

A.R.C. LASER

MADE IN GERMANY

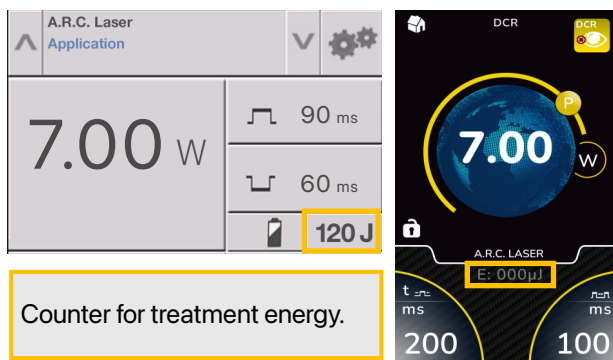


TCL - DCR (Transcanalicular Laser-assisted Dacryocystorhinostomy) Quick Guide

Treatment parameters:

	Pre-settings	Range
Power	7.0 W	5 W - 8 W
Pulse duration	90 ms	20 ms - 200 ms
Pulse pause	60 ms	4 ms - 100 ms
Total energy		0.5 kJ - 1.8 kJ

Userinterface FOX 810 / FOX IV 810:



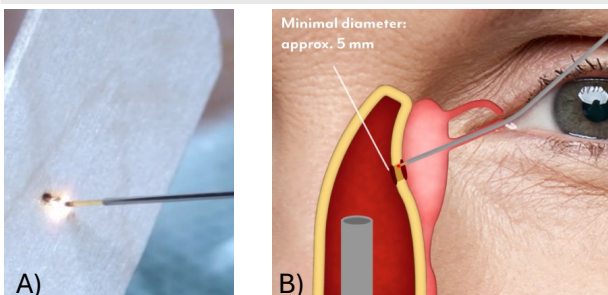
Counter for treatment energy.

Patient preparation:

Application of local or general anesthesia
Dilation of lower canaliculus of the lacrimal punctum with a conical probe

Treatment preparation:

Initialization of the DCR Probe using a sterile wooden spatula applying laser radiation in contact until fiber tip is blackened (picture A)



Picture B)

The DCR probe is positioned under visual control using an endoscope at the front edge of the middle turbinate

Apply without pressure while maintaining constant contact with the bone

Do not apply lateral force to the fiber tip

Accessories:



DCR Probe (LL13069s_VE5) and Laser safety goggles (AS01033)
Endoscope for visual control

Application:

Insert laser probe through the lower lacrimal punctum

Continue until the probe contacts the medial lacrimal sac wall
→ Perception of a hard stop confirms sufficient bone contact.

Nasal endoscope is used to check and control correct positioning of the probe from the nasal side using transillumination of the aiming beam

→ Correct position of the DCR Probes tip at the anterior edge of the middle turbinate (picture B)

Apply laser energy without exerting pressure on the laser tip while maintaining bone contact

Creation of a bony ostium between the lacrimal sac and nasal cavity (Nasolacrimal bypass)

Enlarge the ostium to a diameter of approx. 5 mm by applying further laser energy to the ostium rim pulling the probe back and forth.

Proceed with transcanalicular irrigation and insertion of canalicular silicon intubation for 2–3 months to prevent closure of the ostium

Post-treatment (exemplarily):

Eye drops:

-antibiotic eye drops (e.g. ofloxacin) for 1 week

-decongestant eye drops (xylo-metazoline 0.05%) wean off over the course of 4–6 weeks

-steroidal eye drops (e.g. prednisolone acetate) wean off over the course of 4–6 weeks



Treatment effect:

The goal of the procedure is to create an opening in the lacrimal sac wall to bypass a post-saccal tear duct obstruction

Tear drainage is successfully restored through precise tissue vaporization of the bony structures during osteum creation

Effectiveness and Safety:

- ✓ Minimally invasive and well tolerated treatment
- ✓ Short procedure time (10 - 15 min) and quick post-operative recovery
- ✓ Less cosmetic impairment thanks due to no skin incision → no risk of scarring
- ✓ Preservation of the physiological tear pump to protect the medial lid support apparatus
- ✓ Useful for patients on anticoagulants - no to low risk for bleedings
- ✓ Local anesthesia is possible - In general anesthesia a larynx mask is sufficient
- ✓ Functional success rate after 6 months: 70 - 90 %

Caution:

The Aiming beam of the laser is visible endonasal thanks to transillumination properties of the red light. It facilitates correct positioning at the level of the anteroinferior edge of the middle turbinate attachment. In some patients the transillumination of the aiming beam is barely visible due to thick bone structure. Experienced users might also treat patients without visible aiming beam transillumination as the treatment can also be conducted without the use of an endoscope.

- Do not proceed with the treatment in case of missing hard-stop!
- Fiber tip must not be actively pressed against the wall!
- Avoid lateral movements to prevent fiber breakage.

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Lacrimal surgery

