

Z CALC 2.1 Quick Guide

Toric & non-toric IOL calculation and ordering with Z CALC®



Seeing beyond

Z CALC:

Z CALC is a software intended to support a user in selecting intraocular lenses 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.

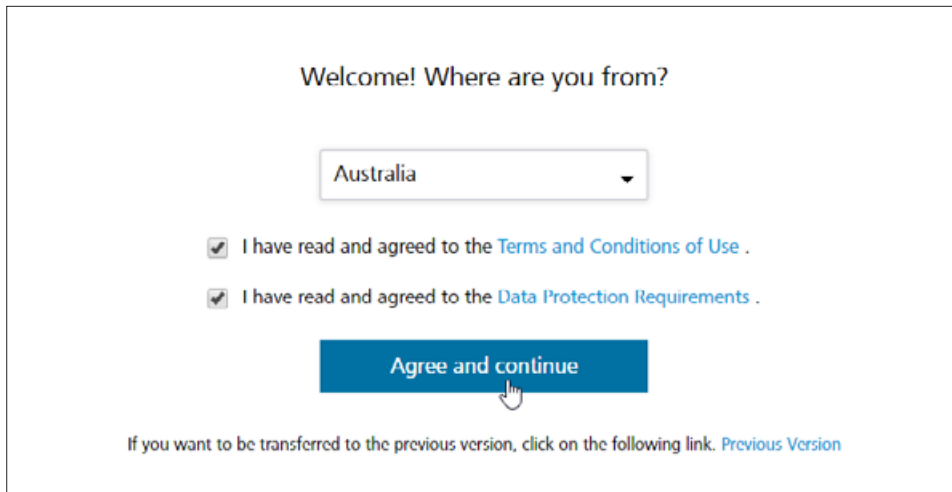
The new Z CALC is compatible with the following browsers:

Microsoft Edge Version 16 or higher, Apple Safari Version 11 or higher, Mozilla Firefox Version 57.0 or higher (PC/Mac), Google Chrome Version 63.0 or higher (PC/Mac), Internet Explorer, Google Chrome Mobile for Android Version 63.0 or higher and Apple Safari mobile for iPhone/iPad Version 11 or higher.

Preconditions for use:

Please ensure that your pop-up blocker is deactivated. For detailed instructions on how to deactivate the pop-up blockers, please review our [Z CALC 2.0 Quick Guide Addendum](#). Before using the product, please consult the instructions for use.

1. Region Selection / Terms & Condition / Data Protection



Welcome! Where are you from?

Australia

I have read and agreed to the [Terms and Conditions of Use](#) .

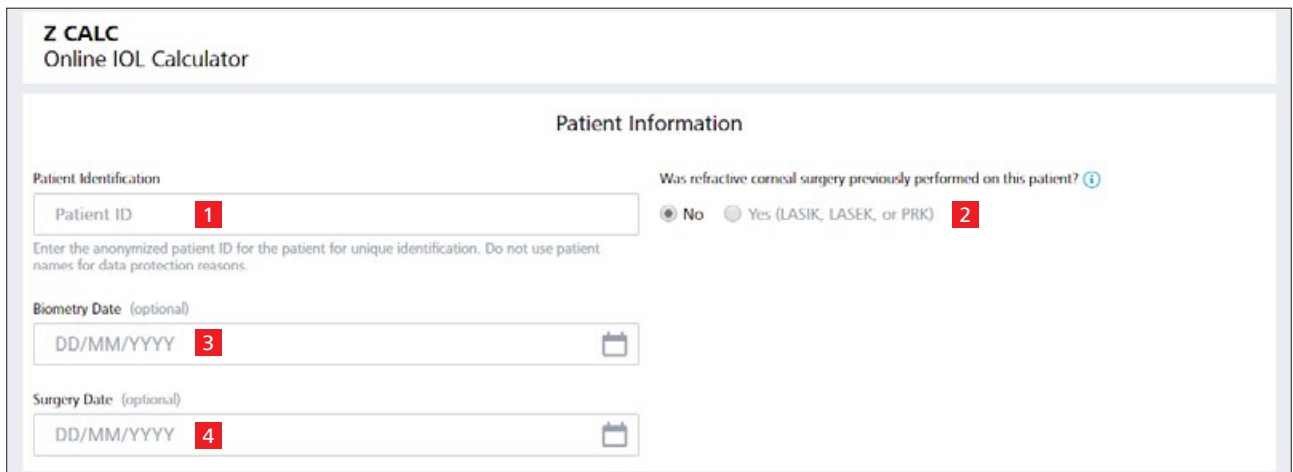
I have read and agreed to the [Data Protection Requirements](#) .

