

CUTTING EDGE

CUTTING EDGE TORIC CALCULATOR
VERSION 1.1.0

ACCOMPANYING DOCUMENT

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1. General information

1.1 Scope

These Instructions for Use apply to Version 1.0.0 of Cutting Edge Toric Calculator.

1.2 Contact information

For questions or comments about these Instructions for Use or about the calculator, please contact the Cutting Edge Customer Service: infocalc@cutting-edge.fr.

Cutting Edge contact partners can be found on the following website: www.cutting-edge.fr

1.3 Definitions and Acronyms

Name	Description
D	Diopter
Flat K	Corneal power of the flattest anterior meridian
Flat Axis	Axis of the flattest corneal meridian
ID	Identification
IOL	Intraocular Lens
OD	Right eye
OS	Left eye
Steep K	Corneal power of the steepest anterior meridian
SE	Spherical equivalent power of the IOL
SIA	Surgically Induced Astigmatism
ACD	Anterior Chamber Depth
AL	Axial Length

1.4 Explanation of symbols

	Manufacturer
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2. Safety notes

2.1 Intended User

Cutting Edge Toric Calculator may only be used by trained healthcare professionals.

2.2 Area of use

2.2.1 Intended use

Cutting Edge Toric Calculator is provided to determine the recommended toric intraocular lens power and the suggested positioning axis, as an adjunct tool for physicians.

It is intended to be used in conjunction with a comprehensive ophthalmic examination and the appropriate diagnostic tests and measurements necessary for cataract surgery candidates.

2.2.2 Contraindications

Cutting Edge Toric Calculator is intended to provide information for healthcare professionals in order to make decisions with therapeutic purposes.

The final choice of the suitable IOL is the surgeon's responsibility.

Cutting Edge Toric Calculator is not intended to calculate toric IOLs for patients with irregular astigmatism.

2.2.3 Data protection and information security

For data protection reasons, patient names must not be entered; only anonymized patient IDs may be entered.

Cutting Edge does not send or save information for patient identification.

A user account can be created (optional). For this purpose, title, name, first name, e-mail address and password are collected. Cutting Edge uses these personal data for user account management and to personalize the messages sent to the identified user.

According to the 2016/679 regulation (General Data Protection Regulation), you benefit of an access right, a rectification's right or suppression's right on data referring to you, at any time by contacting us at rgpd@cutting-edge.fr.

2.2.4 General warnings and notices for safety



Suboptimal IOL calculation due to insufficient consideration of the patient's initial situation

If the individual patient's initial situation is not adequately considered, suboptimal IOL variants may be calculated and suboptimal IOL may be implanted.

- When performing a calculation, consider any previous surgical procedures on the patient, the individual's ocular status (e.g., glaucoma), and other patient details (e.g., refractive status).
- For these considerations, responsibility lies with clinical staff and treating physicians.



Inaccurate IOL calculation due to incorrect biometric data entry.

Incorrect biometric data entered can lead to suboptimal IOL implantation.

- User must make sure that the patient's biometric data have been correctly entered.
- Biometric data must be entered with 2 decimals and not rounded up or down.
- Enter the correct refractive index of the keratometer used. This value can be selected from a list of default values.

2.2.5 Disclaimer

The user is responsible for ensuring that biometric data entered are in the defined range and are correctly entered.

Results obtained by Cutting Edge Toric Calculator are not intended to serve as surgical instruction or to be definitive. It cannot be guaranteed that the results will be accurate for every case.

Physicians using the calculator must come to their own independent resolution regarding the proper treatment for their patients and are solely responsible for the final post-operative refractive outcomes.

3. Description

3.1 Functional description

Cutting Edge Toric Calculator is a medical device.

Cutting Edge Toric Calculator is a web application that combines patient specific biometry data and the planned surgery information to recommend a toric IOL model which will reduce residual refractive astigmatism, and the optimal alignment axis within the capsular bag.

Cutting Edge Toric Calculator considers preoperative corneal astigmatism, as well as any anticipated surgically induced astigmatism to determine the optimal toric IOL for the correction of postoperative corneal astigmatism.

Cutting Edge Toric Calculator also provides an option to consider estimated astigmatism from the posterior surface of the cornea.

Keratometry measurements of the anterior surface of the cornea are used to estimate the astigmatism of the posterior cornea. Combination of anterior, posterior corneal astigmatism and SIA produces an overall net astigmatism of the cornea.

