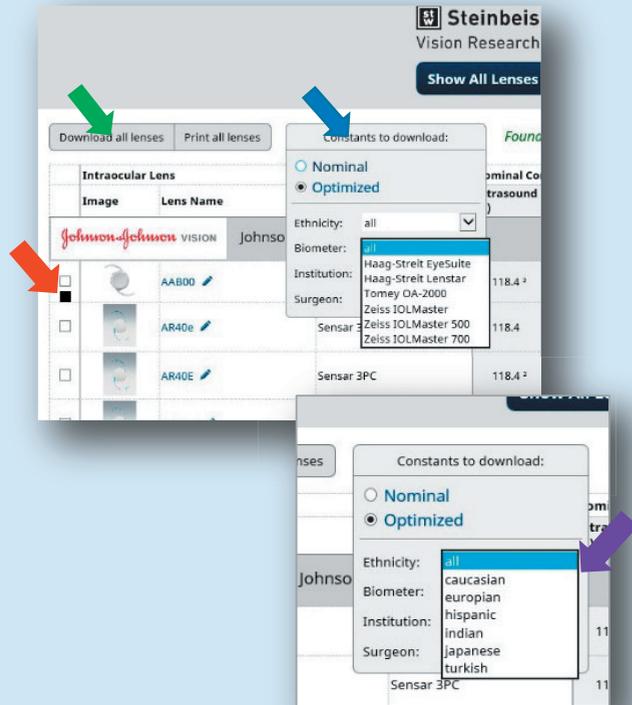


• User-group 2: Cataract surgeons (2)

According to the search results, they can choose one or more IOLs and download lens specifications and ranges of availability as well as IOL-constants for IOL-power calculation.

Registered surgeons get access to their individually optimized IOL-constants. Optimization will be performed according to their needs using only data obtained with a specific biometer or by the surgeon him/herself as soon as there are enough data available.



The use of the platform is free of charge for ophthalmic surgeons. The more data uploaded to the platform, the more reliable the optimized constants are going to be.

In brief

IOLCon is an open platform with versatile options for IOL constant optimization. The online-platform is not bound to specific devices, IOL manufacturers or surgeons. Surgeons may upload refractive results of cataract surgery for optimizing personalized constants. Global constants can be derived for specific biometry devices or ethnicities, which are based on community data. In the near future IOLCon will enable rapid worldwide dissemination of optimized IOL constants.

Biometry device manufacturers are implementing IOLCon open XML interface to integrate IOLCon with their devices.

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Register for IOLCon at:

<https://www.IOLCon.org>



IOL Con

Steinbeis
Vision Research

Alliance for better Vision:

IOL Con



Steinbeis
Vision Research

Welcome to IOLCon,

We are a modern Alliance for Better Vision and the platform for characteristics of intraocular lenses and the optimization of lens constants.

• What is the Appropriate Intraocular Lens Power?

During cataract surgery, the surgeon removes the cataractous natural lens and replaces it by an artificial intraocular lens (IOL) to compensate the loss of refractive power. To avoid over- or undercorrection, the IOL has to be chosen according to the patient's needs and the biometry of his/her eye. The IOL-constants link the biometric measurements to the expected axial lens position in the eye. An accurate estimation of the effective lens position is required to decide which IOL power suits your patient best.

• Why bother with optimizing IOL-constants?

The choice of IOL-power can be improved by continuous optimization of IOL constants. Reliable IOL-constants require a high number of pre-surgical biometry measurements together with the respective refractive outcomes. With a continuously growing data-base of refractive success, IOL-calculation can become more and more reliable.

• What is IOLCon?

IOLCon is an open online database for continuous and automated optimization and compilation of (IOL) constants for cataract surgery. The concept of IOLCon as an encyclopaedic database for IOL specifications is evolving in cooperation with manufacturers of IOLs and biometry devices as well as with cataract surgeons from all around the world. Optimization algorithms for published IOL formulas (SRK/T, Haigis, HofferQ, Holladay 1) were implemented.

