



ZEISS Z CALC Toric and Non Toric IOL Calculation and Ordering User Guide

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Z CALC:

Z CALC® from ZEISS is a software intended to support a user in selecting ZEISS IOLs by calculation of intraocular lens power and predicted residual refraction. Z CALC can also be used for IOL power calculations for patients with previous LASIK, LASEK and PRK treatments.

The new Z CALC is compatible with the following browsers:

Apple Safari mobile for iOS (Version 15 or higher) Apple Safari Version for MacOS (Version 15 or higher) Google Chrome for Windows 10 (Version 102 or higher) Google Chrome mobile for Android (Version 102 or higher) Microsoft Edge for Windows 10 (Version 102 or higher)

Preconditions for use:

Please ensure that your pop-up blocker is deactivated.

For detailed instructions on how to deactivate the popup blockers, please review Pop-Up Blockers and how to deactivate. Before using the product, please consult the instructions for use.

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Region Selection / Terms & Condition / Data Protection

Welcome! Where are you from?

Select a country ▼

☒ I read the [terms and conditions of use](#) and agreed to them.

Agree and continue

- Select region.
- Please read “Terms and Conditions of Use”. Click the checkbox.
- Click “Agree and continue”.
- Additionally you can find the “Data protection guidelines”.

Patient Information

Patient information

Patient identification

Patient ID **1**

Enter the anonymized patient ID of the patient for unique identification. Do not use patient names for data protection reasons.

Laser Vision Correction **2**

☒ No ☐ Yes (LASIK, LASEK, or PRK)

Biometry date (optional) **3**

MM/DD/YYYY

Surgery date (optional) **4**

MM/DD/YYYY

1. Enter patient ID (Please do not enter the patient’s name!).
2. Select whether or not patient has undergone a previous laser vision correction treatment (LASIK, LASEK or PRK):
 1. LVC status must be selected for both eyes.
 2. If yes; be sure to enter whether myopic or hyperopic treatment has occurred.
3. Enter biometry examination date (optional).
4. Enter surgery date (optional).

Calculation Screen

The screenshot shows a web-based calculation screen for IOLMaster measurements. It includes the following fields and options:

- AL (Axial Length):** 23.85 (15.00 - 40.00 mm). Red box 5.
- Measurement method:** ☒ IOLMaster, ☐ Applanation.
- ACD (Anterior Chamber Depth):** 3.26 (1.50 - 6.00 mm). Red box 6.
- Measured from:** ☒ Epithelium, ☐ Endothelium.
- Keratometry (K):** R1 (flat): 7.82 (5.00 - 10.00 mm / 35.00 - 65.00 D), R2 (steep): 7.53 (5.00 - 10.00 mm / 35.00 - 65.00 D). Red box 7.
- Total Keratometry (TK):** 125 (80 - 180°). Red box 9.
- Flat axis:** 125 (80 - 180°).
- Steep axis:** 35.
- Keratometric index:** 1.3375 (dropdown). Red box 10.
- Ast. K:** 1.66.
- Z CALC Nomogram:** ☒ Yes, ☐ No. Red box 11.
- Target refact. SE:** 0.00 (-5.00 - 5.00 D, optional).
- Incision position:** 0 (0 - 360°, optional).
- SIA:** 0.00 (0.00 - 1.00 D, optional). Red box 12.
- Toric/Non-toric:** ☒ Toric, ☐ Non-toric. Red box 13.
- IOL Selection:** AT LARA® toric 929 (dropdown). Red box 14.
- Footer:** "Ensure that the data entered is correct. ZEISS does not send or save any patient identification information. By clicking on the 'Accept and calculate' button, you agree to the terms and conditions of use. Open the terms and conditions of use." and an "Accept and calculate" button.

