

By Louis Pilla, contributing editor

# Refined lasers for YAG and SLT

Nidek's laser system offers optical and energy enhancements plus features for surgeon feedback and comfort.

**W**ith optical system improvements, lower energy use and enhancements for surgeon comfort, the YC-200 Ophthalmic YAG Laser System from Nidek provides physicians a precise, refined tool for YAG laser procedures, including selective laser trabeculoplasty (SLT).

The YC-200 system, which

received 510(k) clearance from the FDA in November, includes the YC-200 and the YC-200 S plus for SLT. These devices are successors to Nidek's YC-1800 laser.

## OPTICAL DESIGN IMPROVEMENTS

An improved optical design optimizes resolution and contrast, and expands focal depth to provide a clear view of

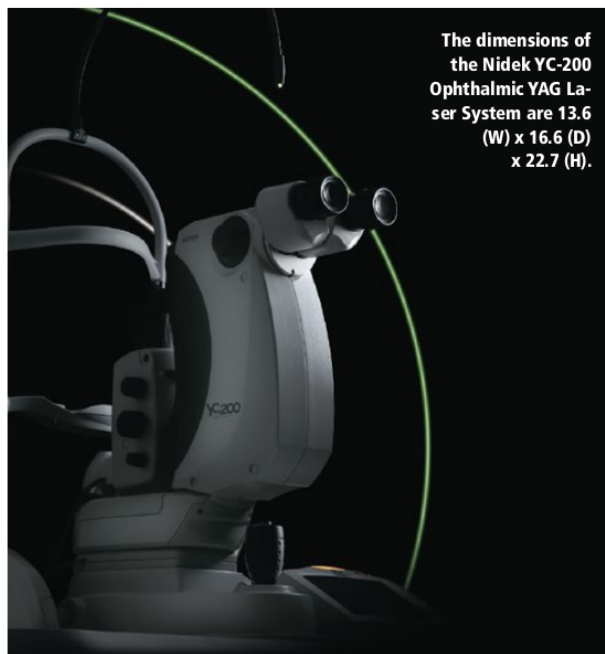
pathology and treatment, notes Keith Effert, senior product marketing manager at Nidek.

An LED light source provides a brighter, more natural view, he explains, and minimizes aberration. This is "a unique illumination to Nidek" he says. The area of the eye in which the surgeon is working, he says, "looks much more natural with these optics."

The YC-200 optics are "excellent," according to Howard Barnebey, MD, Specialty Eyecare Centre, Bellevue, Wash. Dr. Barnebey recently installed the YC-200 S plus in his practice, primarily to gain a better SLT platform.

According to Nidek, the system also offers a precise aiming beam. In YAG mode, a motorized rotatable aiming beam can avoid corneal opacities and achieve more accurate focusing. In SLT mode, a precise edge aiming beam or "parfocal" beam delivers a clear view for easier focusing of the aiming beam through the contact lens.

A focus shift enables a 500- $\mu$ m anterior or posterior axial shift of the YAG laser's focal point; the focus shift can be changed in 25- $\mu$ m increments.



The dimensions of the Nidek YC-200 Ophthalmic YAG Laser System are 13.6 (W) x 16.6 (D) x 22.7 (H).

IMAGE COURTESY: NIDEK

**EFFECTIVE ENERGY**

The YC-200 devices achieve 1.6-mJ plasma threshold in air, according to Nidek, allowing for homogeneous laser energy delivery. By delivering less energy than the YC-1800, the YC-200 devices provide more efficient tissue cutting and lower risk of IOL pitting, says Mr. Effert.

Dr. Barnebey notes that the laser delivers energy at a slightly broader cone angle at the level of the cornea than is typical. The S plus features a 5.5° cone angle compared to the 3.0° cone angle of the YC-1800 and other laser systems in its class. This larger cone angle helps minimize the risk for scarring or swelling at the level of the cornea, says Dr. Barnebey.

**REAL-TIME TREATMENT FEEDBACK**

To obtain real-time feedback on treatment progress, surgeons can use the YC-200 S plus SLT-NAVI feature, which presents an intuitive display on the progress of laser treatment. This display allows the doctor to visualize the SLT sequence. The SLT-NAVI counts the SLT shots and shows the treatment area so operators can see where they are treating even if they take their eyes off the eyepiece.

It can be set to 90°, 180° or 360° treatments to show the progress of therapy in the trabecular meshwork.

**SURGEON COMFORT**

The YC-200 devices offer various ergonomic improvements

to aid surgeon use. One is an optimized operating distance that enhances comfort. This design is especially useful for surgeons with shorter arms, says Mr. Effert. A forehead rest provides an edge where the surgeon can place his or her finger while holding the contact lens against the patient.

"It gives them a little bit more comfort," Mr. Effert explains.

A motorized joystick offers an "S-switch" that can be customized to increase or decrease energy. The surgeon can touch the S-switch on the joystick to change the energy level without removing his or her hands from the joystick or oculars. The S-switch can also be customized to turn the dual rotating aiming beams on and off. **OM**



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