Users of Cutting Edge Toric Calculator also have the option to enter keratometry values of total corneal power. Some anterior segment imaging and biometry diagnostic tools can measure curvature values for both the anterior and posterior surfaces of the cornea and produce keratometry values representative of the total cornea.

These total corneal power values can be entered as keratometry input and in that case, the option to include the posterior astigmatism calculation should be turned OFF.

The values for the calculated IOLs are as close as possible to the required target refraction, whereby a choice of three IOL variants is always offered.

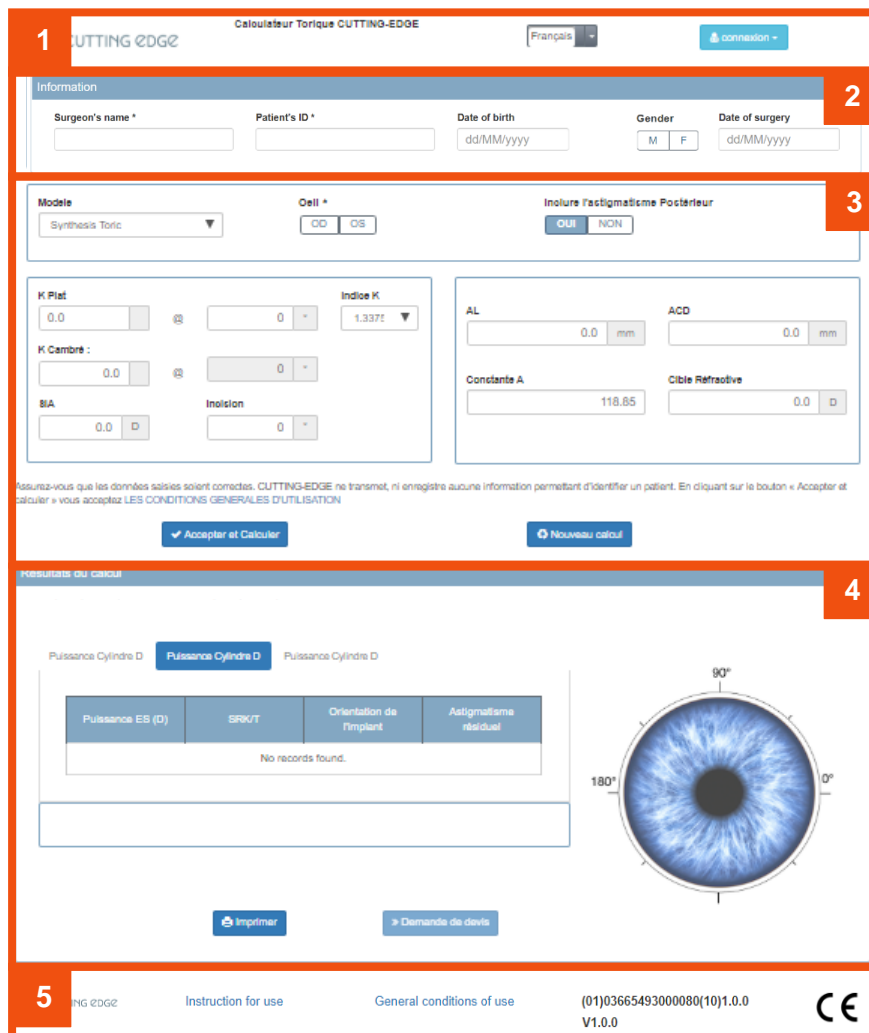
A graphic of the eye with the IOL implanted is used to better depict the results. The IOL is rotated into place and the intended incision is marked.

This graphical display and the numerical inputs and outputs can be printed and used as a guide during surgery.

A user account is required to use the E-mail function.

3.2 User interface

The main view contains the following elements:



The screenshot shows the following elements:

- 1 Header:** Includes the CUTTING EDGE logo, language selection (Français), and a connexion button.
- 2 Information:** Fields for Surgeon's name, Patient's ID, Date of birth, Gender (M/F), and Date of surgery.
- 3 Calculation data:** Includes Model (Synthesis Toric), Oeil (OD/OS), Inclure l'astigmatisme Postérieur (OUI/NON), K Plat, Indice K, K Cambre, BIA, Inclusion, AL, ACD, Constante A, and Cible Réfractive.
- 4 Calculation results:** A table with columns for Puissance ES (D), SRK/T, Orientation de l'implant, and Astigmatisme résiduel. An eye diagram shows IOL orientation with 0°, 90°, and 180° markers.
- 5 Footer:** Includes CUTTING EDGE logo, Instruction for use, General conditions of use, UDI code (01)03665493000080(10)1.0.0 V1.0.0, and the CE mark.