5. Enter axial length from the patient's record. Select IOLMaster for measurements with an optical biometry device or immersion ultrasound. Select applanation for measurements with applanation ultrasound.
6. Enter the ACD from the patient's record and indicate if it has been measured from the epithelium or endothelium.
7. Please choose if you want to enter standard (K) Keratometry values or "Total Keratometry (TK)" values, if you want to use the TK values incorporating the posterior corneal curvature measurements from the IOLMaster 700.
8. Enter the K- or TK-readings either in D or radii in mm.
9. Enter "Flat axis".
10. Select the "Keratometric index" from the drop down menu.
11. Select Z CALC Nomogram*, if desired.
12. Insert target refraction, incision position and SIA for personalized calculation (optional).
13. Choose between toric or non-toric IOL calculation.
14. Select the desired IOL from the drop-down menu.
Click "Accept and calculate".

Result Screen

Standard Mode

A [Show expanded mode](#)

IOL refractive power				Predicted outcome ⓘ					
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]		
+19.50	+18.50	+2.00	35	-0.56	-0.49	-0.13	125	---	
+19.00	+18.00	+2.00	35	-0.18	-0.12	-0.13	125	---	
+18.50	+17.50	+2.00	35	+0.19	+0.26	-0.14	125	---	

Visualization of the IOL value

Select the product model using the drop-down menu:
MP: MICS, preloaded

Expanded Mode

[Hide expanded mode](#)

IOL refractive power				Predicted outcome ⓘ					
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]	ELP ⓘ [mm]	
									Reset
+19.00	+18.00	+2.00	35	-0.18	-0.12	-0.13	125	4.28	---

Visualization of the IOL value

Select the product model using the drop-down menu:
MP: MICS, preloaded

A You may switch between “Standard Mode” or “Expanded Mode” by clicking the desired mode (top right corner).

- Standard Mode: Z CALC presents three calculations from which you may choose the most appropriate based on your requirements.
- Expanded Mode: You may vary Spherical Equivalent (SE) and cylinder powers (toric IOLs only) to review associated residual refraction and Effective Lens position (ELP).

** Mathematical compensation for the posterior corneal astigmatism (first implemented with v2.0).*

IOL product model selection

- Choose between different product models (depending on the availability) from the drop-down menu from the generated readings.
 - Click on the “Add to wish list” button adjacent to the drop-down menu to transfer the result to the wish list.
- M MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size MP MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size & Preloaded MV MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size & Violet and blue filtering (yellow) P Fully Preloaded in injector PY Fully Preloaded in injector & Yellow blue-light filtering “-” No variant

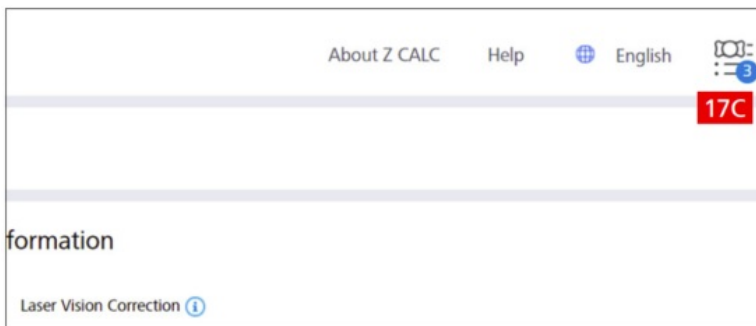
Navigate to the Wishlist/PDF-Printouts



17A Click on Save as PDF button to save the selected results as PDF directly from the calculation screen.

17B Click on wish list button at the bottom. This will lead you to the second screen, where you can select lenses for ordering or PDF-print-outs.

OR



17C Click on the wish list symbol in the right upper corner, which will lead you to the same screen as the wish list button at the bottom of the page.