Agree and continue

If you want to be transferred to the previous version, click on the following link. [Previous Version](#)

- Select region.
- Please read “Terms and Conditions of Use” and “Data Protection guidelines”. Click both checkboxes.
- Click “Agree and continue”.
- Note: If you wish to use the former Z CALC version, please use the “Previous Version” provided. Please be aware that Z CALC 1.5.1 will be phased-out within the next 12 months.

2. Patient Information



Z CALC
Online IOL Calculator

Patient Information

Patient Identification

Patient ID **1**

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

Was refractive corneal surgery previously performed on this patient? ⓘ

No Yes (LASIK, LASEK, or PRK) **2**

Biometry Date (optional)

DD/MM/YYYY **3**

Surgery Date (optional)

DD/MM/YYYY **4**

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

3. Calculation Screen

Calculation for OD

AI **5**
23,85
(15.00 - 40.00 mm)

ACD **6**
3,26
(1.50 - 6.00 mm)

Measurement Method **7**
 IOLMaster
 Applanation

Measured from
 Epithelium
 Endothelium

Keratometry **7** Total Keratometry (TK) **7**

R1 (flat) **9** Flat Axis **8**
7,82 125
(5.00 - 10.00 mm / 35.00 - 65.00 D) (0 - 180°)

R2 (steep) Steep Axis
7,53 35
(5.00 - 10.00 mm / 35.00 - 65.00 D)

Refractive index **10** Cyl (Ax)
1.3375 1.66

Target Refract. SE **11** Incision Orientation
0,00 0
(-5.00 - 5.00 D, optional) (0 - 360°, optional)

SIA **11**
0,00
(0.00 - 2.00 D, optional)

Toric **12** Non-toric

AT LISA® toric 909 **13**

Ensure that the data entered are correct. ZEISS does not send or save information for patient identification. By clicking on the "Accept and calculate" button, you agree to the terms and conditions of use, upon the terms and conditions of use.

Accept and calculate

- 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 Flat Axis.
- 9** Enter the K- or TK-readings either in dpt or radii in mm.
- 10** Select the Refractive Index from the drop down menu.
- 11** Insert target refraction, incision orientation and SIA for personalized calculation (optional).
- 12** Choose between toric or non-toric IOL calculation.
- 13** Select the desired IOL from the drop-down menu.

Click "Accept and calculate".

4. Result Screen

Standard Mode

Show expanded mode

IOL Refractive Power				Predicted Refraction				
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]	
+19.50	+18.50	+2.00	31	-0.37	-0.27	-0.18	121	...
+19.00	+18.00	+2.00	31	0.00	+0.10	-0.19	121	...
+18.50	+17.50	+2.00	31	+0.37	+0.46	0.19	121	...

Visualization of the IOL Value

Select IOL type via the drop-down menu:
M: MICS (microincision cataract surgery)
MP: MICS, preloaded
MV: MICS, violet and blue filter (yellow)

Expanded Mode

Hide expanded mode

IOL Refractive Power				Predicted Refraction				
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]	ELP [°]
+19.00	+18.00	+2.00	31	0.00	+0.10	-0.19	121	4.43

Visualization of the IOL Value

Select IOL type via the drop-down menu:
M: MICS (microincision cataract surgery)
MP: MICS, preloaded
MV: MICS, violet and blue filter (yellow)

- 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).

