A.R.C. LASER
MADE IN GERMANY

NanoLaser Cataract / RLE Quick Guide

Treatment parameters:

	Settings		Range
	Soft nucleus / RLE	Medium– hard nucleus	
Energy	30 %	45 %	30 - 70 %

NanoLaser (Cetus) User Interface:

Pulse and energy counter for the documentation
Counter is reset to zero by changing the probe

Accessories:

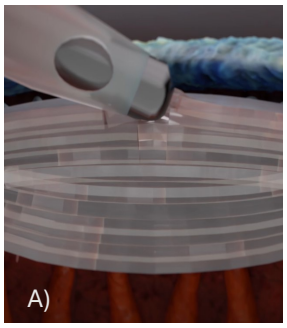
Cetus Probe LY11004s incl. Sleeve (WE01407s)
Trigger hose for phaco connection—WE07001*

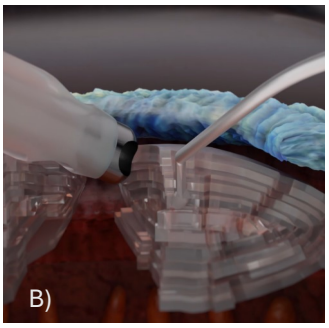
* compatibility of trigger hose depends on phaco machine. The individual vitrectomy tubing of the phaco machine is equipped with the suitable Cetus NanoLaser luer-connector (ST01022).

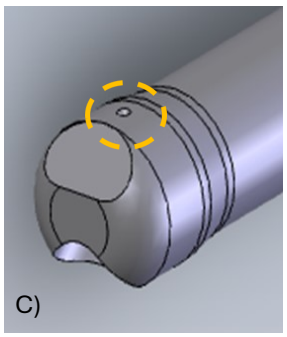
Treatment preparation:

Same as conventional ultrasound phacoemulsification
Fluidics of the phaco machine is connected to the Cetus Probe to allow irrigation and aspiration

Priming of phaco probe avoids waiting time if conversion to ultrasound is performed







A) Opening of the probe tip bevel-down for segmentation of the nucleus

B) Equatorial orientation of the opening to proceed fremoval of the fragments

C) Marking point for orientation, 180° to the aspiration opening

Patient preparation:

Same as conventional ultrasound phacoemulsification

Application:

Realization of rhexis and hydrodissection

Aspiration opening of the probe is indicated by the marking point on opposite site (picture C)

Insertion of Cetus Probe to center of nucleus,
opening bevel-down (picture A)

Application of Laser energy as soon as occlusion occurs (release of pneumatic vitrectomy pulses)

Chopping the nucleus in segments by help of Cetus Probe and chopping instrument (high pulse rate) or other pre-chop technique

Keep the probe opening into equatorial direction (picture B) to continue with nucleus fragments removal

Reduction of tumbling parts:

→ Low pulse rate to keep occlusion
→ Use the chopper to fix nucleus fragments at the probe tip (second hand!)

Preservation of the epinucleus during photofragmentation of the lens is particularly helpful in NanoLaser applications

Application of Irrigation / Aspiration as usual

Post-treatment medication:

Same as in conventional phacoemulsification

Application-QuickGuide_NanoLaser_Cataract-RLE_EN_rev0, 2025-06-18

All information is up-to-date and has been reviewed in the clinical evaluation.

A.R.C. LASER

MADE IN GERMANY

NanoLaser Cataract / RLE Quick Guide

Treatment effect

NanoLaser use enables 100 % laser surgery by replacing the ultrasound energy of the conventional phaco treatment

Lens fragmentation is realized by laser plasma induced shockwaves

No laser radiation is applied within the eye due to the absorption in the probe tip

Effectiveness and Safety:

- ✓ 100 % laser lens removal
- ✓ Cold laser treatment—no tissue alteration due to heat
- ✓ Free from harmful vibration —no mechanical movements of the tip
- ✓ Minimal energy* for maximum protection of endothelial cells
- ✓ Atraumatic tip design is gentle to iris and posterior capsule
- ✓ Maximal hygenic standard due to 100 % single-use probes

* Gangolf Sauder et al: Nanosecond Laser and Phacoemulsification Cataract Surgery: Comparison of Intraoperative Parameters and Post-Surgery Outcomes; Walid Zbiba et al: Qualitative and quantitative endothelium changes after cataract surgery: ultrasound phacoemulsification vs. Nanolaser technique

Notes:

Before applying laser pulses, occlusion must first be achieved;
laser pulses emitted without material occlusion have no photofragmentation effect!

The manipulator/chopper may touch the laser tip, no damage will occur!

Prior use of ultrasound phacoemulsification can be helpful for nucleus segmentation if it is difficult to divide or segment the nucleus!

A hard lens nucleus requires high energy for nucleus fragmentation!
The NanoLaser delivers much less energy in the same time compared to ultrasound phacoemulsification
→ operating time is extended; conversion to ultrasound phacoemulsification should be considered.

Small pupil and floppy iris situations are difficult operational situations, same as in ultrasound phacoemulsification.

More detailed information for your patients:

www.nanolaser.de

Scan QR-Code for YouTube Playlist NanoLaser:

Application-QuickGuide_NanoLaser_Cataract-RLE_EN_rev0, 2025-06-18

All information is up-to-date and has been reviewed in the clinical evaluation.