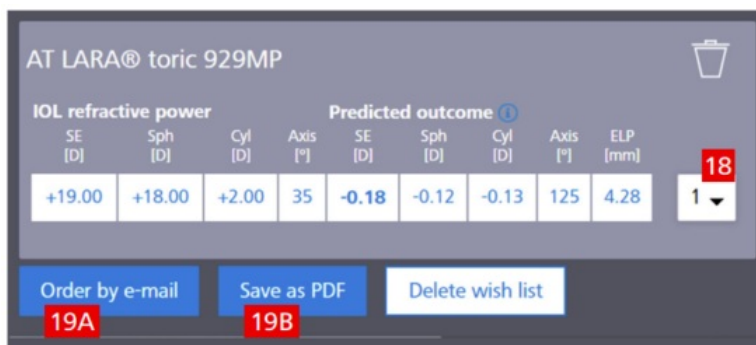
Create PDF printouts for selected IOLs or order via e-mail

17. Select the desired quantity for the IOL.

19A Click “Order by E-Mail” (to directly send your order to the local ZEISS sales representative).

OR

19B Click “Save as PDF” to create a PDF with the calculation results and ordering information of the selected IOLs in the wish list.



Order by e-mail or create PDF printouts

Send order e-mail

Select which PDF form(s) you want to create and enter your information.

☐ IOL Order Form
☐ IOL plan
☒ IOL order form and IOL plan

Your e-mail address

e.g., test@mail.com

E-mail address of ZEISS IOL representative

so-admin.uk@zeiss.com

Clinic name

e.g., Clinic for ophthalmology

Department (optional)

e.g., Ophthalmology

Street and number

e.g., 20 Main Street

Additional address information (optional)

e.g., Building C

City

e.g., Potsdam

Zip code

e.g., 01010

State (optional)

e.g., Brandenburg

Country

e.g., Germany

Telephone number (optional)

e.g., +49 11 1122000345

Fill out all mandatory fields: name and address of the clinic, e-mail address of ZEISS IOL representative.

Check your entries

Save PDF form

Select which PDF form(s) you want to create and enter your information.

☐ IOL Order Form
☐ IOL plan
☒ IOL order form and IOL plan

Your e-mail address (optional)

e.g., test@mail.com

Clinic name (optional)

e.g., Clinic for ophthalmology

Department (optional)

e.g., Ophthalmology

Street and number (optional)

e.g., 20 Main Street

Additional address information (optional)

e.g., Building C

City (optional)

e.g., Potsdam

Zip code (optional)

e.g., 01010

State (optional)

e.g., Brandenburg

Country (optional)

e.g., Germany

Telephone number (optional)

e.g., +49 11 1122000345

Check your entries

For Ordering:

- Enter all the relevant details including clinic name, department, address, phone number and email address (your local ZEISS partner's email address is filled in automatically based on your country selection).
- By hitting the "Send" button, an email with your order is sent out to the local ZEISS business partner (automatically filled based on your country selection).

For Printing and/or manually faxing

- For saving as PDF, you don't need to enter your data (data entry is only required for direct ordering).
- Please just scroll down and click "Save", the PDFs will be created and open in a new tab window in your browser.

Note: Please ensure the pop-up blocker is deactivated in your browser. Otherwise please follow the instruction in the addendum: **Pop-Up Blockers and how to deactivate.**

IOL PLAN
Patient ID: 1857 BD

Test Clinic
Department
Max-Delbrück-Straße 8-10
Building C
10580 Berlin
Germany
Telephone number
ww@clintc.com

OD right **EYE STATUS** **left OS**

LS Phakic LVC untreated LVC mode untreated LVC Phakic LVC LASIK/LASER/PRK LVC mode hyperopic
Target ref: 0.00 D Target ref: 0.00 D Target ref: 0.00 D Target ref: 0.00 D

BIOMETRY VALUES

Date of measurement: 2024-04-24 n: 1.3375 Date of measurement: 2024-04-24 n: 1.3375

AL: 23.85 mm AL: 21.00 mm
ACD: 3.26 mm ACD: 3.00 mm

Acc. K: -3.66 D @ 125° Acc. TK: -1.21 D @ 100°
Avg. R: 7.68 mm Avg. TR: 8.00 mm
R1: 7.82 mm @ 125° TR1: 8.11 mm @ 100°
W: 7.53 mm @ 35° TR2: 7.88 mm @ 100°