The IOL-data used in IOLCon are provided by two user groups: IOL-manufacturers as well as ophthalmic surgeons.

• User-group 1: IOL manufacturers and distributors

Technical IOL data entry requires registration through an authorized staff member from the IOL manufacturer or IOL distributor.

IOL manufacturers and IOL distributors can add along with technical specifications the data of the IOLs to the online-platform.

Manufacturers/distributors have the sole responsibility for keeping their product information up to date.

The screenshot shows the 'Add Lens' form for manufacturers/distributors. It includes fields for Manufacturer (Johnson & Johnson Vision), Name, and Comment. There is an 'Image' field with a 'Browse' button and a note: 'The image has to be a JPG or PNG file and smaller than 1 MB.' Below this is a 'Specifications' section with various dropdown menus and input fields for parameters like Single Piece, Preloaded, Incision Width, Hydrophilic/-phobic, Refractive Index, Optic Diameter, Optic Concept, Optic Design, Toric, Optic Material, Foldable, Injector Size, Filter, Abbe Number, Achromatic, Haptic Material, Haptic Diameter, Intended Location, Sph. Aberration, and SA Correction. The 'Available Powers' section has input fields for Refractive Power, Sphere, Cylinder, Near Addition, and Intermediate Addition. The 'Nominal Constants' section includes fields for Ultrasound A, SRK II A, Haigis a, Hoffer-Q pACD, Holladay 1 SP, and Olsen C. At the bottom, there are buttons for 'Add this lens to database', 'Save this lens temporarily', and 'Reset all input fields'. The user is logged in as Dr. Sibylle Scholtz.

• User-group 2: Cataract surgeons (1)

On one hand ophthalmic surgeons can use the platform to search for IOLs based on the required specifications and available power range. On the other hand ophthalmic surgical centers can upload pre- and postoperative results to the website and obtain globally and/or personally optimized IOL-constants for quality management to improve their own surgical results. Microsoft Excel and XML Templates are provided.

The screenshot shows the 'Search For Lenses' form. It includes a 'Manufacturer' dropdown menu (HumanCystics, Hoya, Lenses, Millennium Biomedica) and a 'Name or comment' field. There is an 'Uploaded since' field with a 'year-month-day' format and a checked box for 'has optimized constants'. The 'Specifications' section has dropdown menus for Optic Material (PMMA, acrylic), Preloaded, Optic Diameter, Optic Concept (monofocal, bifocal), Sph. Aberration, and Toric. There are also input fields for Incision Width, Haptic Diameter, and Optic Design. The 'Availability' section has input fields for Sphere, Cylinder, and Reading Addition. At the bottom, there are buttons for 'Search for corresponding lenses' and 'Reset all input fields'. A red arrow points to the 'Search For Lenses' button, and a green arrow points to the 'Search for corresponding lenses' button. The user is logged in as Dr. Sibylle Scholtz.

The screenshot shows the 'Clinical Results' form. It includes a 'Results File' field with a 'Durchsuchen...' button and a note: 'Keine Datei ausgewählt.' There is an 'Upload results file' button. Below this is an 'Examples' section with 'CSV example' and 'XML example' sections. The CSV example shows a table with columns: Institution, Surgeon, Biometer, Ethnicity, LensManufacturer, LensName, PowerSphere, P, UKS, Dr., Smith, HS, LensSun, european, XID, Lens, 18, 24, 1, 3, 22, 7, 6, 7, 5, 0, 50, -0, 25. The XML example shows an XML structure with fields like Institution, Surgeon, Biometer, Ethnicity, LensManufacturer, LensName, PowerSphere, P, UKS, Dr., Smith, HS, LensSun, european, XID, Lens, 18, 24, 1, 3, 22, 7, 6, 7, 5, 0, 50, -0, 25. At the bottom, there are buttons for 'Download spreadsheet' and 'Download XML template'. The user is logged in as Achim Langerhuber.