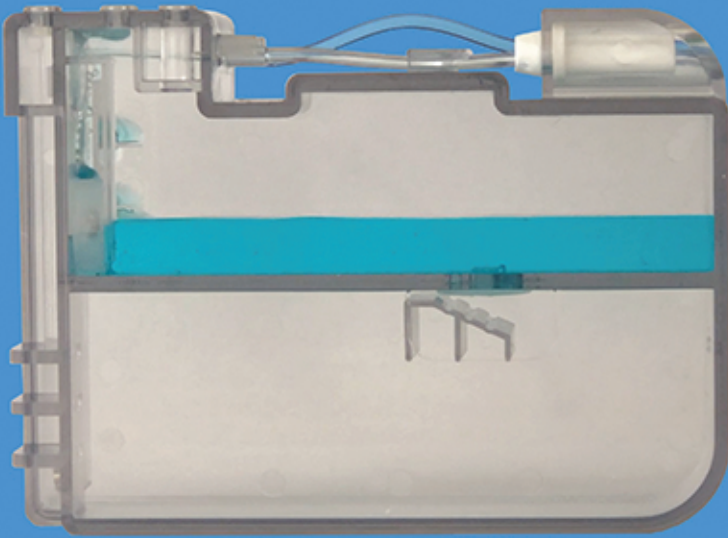


# ANTERIOR VITRECTOMY SINGLE-USE KITS

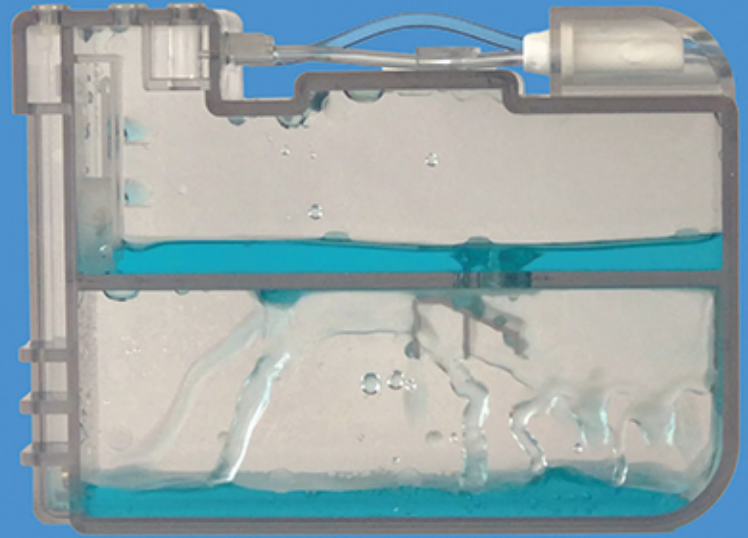
- A 20 gauge preassembled pneumatic anterior vitrectomy cutter attached to an Active Cassette.
- Handpiece & Cassette are single-use and preassembled.



# ACTIVE CASSETTE DESIGN



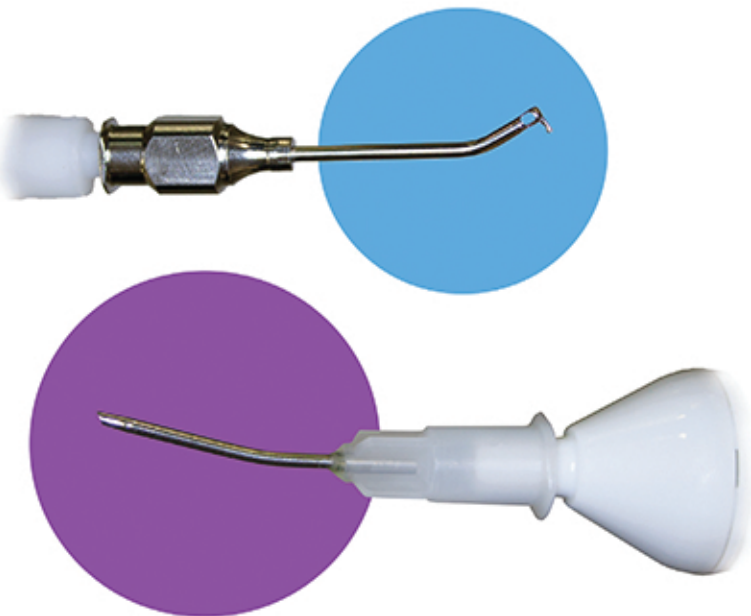
- Small upper chamber provides rapid vacuum response.
- Accurate vacuum level easily maintained.



- Automated fluid transfer to lower chamber maintains optimal performance.

## UNIQUE CANNULAS

### VARIETY OF CANNULA OPTIONS



- Ideal shapes and sizes to maximum performance.
- Various cannula options allow the surgeon to be as gentle or aggressive as preferred.
- Stainless steel or plastic cannulas are available.
- Unique cannula designs offer fluidic balance and flow rates to achieve ultimate control.

# CATA PULSE<sup>®</sup>

"PHACO-FREE" LENS REMOVAL SYSTEM

Additional U.S. and Foreign Patents Pending

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**MED-LOGICS, INC.<sup>®</sup>**

1627 Enterprise Street  
Athens, TX 75751 USA  
Tel: +1-949-582-3891  
E-mail: [info@mlogics.com](mailto:info@mlogics.com)

[www.mlogics.com](http://www.mlogics.com)

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