IOL CALCULATION

ZEISS AT LARAII® toric 929 MP **ZEISS AT LARAII® toric 929 MP**

Z CALC | Keratometry Z CALC | Total Keratometry

IOL [D]				Predicted outcome [D]			
SE	Sph	Cyl	As	SE	Sph	Cyl	As
+20.00	+19.00	+2.00	35°	-0.94	-0.87	-0.13	125°
+19.50	+18.50	+2.00	35°	-0.56	-0.49	-0.13	125°
+19.00	+18.00	+2.00	35°	-0.18	-0.12	-0.13	125°
+18.50	+17.50	+2.00	35°	+0.19	+0.26	-0.14	125°
+18.00	+17.00	+2.00	35°	+0.56	+0.63	-0.14	125°

EUP: 4.28 mm

IOL [D]				Predicted outcome [D]			
SE	Sph	Cyl	As	SE	Sph	Cyl	As
+32.50	+31.75	+1.50	10°	-0.67	-0.66	-0.02	100°
+32.00	+31.25	+1.50	10°	-0.28	-0.27	-0.02	100°
+31.50	+30.75	+1.50	10°	+0.11	+0.12	-0.03	100°
+31.00	+30.25	+1.50	10°	+0.48	+0.50	-0.03	100°
+30.50	+29.75	+1.50	10°	+0.87	+0.88	-0.03	100°

EUP: 3.91 mm

F **G**

Incision orientation: 0°
Implant axis: 35°

Incision orientation: 0°
Implant axis: 10°

Comment: Signature: ZEISS

2024 Calculation Reference - Version 1.7.0-1000 - Created on 2024-05-08 07:39 (UTC) by stage.nova Page 1 of 1

A Clinic-specific information (Optional).

B Name and type of the lens.

C Formula and type of measurement (Keratometry or Total Keratometry).

D Labeled values on the product package of the calculated lenses are highlighted with bold font and not labeled ones greyed out.

E Selected lenses from the wishlist for OD and OS.

F Eye schematic with main incision position and implant axis for toric IOLs.

G Anatomical position.

ICOL ORDER FORM
 Patient ID: TEST 00

Test Clinic
 Department
 Max-Delbrück-Straße 8-10
 Building C
 10589 Berlin
 Germany
 Telephone number
 test@clinic.com

	OD	OS
ICL	ZEISS AT LARAB toric 929 MP	ZEISS AT LARAB toric 929 MP
ICL (SE / Sph / Cyl / Axis)	A +19.00 D / — / +2.00 D / 35°	+31.50 D / — / +1.50 D / 10°
Order quantity	1	1
Surgery date	2024-05-13	2024-05-13
Target refraction (SE)	0.00 D	0.00 D
Axial length	23.85 mm	21.00 mm
Anterior chamber depth	(from Epithelium) 3.26 mm	(from Epithelium) 3.00 mm
Keratometric index	1.3375	1.3375
R1	7.82 mm @ 125°	— @ —
R2	7.53 mm @ 35°	— @ —
Ast. K	-1.66 D @ 125°	— @ —
TR1	— @ —	8.11 mm @ 100°
TR2	— @ —	7.88 mm @ 10°
Ast. TK	— @ —	-1.21 D @ 100°
Incision orientation	0°	0°
SIA	0.00 D	0.00 D
ELP	4.28 mm	3.91 mm
Predicted outcome (SE / Sph / Cyl / Axis)	-0.18 D / -0.12 D / -0.13 D / 125°	+0.11 D / +0.12 D / -0.63 D / 100°

Order reusable STAYC: ☐

Disclaimer:

The order request is based on a non-binding recommendation. I have accepted the Terms and Conditions of use of the ZEISS product that generated this order request. The recommendation is merely an approximate value on the basis of general experience and a calculation algorithm and has not been verified on the basis of my specialist expertise. The order request and a resulting order are based on the General Terms and Conditions of Carl Zeiss Meditec AG that was able to access online at <https://www.zeiss.com/meditec/content/terms-and-conditions.html>.