Position	Area	Description
1	Header	Contains the following elements: <ul style="list-style-type: none"> Language selection Sign in option button
2	Information	The information about Surgeon and Patient is entered here.
3	Calculation data	All relevant data for the calculation is entered here as well as selecting which IOL model is to be calculated.
4	Calculation results	A table with the calculation results and an eye diagram with the IOL orientation value are displayed.
5	Footer	Contains the following elements: <ul style="list-style-type: none"> Help <ul style="list-style-type: none"> link to download the Instructions for Use UDI code version information Link to download the Terms and Conditions of use.

User can scroll up and down the page, all areas are always accessible.

3.3 General operating instructions

The following message types are used in the calculator:

Message Type	Description	Cause	Action
Error message	Displayed in red directly under the input field. No IOL calculations can be performed.	Mandatory value not entered or outside the calculation range.	Enter a value or correct the entered value to make the message disappear.
Warning message	Displayed in yellow directly under the input field. IOL calculations can be performed.	Entered value outside the usual range.	Verify the entered value and correct the value if applicable. Close the message by clicking on the cross.
Information message	Black pop-up message with a mouse-over.	Contains information to guide the user to fill fields or translate acronyms.	N/A

3.4 Basics

3.4.1 IOL calculation

The IOL calculation is carried out based on the biometric data that are entered using the SRK/T formula. With the IOL calculation, three variants ("IOL variants") are calculated for each IOL.

The middle variant is closest to the target refraction and the other two are SE neighbors of the middle variant, whereby the IOL refractive power is adjusted by manipulating the SE value and the cylinder.

The user can choose which of the IOL variants is suitable for the patient.

3.4.2 Posterior astigmatism

Posterior astigmatism is estimated based on the biometric data entered and using the Baylor nomogram.

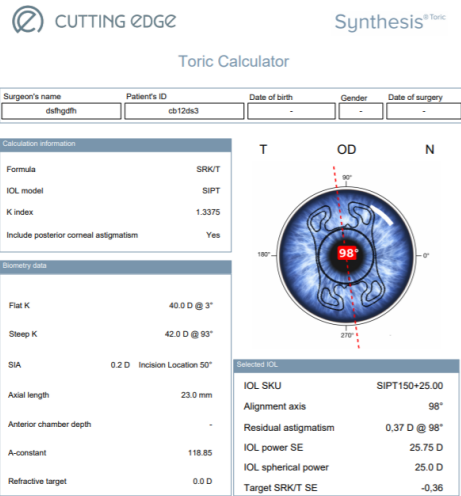
The results may not be applicable to individual eyes with corneal abnormality (e.g. keratoconus, post penetrating keratoplasty, post refractive surgery).

Only anterior corneal curvatures values are appropriate when requesting the use of the posterior astigmatism function.

3.4.3 Report

Cutting Edge Toric Calculator provides the option to generate a calculation report and to further save and print it or receive it via e-mail. This way, the user can start the order process for the required IOL.

The following report is available:

Form	Patient Details
<p>Figure</p>	 <p>The screenshot displays the 'Torric Calculator' interface. At the top, it shows the 'CUTTING EDGE' logo and 'Synthesis[®] Toric'. Below this, there are input fields for 'Surgeon's name' (dashgph), 'Patient's ID' (cb12d3), 'Date of birth', 'Gender', and 'Date of surgery'. The 'Calculation information' section lists: Formula (SRK/T), IOL model (SIPT), K index (1.3375), and 'Include posterior corneal astigmatism' (Yes). The 'Biometry data' section lists: Flat K (40.0 D @ 3°), Steep K (42.0 D @ 93°), SIA (0.2 D, Incision Location 50°), Axial length (23.0 mm), Anterior chamber depth, A-constant (118.85), and Refractive target (0.0 D). The 'Selected IOL' section lists: IOL SKU (SIPT150+25.00), Alignment axis (98°), Residual astigmatism (0.37 D @ 98°), IOL power SE (25.75 D), IOL spherical power (25.0 D), and Target SRK/T SE (-0.36). A graphic of an eye with a toric IOL is shown with an alignment axis of 98°.</p>
<p>Information included</p>	<ul style="list-style-type: none"> - Patient's identification - Biometric Data - Calculation result for the selected IOL - Graphic image of the IOL and orientation axis value - Information about the IOL to be ordered

4. Operation

4.1 Opening the calculator and selecting the language

Cutting Edge Toric Calculator is openly accessible for all internet users via a web browser.