5. IOL type selection

IOL Refractive Power				Predicted Refraction				
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]	
+19.50	+18.50	+2.00	31	-0.37	-0.27	-0.18	121	...
+19.00	+18.00	+2.00	31	0.00	+0.10	-0.19	121	14
+18.50	+17.50	+2.00	31	+0.37	+0.46	-0.19	121	15

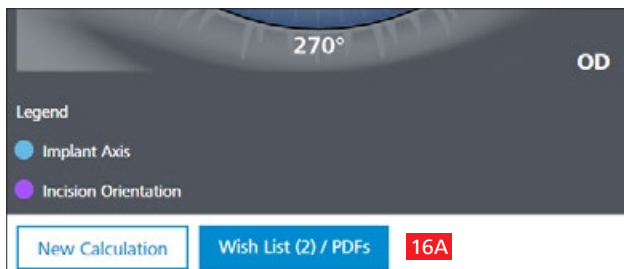
Dropdown menu options: M, MP, MV

14 Choose between different IOL types from the drop-down menu from the generated readings.

15 Click on the “Add to wish list” button adjacent to the drop-down menu to transfer the result to the wish list.

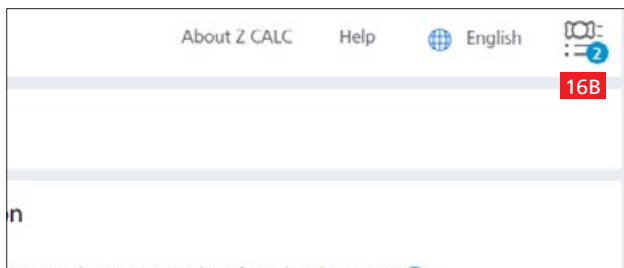
- M** MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size
- MP** MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size & Preloaded
- MV** MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size & Violet and blue filtering (yellow)
- P** Fully Preloaded in injector
- PY** Fully Preloaded in injector & Yellow blue-light filtering
- “-”** No variant

6. Navigate to the Wishlist/PDF-Printouts



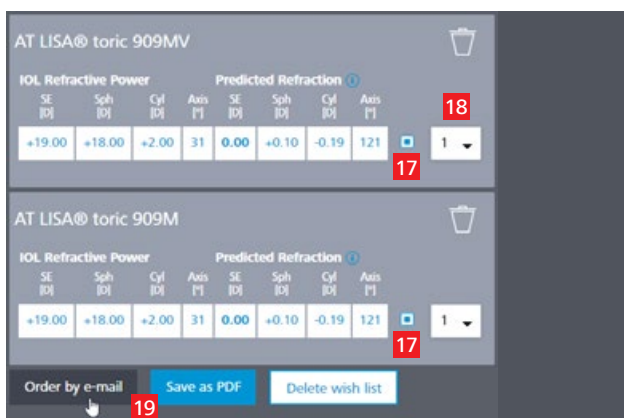
16A Click on wish list button at the bottom. This will lead you to the second screen, where you can select lenses for PDF-print-outs or ordering.

OR



16B Click on the wish list symbol in the right upper corner to save calculation result to a local computer or order IOL(s) directly via email.

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



17 Use checkbox to mark the selection.

18 Select the desired quantity for the IOL.

19 Click “Order by E-Mail” (to directly send your order to the local ZEISS sales representative) or “Save as PDF” (create the PDF with the calculation result).

8. 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 Calculation
 IOL Order Form and IOL Calculation

E-mail Address of ZEISS IOL Representative

Clinic Name

Department(optional)

Street and Number

Additional Address Information(optional)

City

Zip Code

State(optional)

Country

Telephone Number(optional)

Your E-Mail Address

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

For Ordering

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: [Z CALC 2.0 Quick Guide Addendum](#).

Save PDF form

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

IOL Order Form
 IOL Calculation
 IOL Order Form and IOL Calculation

Clinic Name(optional)

Department(optional)

Street and Number(optional)

Additional Address Information(optional)

City(optional)

Zip Code(optional)

State(optional)

Country(optional)

Telephone Number(optional)

Your E-Mail Address(optional)

Check your entries

For Printing

Clinic name
Department
Street and Number
Additional Address Information
Zip Code City State
County
Telephone Number
Your E-Mail Address

Patient ID: 40657458 Gender: _____
Surgeon: _____ Operator: _____

[!] Warning: You have modified IOLMaster data. However, calculations for patients with whom refractive myopic or hyperopic surgery has already been carried out (LASIK/LASEK/PRK type) are intended for original IOLMaster data only. Using the results of the calculation is at your own risk!