Comment

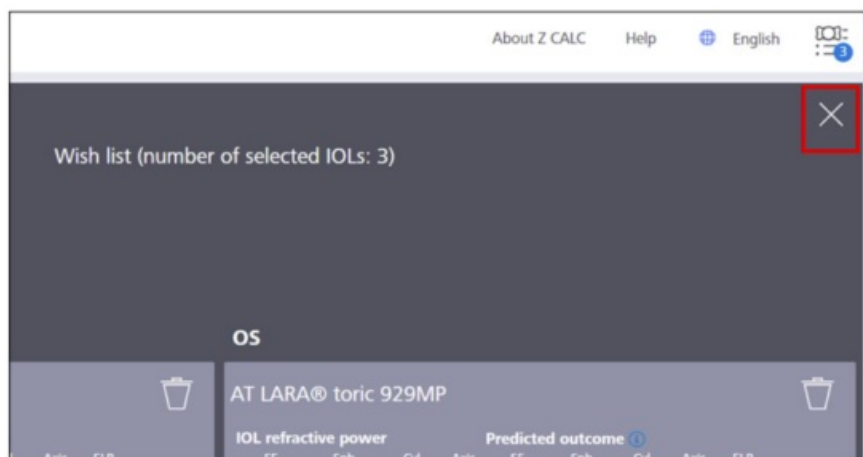
Signature

ZEISS Calculation Reference - version 1.7.0 (2024) Created on 2024-05-08 07:00:00 City: magde, test Page 1 of 1

A Based on the labeling of the selected lens, ordering relevant values are displayed bold.

OD: Oculus Dexter (right eye)
OS: Oculus Sinister (left eye)
OU: Oculus Uterque (both eyes)
LS: Lens state
Target ref.: Target refraction
LVC: Laser vision correction
SIA: Surgical induced astigmatism
Inc: Incision direction
n: Keratometric index
AL: Axial length
ACD: Anterior chamber depth
Ast. K/ Ast. TK: Astigmatism K/ TK
Avg. R/ Avg. TR: Average R/ TR
K1 & K2: Keratometry values
TK1 & TK2: Total Keratometry values
SE: Spherical equivalent
Sph: Sphere
Cyl: Cylinder
Ax: Axis
ELP: Effective lens position

Start new calculation



- Close the wish list window by clicking the cross on the top right of the screen.
- Start a new calculation by clicking on the “New calculation” button. Please note, that all input data and the calculation results including the wish list, will be deleted when you click this button. If you only want to add another calculation to add to your wish list, do not click “New Calculation”.



Addendum

Pop-Up Blockers and how to deactivate

To download the IOL calculations/ IOL order forms, pop-ups must be allowed for the Z CALC page. Please ensure to deactivate browser-based pop-up blockers, in case the pop-ups are blocked (PDF creation is suppressed).

This option can be found within the settings of the browser you are using.

In some browsers you see the blocking as a warning message and you can enable the option directly by clicking on the message.

It may then be necessary to start downloading the documents again.

Further information can be found on the respective homepages of the browser providers



Z CALC 2.3



Carl Zeiss Mediatek AG


Goeschwitzer Strasse 51–52 07745 Jena Germany

<https://zcalc.meditec.zeiss.com>



www.zeiss.com/med/contacts



Documents / Resources

	<p>ZEISS Z CALC Toric and Non Toric IOL Calculation and Ordering [pdf] User Guide MP, MVMICS, Z CALC Toric and Non Toric IOL Calculation and Ordering, Z CALC, Toric and Non Toric IOL Calculation and Ordering, Non Toric IOL Calculation and Ordering, IOL Calculation and Ordering, Calculation and Ordering, Ordering</p>
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References

-  [Contact us at ZEISS Medical Technology](#)
-  [Z CALC Online IOL Calculator](#)
- [User Manual](#)

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