The following versions are supported:

- ✓ Microsoft Edge Version 12 or higher
- ✓ Apple Safari Version 9.0 or higher
- ✓ Mozilla Firefox Version 38.0 or higher
- ✓ Google Chrome Version 45.0 or higher

A current version of Adobe Acrobat Reader is also required to prepare the calculation report.

1- Access Cutting Edge Toric calculator using the following link in a suitable web browser:
<http://toriccalc.cutting-edge.fr>

2- Select language in the drop-down menu located in the header.

Note: Default language depends on the standard language set in the browser.

3- IOL calculation can be started.

4.2 Essential functions

Carrying out an IOL calculation with Cutting Edge Toric Calculator is divided into the following steps:

- Creating user account (optional)
 - E-mail address
 - Name
 - First name

- Title
- Country
- Language
- Preferences
- Signing in (optional)
 - E-mail
 - Password
- Entering information about Surgeon and Patient
 - Surgeon's name
 - Patient's Identification
 - Patient's date of birth
 - Patient's gender
 - Expected date of surgery
- Selecting calculation option
 - Selection of the IOL model
 - Selection of the eye to be operated
 - Selection of the astigmatism calculation option
- Entering the data for the calculation and IOL calculation
 - Entry of patient's biometric data
 - Acceptation of the terms and condition of use and calculation
- Selection of the IOL
 - Display of the calculated IOL variants
 - Selection of the desired IOL

Note: When using the "Clear All" button, all data entered and all calculation results are deleted.

- Printing the report/E-mail
 - Display of the order information for the selected IOL

The following section provides more detailed information about the individual steps.

4.2.1 Creating user account (optional)

Identified user can benefit from additional functions:

- √ Preferences (settings) are preselected for future connections,
- √ An email can be automatically generated and sent to the user with the calculation report attached and the IOL reference to order.

The following table provides an overview of the input fields in the registration form:

Parameter	Explanation
Email	Entering data for user's email address.
Name	Entering data for user's name.
First Name	Optional input for user's first name.

Parameter	Explanation
Title	User's title can be selected from a series of default values.
Country	Optional input of the user's country, selection from a drop-down menu.
Language	Optional input of the user's language, selection from a drop-down menu.
Include posterior astigmatism	Optional input for posterior astigmatism adjustment. YES should be selected when using anterior keratometry value and when willing to add posterior astigmatism estimation. Estimated posterior corneal astigmatism will be calculated and considered in the total corneal astigmatism calculation. NO should be selected when using total keratometry value or when willing to use anterior keratometry only.
K index	Optional input of the refractive index used for keratometry, can be selected from a series of default values.
SIA	Optional input of the astigmatism induced by the surgery (in D).
Incision	Optional input of the position of the main incision (in degree).
Refractive target	Optional input of the refractive target (SE) (in D).
I'm not a robot	Required test to differentiate human users from possible malicious robots.
I accept the terms and conditions of use	By checking the box, the user accepts the terms and conditions of use.

Pre-requisite: Cutting Edge Toric Calculator accessed (See §4.1 Opening the calculator and selecting the language).

- 1- Click on the "Sign in" button.
- 2- Select "Create a new account".
- 3- Complete the form. Only the email address, name and title are mandatory fields.
- 4- Check the boxes "I am not a robot" and "I accept the terms and conditions".
- 5- Click on the "Save" button. An email is sent to activate user account and define the password.
- 6- Open the received email and click on the link.
- 7- Enter a password containing 6 to 10 characters.
- 8- Confirm password.
- 9- Click on the "Save" button. User account has been created.
- 10- Click on the "return" button to return to the calculator page.

4.2.2 Signing in (optional)

Sign in allows recovery of all user settings and activates the E-mail function.

The following table provides an overview of the input fields and button in the 'Sign in' window:

Parameter	Explanation
email	Entering data for email address of the user linked with the user account.
password	Entering data for password of the user linked with the user account.
Authentication	Opens the user account. Depending on information provided by the user when creating the user account, user preferences and settings are displayed in the appropriate fields. E-mail function activated.
Forgotten password	Recovery of the password to access the user account.
Create a new account	Opens the form for creating a user account

Pre-requisite: User account created (See §4.2.1 Creating user account).