IOL Calculation

Eye Status

Lens Status: Phakic				Lens Status: Phakic			
LVC: LASIK/LASEK/PRK LVC Mode: Myopic				LVC: LASIK/LASEK/PRK LVC Mode: Myopic			
Target Ref: 0.00 D SIA: 0.30 D Inc: @ 135°				Target Ref: 0.00 D SIA: 0.30 D Inc: @ 45°			

Biometry

Date of Measurement: 2019-04-24				Date of Measurement: 2019-04-24			
AL	24.00 mm	From	Epithelium	AL	24.00 mm	From	Epithelium
ACD	3.50 mm			ACD	3.50 mm		
LT	---			LT	---		
WTW	---	n	1.3375	WTW	---	n	1.3375
K1	41.00 D @ 75°	Cyl	---	K1	41.00 D @ 75°	Cyl	---
K2	42.00 D @ 165°	SE	---	K2	42.00 D @ 165°	SE	---
TK1	---	Cyl TK	---	TK1	---	Cyl TK	---
TK2	---	TSE	---	TK2	---	TSE	---

Z858 AT LARA® toric 929 MP				Z858 AT LISAB® tri toric 939 MP			
Z CALC with Keratometry				Z CALC with Keratometry			
IOL				IOL			
SE	Sph	Cyl	Axis	SE	Sph	Cyl	Axis
22.80	22.80	1.00	172°	22.25	22.80	1.80	189°
0.08	0.61	-0.15	82°	-0.80	-0.78	-0.04	69°
22.80	22.80	1.00	172°	22.25	22.80	1.80	189°
0.08	0.16	-0.15	82°	-0.05	-0.03	-0.04	69°
22.80	21.80	1.00	172°	22.25	22.00	1.80	189°
0.48	0.53	-0.15	82°	0.32	0.34	-0.04	69°
21.80	21.00	1.00	172°	22.25	21.50	1.80	189°
0.83	0.90	-0.15	82°	0.68	0.71	-0.05	69°

Incision Orientation: 135°
Implant Axis: 172°

T N

Incision Orientation: 45°
Implant Axis: 159°

N T

Comment: _____ Signature: _____

ZEISS

Zeiss Calculation Web Services - Version 1.1 Printed on 2019-04-24 09:00 by dev, isaac Page 1 of 1
Carl Zeiss Meditec AG | Template Version 1.1 [042019] | © Copyright 2019 All rights reserved.

- A** Clinic-specific information (Optional).
- B** Warning for patients with previous refractive surgery.
- C** Name and type of the lens.
- D** Formula and type of measurement (Keratometry or Total Keratometry).
- E** Labeled values on the product package of the calculated lenses are highlighted with bold font and not labeled ones greyed out.
- F** Selected lenses from the wishlist for OD and OS.
- G** Eye schematic with main incision position and implant axis for toric IOLs.
- H** Anatomical position.

Clinic name
Department
Street and Number
Additional Address Information
Zip Code City State
County
Telephone Number
Your E-Mail Address

Patient ID: 40657458 Gender: _____
Surgeon: _____ Operator: _____

[!] Warning: You have modified IOLMaster data. However, calculations for patients with whom refractive myopic or hyperopic surgery has already been carried out (LASIK/LASEK/PRK type) are intended for original IOLMaster data only. Using the results of the calculation is at your own risk!

IOL Order Form

IOL	Laterality	Order Quantity	Surgery Date
AT LARA® toric 929 MP	OD	1	2019-05-27
AT LISAB® tri toric 939 MP	OS	1	2019-05-27

