WE OFFER FLEXIBILITY

CCL VARIO SYSTEM

3 mW – 30 min · 9 mW – 10 min · 18 mW – 5 min

Indications:

- Progressive Keratoconus
- Iatrogenic Ectasia
- Pellucid Marginal Degeneration

PT · SWISS GLOBAL TRADING

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Corneal Cross Linking Excellence

Background

Corneal cross-linking is a process of photopolymerization. During this process of photopolymerization singlet oxygen is being created with the use of riboflavin as a photomediator activated by UV-light. Free radicals lead to physical intra- and interhelical cross-links of stromal collagen fibers. This process takes place mainly in the anterior 150 µ of the stroma. This is important to remember in cases where a refractive procedure is planned post-CXL.

CXL – Corneal Cross Linking

Corneal cross-linking (CXL) is a treatment with the aim of strengthening the corneal stromal tissue. This is achieved by the creation of new chemical bonds between stromal fibers.

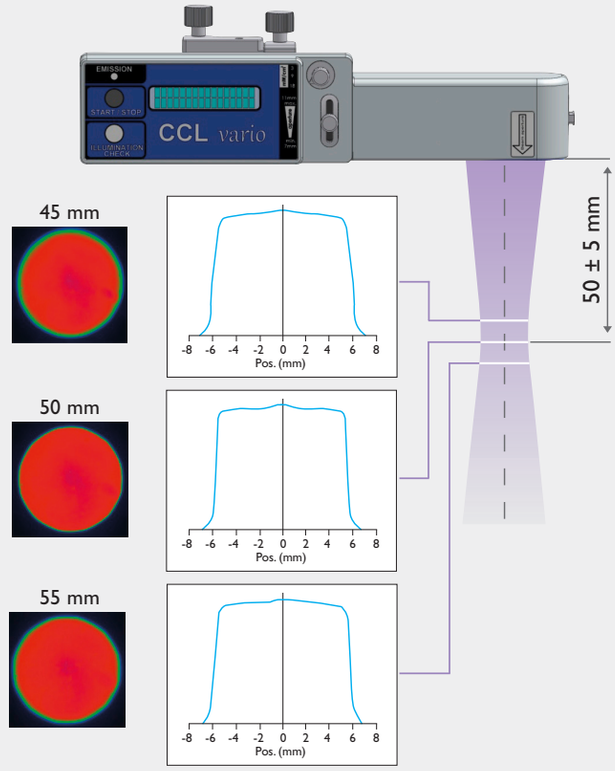
Until today corneal cross-linking has been the only successful treatment to stop progressive keratoconus and related ectatic diseases such as pellucid marginal degeneration and iatrogenic ectasia. Since its introduction in 2006, tens of thousands of patients around the world have been successfully treated.

Clinical experience

In recent years corneal cross-linking has become the standard procedure for treating patients with progressive keratoconus and other ectatic corneal diseases because of its effectiveness and lack of serious side effects.

In a number of clinical studies it was demonstrated that in more than 85 % of eyes treated the BCVA increased significantly. Six months after the procedure cylinder was reduced in the majority of all patients. The steepest K-value was reduced by an average of up to 2 dioptres.

Beam characteristics of the CCL-365 vario
High homogeneity and illumination stability over a wide range



Top hat beam profile

The Device

The **CCL VARIO** corneal cross-linking system was designed with a special focus on effectiveness, safety and user friendliness.

It comes with one diode and special optics which is homogenizing the beam. Thus hot spots are being avoided and the endothelium is sufficiently protected.

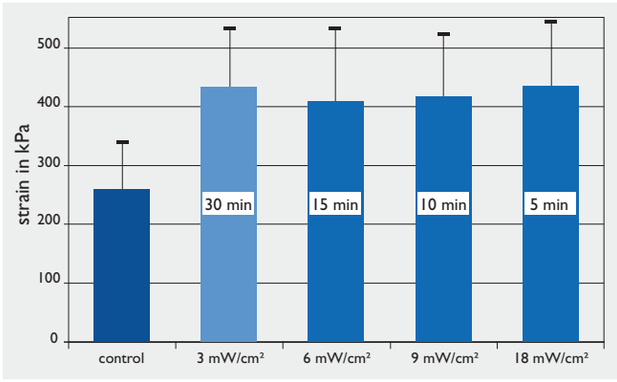
To offer more flexibility, it enables the surgeon to choose between three energy levels:

3 mW · 9 mW · 18 mW

This allows the surgeon to choose the ideal energy/time combination for the intended treatment:

Standard - Accelerated - Express Cross-linking. At the end of the procedure the system switches off automatically.

3 mW x 1800 sec (30 min) = 5400 mJ
9 mW x 600 sec (10 min) = 5400 mJ
18 mW x 300 sec (5 min) = 5400 mJ



Courtesy Prof. Spoerl, PhD, University of Dresden

Since the total dose of radiation is time dependant, each setting delivers a total energy of 5400 mJ.

Studies performed by Prof. Eberhard Spoerl, PhD at the University of Dresden demonstrated that the amount of cross-links achived by various energy levels is practically the same.

To guarantee the high level of safety the beam of the **CCL VARIO** has a wasteline at a distance of 50 mm from the optics and a depth of focus of approx. +/- 5 mm.

To protect the limbal stem cells and to focus the beam on the clear cornea only the **CCL VARIO** has a continuously adjustable aperture from 7 mm to 11 mm.

A small monitor shows the result of the selftest and the remaining treatment time.

The **CCL VARIO** is portable with a table mount and comes in a sturdy transport case allowing the surgeon to be mobile.

or a better performance

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The optional floor mount is recommended to facilitate focusing and treatment.

PT Floor Mount

Technical Data

Wavelength range:	365 nm
Illumination intensity:	3 – 9 – 18 mW/cm^2
Working distance:	50 mm ± 5 mm
Light emission:	Continuous wave (CW)
Spot sizes (continously adjustable):	7.0 – 11.0 mm
Timer:	30 – 10 – 5 min
Electric power:	100 – 240 V
Dimensions hard case (w,l,h):	37.0 cm x 46.0 cm x 14.0 cm
Weight (total):	7.5 kg

CE 1275

Basic Literature

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A detailed list of literature is available on request.

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