- 1- Click on the "Sign in" button.
- 2- Enter user email address.
- 3- Enter user password.
- 4- Click on the "Authentication" button.

4.2.3 Entering patient information

In the first stage of IOL calculation, patient's information is entered.

The following table provides an overview of the input fields under "Information":

Parameter	Explanation
Surgeon's name	Entering data for surgeon identification.
Patient's ID	Entering data for patient identification. The patient must be uniquely identifiable, and patient's name must not be entered.
Date of birth	Optional input of the date of birth of the patient.
Gender	Optional input of the gender of the patient.
Date of surgery	Optional input of the date of the scheduled surgery for the patient.

- 1- Enter the name of the surgeon in the "Surgeon's name" input field.
- 2- Enter the patient ID of the patient for whom the IOL is being calculated in the "Patient's ID" input field.

Reminder: Do not enter the patient's name!

Surgeon's name and Patient's ID must be entered to be able to perform the calculation.

- 3- Enter additional information about the patient (date of birth, gender, and date of surgery).
- 4- Continue with the calculation option (see §4.2.4 Selecting calculation option).

4.2.4 Selecting calculation option

The following table provides an overview of the input fields and buttons:

Parameter		Explanation
IOL Model		Selecting desired IOL Model to be calculated in a drop-down menu.
Eye		Selecting the eye to be implanted and for which the calculation will be carried out.
Include posterior astigmatism	YES	Select this adjustment if using anterior keratometry value and willing to estimate posterior astigmatism. Estimated posterior corneal astigmatism will be taken into account in the total corneal astigmatism calculation.
	NO	Select this adjustment if using total keratometry value or not willing to estimate posterior astigmatism.

- 1- Select the desired IOL model in the drop-down menu.
- 2- Select the eye by clicking on OD or OS button.
- 3- Select the posterior astigmatism option by clicking on the "Yes" or "No" button.
- 4- Continue with calculation data entry (See §4.2.5 Entering the data for the calculation and IOL calculation).

4.2.5 Entering the data for the calculation and IOL calculation

For IOL calculation, biometric data from the biometry examination must be entered.

The defined range and the usual range are differentiated. If the values that are entered are not in the cited ranges, a message will show up (red: outside the defined range, orange: outside the usual range). If entered values are outside the defined range, no IOL calculation can be carried out.

The following table provides an overview of input fields and buttons:

Parameter	Explanation
Flat K	Keratometer values for corneal curvature and axis. Refractive power can be entered as radius (mm) or diopter (D). Depending on the entered value, the corresponding unit is automatically selected. Values with the same unit must be entered in all fields.
Flat K axis	
Steep K	
K index	The refractive index can be selected from a series of default values.
SIA	Astigmatism induced by the surgery in D.
Incision	Position of the main incision for IOL implantation in °.

Parameter	Explanation
AL	Axial Length in mm.
ACD	Optional input of anterior chamber depth in mm.
A-constant	A-constant corresponding to the selected IOL model.
Refractive target	Target refraction (SE) of the eye in D. +0.0D is displayed by default.
Accept and calculate	Starts the IOL calculation with the settings made and the inputs. By clicking on this button, the user accepts the terms and conditions of use. These can be viewed by clicking on "terms and conditions of use". Calculation is carried out if all mandatory fields are entered and values are in the defined ranges.
Clear All	Deletes all entered values and settings and jumps to the start of the page.

- 1- Enter all biometric data for the required laterality.

All values entered must be in the defined range to be able to calculate IOLs. All fields apart from "ACD" must also be filled out.

TIP: You can move from one field to another by using the Tab key.

- 2- Verify that the entered data are correct.
- 3- Click on the "Accept and calculate" button.

Three Toric IOL cylinder power suggestions are displayed. The cylinder that provides the lowest post-operative expected residual astigmatism is displayed in the middle, while the other options represent the closest available cylinder powers for comparison.

For each cylinder option, three IOL power (SE) suggestions are displayed in the table. The SE that provides the lowest post-operative expected residual refraction is displayed in the middle, while the other options represent the closest available SE powers for comparison.

Estimated residual SE error with SRKT, IOL orientation and predicted residual astigmatism are shown for each individually suggested Toric model.

The recommended IOL is reminded under the table for comparison.