OD		OS
IOL	AT LARA® toric 929	AT LISAB® tri toric 939
IOL Refractive Power (Sph/Cyl/Axis)	22.00 dpt / 1.00 dpt / 172°	22.50 dpt / 1.80 dpt / 189°
IOL Refractive Power (SE/Cyl/Axis)	22.80 dpt / 1.00 dpt / 172°	23.25 dpt / 1.50 dpt / 159°
Target Refraction (SE)	0.00 dpt	0.00 dpt
Axial Length	24.00 mm	24.00 mm
Refractive Index (n)	1.3375	1.3375
K ₁ / a ₁	41.00 dpt / 75°	41.00 dpt / 75°
K ₂ / a ₂	42.00 dpt / 165°	42.00 dpt / 165°
TK ₁ / a ₁	---	---
TK ₂ / a ₂	---	---
Anterior Chamber Depth	(from Epithelium) 3.50 mm	(from Epithelium) 3.50 mm
Subjective Refraction (Sph/Cyl/Axis)	---	---
Incision Orientation	135°	45°
SIA	0.30 dpt	0.30 dpt
ELP	4.39 mm	4.64 mm
Residual Refraction (Sph/Cyl/Axis)	0.16 dpt / -0.15 dpt / 82°	-0.03 dpt / -0.04 dpt / 69°
Predicted Refraction (SE)	0.08 dpt	-0.05 dpt

Order Reusable STACY:

Disclaimer:
The order request follows 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 I have verified on the basis of my specialized expertise. The order request and its resulting order are based on the General Terms and Conditions of Carl Zeiss Meditec AG that I was able to access online at <https://www.zeiss.com/meditec/us/imprint/terms-and-conditions.html>.

Comment: _____ Signature: _____

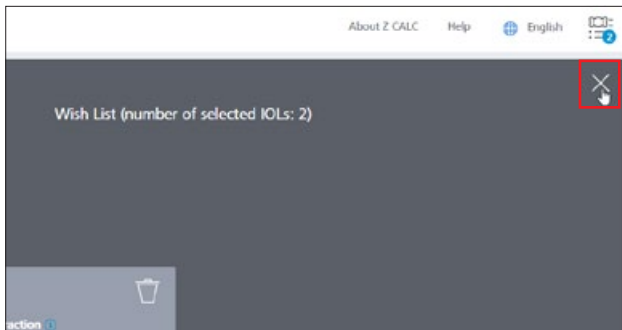
ZEISS

Zeiss Calculation Web Services - Version 1.1 Printed on 2019-04-24 09:00 by dev, isaac Page 1 of 1
Carl Zeiss Meditec AG | Template Version 1.1 [042019] | © Copyright 2019 All rights reserved.

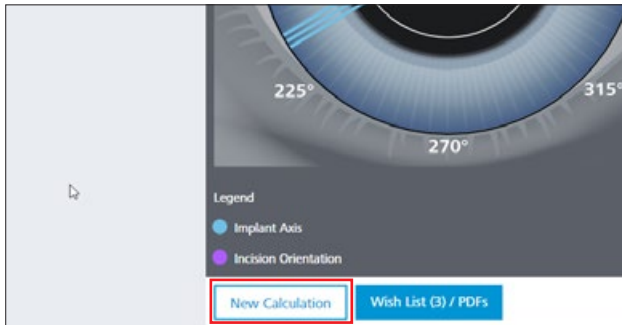
- A** Based on the labeling of the selected lens, ordering relevant values are displayed bold.

OD: Oculus Dexter
OS: Oculus Sinister
OU: Oculus Uterque
LVC: Laser Vision Correction
SIA: Surgical Induced Astigmatism
Inc: Incision
AL: Axial Length
ACD: Anterior Chamber Depth
LT: Lens Thickness
WTW: White-to-White
K1 & K2: Keratometry Values
TK1 & TK2: Total Keratometry Values
n: Refractive Index
Cyl: Cylinder
ELP: Effective Lens Position

9. 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”.





0297

Z CALC 1.5.1



Z CALC 2.1.0

Z CALC 2.0.1



Carl Zeiss Meditec AG

Goeschwitzer Strasse 51–52

07745 Jena

Germany

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

www.zeiss.com/med/contacts

EN_32_025_03031V Printed in Germany. CZ-VIII/2019 International edition: Only for sale in selected countries.
The contents of the brochure may differ from the current status of approval of the product or service offering in your country. Please contact our regional representatives for more information.
Subject to changes in design and scope of delivery and due to ongoing technical development. Z CALC is either trademark or registered trademark of Carl Zeiss Meditec AG or other companies of the ZEISS Group in Germany and/or other countries.
© Carl Zeiss Meditec AG, 2019. All rights reserved