The recommended IOL orientation is displayed on the schematic diagram of the eye as well as the incision location. Identification of Temporal and Nasal are displayed in the graphical area, relative to the choice of eye (OD or OS).

- 4- Continue with the selection of the IOL (See §4.2.6 Selecting IOL).

4.2.6 Selecting IOL

After IOL calculation, the desired IOL is to be selected.

The following table provides an overview of the functions and buttons:

Parameter	Explanation
Cylinder Selection	Select desired IOL cylinder to display the associated three IOL power (SE) suggestions.
IOL Selection	Select the desired IOL power (SE).

Pre-requisite: *You have carried out an IOL calculation.*

- 1- Select an IOL cylinder.
- 2- Select the IOL power (SE) by clicking directly in the table: the selected line is surrounded in black.
- 3- Continue with the IOL report (See §4.2.7 Printing the report/E-mail).

4.2.7 Printing the report/E-mail

A patient details form can be generated and used to start the ordering process for the required IOLs.

The form can be saved and printed or sent by e-mail. For more information about the content of the form, see §3.3.3 Report.

The following table provides an overview of the buttons:

Parameter	Explanation
Print	Save and print the form. By clicking on the "Print" button, the form is generated and opened in a new browser tab. The form can then be saved in a preferred storage location or printed.
E-mail	<i>For identified (logged) user only.</i> Send an e-mail with the calculation report attached and the IOL reference to order. An email is generated and sent to the e-mail address that was entered when creating the user account.

Pre-requisites:

- √ *You have carried out an IOL calculation.*
- √ *An IOL is selected in the results table.*
- √ *If the form is to be saved or printed as a PDF file: Adobe Acrobat Reader is installed, or the used browser has an integrated and activated PDF reader.*

- 1- Click on the "print" button.
- 2- Save or print the file.
By default, the name of the report is the entered patient's ID.
- 3- For a user logged with a user account only (See §4.2.2 Signing in): If you want to receive the report by email, click on the "E-mail" button.
The email is sent.
- 4- Click on the "Clear All" button to perform another calculation, or
- 5- Continue with the shut-down procedure (See §4.2.8 Shutting down).

4.2.8 Shutting down

Close the Cutting Edge Toric Calculator page on your browser by clicking on the cross.

5. Troubleshooting

5.1 General

Message/Fault	Cause	Rectification
Error messages and warnings	Mandatory value(s) not entered	Enter a value in the field identified with the error message.
	Value(s) outside the calculation range	Correct the entered value(s) in the field(s) identified with the error message.
	Values with different refractive power notation have been entered in the fields.	Ensure that values are entered in all fields with the same refractive power notation (mm or D).
	Entered value(s) outside the usual range.	Verify the entered value(s) in the field(s) identified with the warning message and correct the value(s) if applicable. Close the message by clicking on the cross.

5.2 User account

5.2.1 Forgotten password

To reset your password, follow the instructions below:

Pre-requisite:

- √ You have accessed Cutting Edge Toric Calculator (See §4.1 Opening the calculator and selecting the language).
- √ You have created your user account (See §4.2.1 Creating user account).

- 1- In the header, click on the “Sign in” button.
- 2- Select “Forgotten password”.
- 3- Enter your email address (linked with your user account) in the field “email”.
- 4- Click on the “Send” button.
- 5- Open the received email and click on the link.
- 6- Enter a password containing 6 to 10 characters.
- 7- Confirm your password.
- 8- Click on the “Save” button. Your password has been changed.

5.2.2 User settings modification

To modify your user settings, follow the instructions below:

Pre-requisite:

- √ You have accessed Cutting Edge Toric Calculator (See §4.1 Opening the calculator and selecting the language).
- √ You have created your user account (See §4.2.1 Creating user account).

- 1- Log in with your user account (See §4.2.2 Signing in).
- 2- Click on the “profile” button in the header.
- 3- Click on “modify my user settings”.
- 4- In the registration form, modify the desired setting(s).

Note: All the fields can be modified except the email address. If you want to change your email address, you must create a new user account or contact the Cutting Edge Customer Service.

- 5- Click on the “Save” button.

5.3 List of warnings and notices for safety

The table below lists all warning and notices for safety and security related to the use of Cutting Edge Toric Calculator.

All messages are self-explanatory.

Category	Message
Security	Do not use patient names for data protection reasons, enter the anonymised patient ID.
	Ensure that the data entered are correct. Cutting-Edge 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.
Warning	You may enter either diopter or millimeter values. Ensure that values with the same refractive power notation are entered in all fields.
	Please do not select this adjustment if you are using a total keratometry value.
	Warning! Flat K value is outside the usual range: [7.03mm – 8.44mm]. [40.00D – 48.00D]. Calculation is nevertheless possible.
	Warning! Steep K value is outside the usual range: [7.03mm – 8.44mm]. [40.00D – 48.00D]. Calculation is nevertheless possible.
	Warning! AL value is outside the usual range: [16.00 – 30.00]. Calculation is nevertheless possible.
	Warning! ACD value is outside the usual range: [2.00 – 4.00]. Calculation is nevertheless possible.
	Warning! SIA value is outside the usual range: [0.00 – 1.00]. Calculation is nevertheless possible.
	Residual astigmatism must be managed in this particular case.
	The use of a monofocal IOL is recommended in this case.
	The desired IOL is not available for the biometric data indicated.
	Lowest anticipated residual astigmatism. We recommend switching to a Synthesis Toric IOL.
Error	Patient ID must be entered.
	Surgeon’s name must be entered.
	The date must be before today’s date.
	The date must be after today’s date.

Category	Message
	The Eye must be selected.
	The IOL model must be selected.
	Error! Flat K value is not within the defined range. A calculation is not possible. [6.75mm – 8.88mm] [38.00D – 50.00D].
	Error! Flat K (D) must be less than Steep K (D).
	Error! Steep K (mm) must be less than Flat K (mm).
Error	Flat K value must be entered.
	Flat axis value must be entered.
	Error! This value is not within the defined range. A calculation is not possible. [0 – 180]
	Error! Steep K value is not within the defined range. A calculation is not possible. [6.75mm – 8.88mm] [38.00D – 50.00D].
	Error! Steep K (D) must be greater than or equal to Flat K (D).
	Error! Flat K (mm) must be greater than or equal to Steep K (mm).
	Steep K value must be entered.
	Error! AL value is not within the defined range. A calculation is not possible. [15.00 – 40.00]
	AL value must be entered.
	Error! ACD value is not within the defined range. A calculation is not possible. [1.50 – 6.00]
	Error! Refractive target value is not within the defined range. A calculation is not possible. [-4.00 – 1.00]
	Error! SIA value is not within the defined range. A calculation is not possible. [0.00 – 2.00]
	SIA value must be entered.
	Incision value must be entered.
	Error! Incision value is not within the defined range [0 – 360]. A calculation is not possible.
Error! A-constant value is not within the defined range. A calculation is not possible. [118.00 – 119.50].	

6. Technical specifications

6.1 Compliance

The software complies with the Medical Devices Directive 93/42/EEC: Class I

It is labelled with



6.2 Value ranges

The following table shows the defined ranges for the input fields for the biometric data.

Only values that are in the defined range can be entered.

Data	Unit	Data type	Precision	Calculation range (inclusive)	
				<i>Usual range (inclusive)</i>	
				Min	Max
K Flat	Diopter (D)	Positive decimal number	two significant digits	38.00 <i>40.00</i>	50.00 <i>48.00</i>
K Flat	Millimeter (mm)	Positive decimal number	two significant digits	6.75 <i>7.03</i>	8.88 <i>8.44</i>
Flat Meridian	Degree (°)	Positive integer	unit	0	180
K Steep	Diopter (D)	Positive decimal number	two significant digits	38.00 <i>40.00</i>	50.00 <i>48.00</i>
K Steep	Millimeter (mm)	Positive decimal number	two significant digits	6.75 <i>7.03</i>	8.88 <i>8.44</i>
Steep Meridian	Degrees (°)	Positive integer	unit	0	180
Surgically Induced Astigmatism (SIA)	Diopter (D)	Positive decimal number	two significant digits	0.00 <i>0.00</i>	2.00 <i>1.00</i>
Incision location	Degree (°)	Positive integer	unit	0	360
Axial Length (AL)	Millimeter (mm)	Positive decimal number	two significant digits	15.00 <i>16.00</i>	38.00 <i>30.00</i>
Anterior Chamber Depth (ACD)	Millimeter (mm)	Positive decimal number	two significant digits	1.50 <i>2.00</i>	6.00 <i>4.00</i>
Refractive target	Diopter (D)	Decimal number	two significant digits	-4.00	1.00
A-constant	none	Positive decimal number	two significant digits	118.00	119.50


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