Lenstar
IOL Data Collection Worksheet

⇨ **Collecting the following information from your lens manufacturer will help you add lenses to the EyeSuite Software for calculating suggested lens powers using Optical Biometry measurements.**

Manufacturer name: _____   **Lens name**: _____

Lens type: ◯ spherical   ◯ toric (see additional required information for Toric lenses below)

Available spherical power range: _____ **available increments**: _____

(You may wish to leave this defaulted at -10 to 40 to see calculations regardless of lens availability and the available increments is typically 0.50D)

Manufacturer A (referred to as A for ultrasound, "optical" can be changed to "acoustical" to best represent this value)   _____

SRK/T-A for optical biometry (also referred to as A-Constant, must be a value between 100 to 132 & can be used for Shammas)   _____

Hoffer Q pACD for optical biometry (must be a value between -6 to 40)   _____

Holladay sf for optical biometry (must be a value between -10 to 20)   _____

Haigis A0 (must be a value between -10 to 10) _____ , **A1** (between -1 to 1)_____ , and **A2** (between -1 to 1) _____

> *(The above constants may also be found on the Users Group for Laser Interference Biometry or ULIB at www.ocusoft.de/ulib/
> OR you can access these same constants along with more recently optimized constants by Steinbeis Vision Research at www.iolcon.org

Hill RBF A for optical biometry **only** (must be between 100 to 132)   _____

(Hill RBF A can be found posted on Dr. Warren Hill's website, www.rbfcalculator.com under 'Lens Constants'. When a constant is not posted here, it is acceptable to use the SRK/T-A constant value as a starting point)

Barrett LF for optical biometry **only** (must be a value between -2 to 5) and can be calculated within EyeSuite as long as the SRK/T-A for optical biometry has been entered. To add the Barrett, select the value field and then right mouse click. The option to 'Calculate Barrett LF from SRK/T A Constant' will appear, left mouse click to choose the calculation. The Barrett value will automatically calculate and become available for IOL calculations.

Olsen for optical biometry **only**. Constants are provided by Dr. Olsen. You may wish to refer to a separate data collection sheet for Olsen.

For Toric lenses, the following information needs to be collected in addition to the above information:

*Recommended - first add a "Non Toric" model to capture the lower amounts of astigmatism with a cylinder range of 0.00 to the first cylinder power in the range of the lowest powered model available and 0.01 for the Power @ IOL to display an axis.

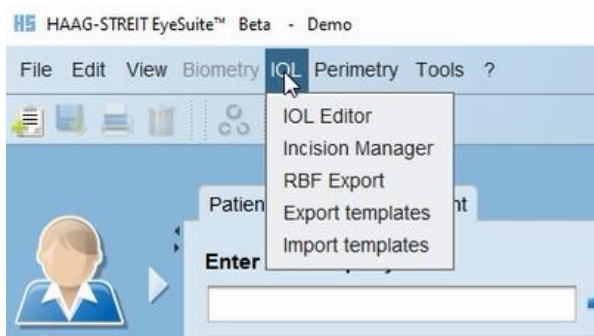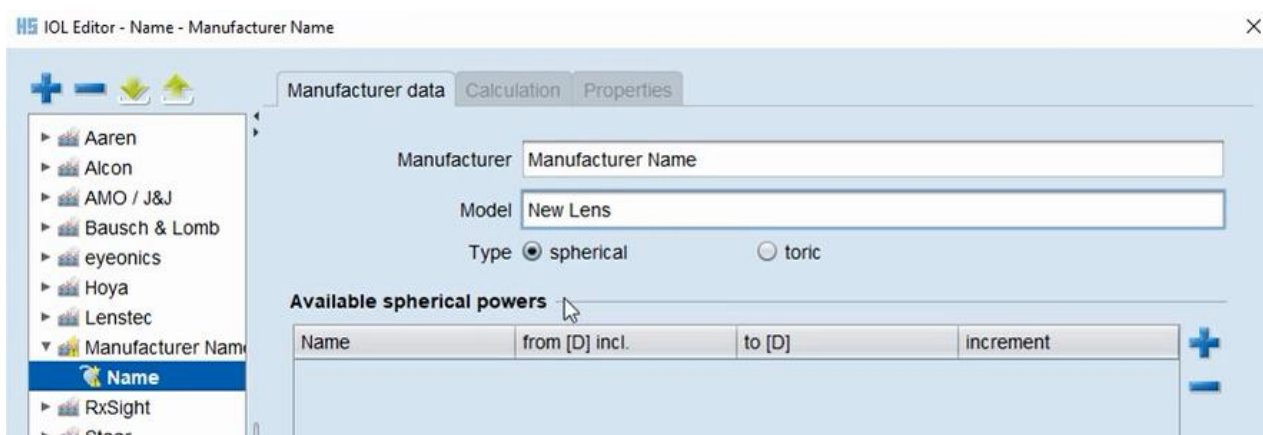| Model Name	Power @ IOL	Astigmatic Correction range	Power @ Cornea
Non Toric	0.01	0.00 to _____	0.00
_____	_____	_____ to _____	_____
_____	_____	_____ to _____	_____
_____	_____	_____ to _____	_____
_____	_____	_____ to _____	_____
_____	_____	_____ to _____	_____
_____	_____	_____ to _____	_____

# Adding Spherical Lenses in EyeSuite

Step 1: Open the IOL Editor

Step 2: Click on the blue "+" above the list of existing lenses to add a new lens entry.

Step 3: Enter the name of the Manufacturer and model name.

Step 4: Click on the blue "+" to the right of the "Available spherical powers" to add a range. This range can be edited to reflect the actual powers and increments that the lens is available in. However, the default range of -10.00 to +40.00 can be used for a greater range to calculate.
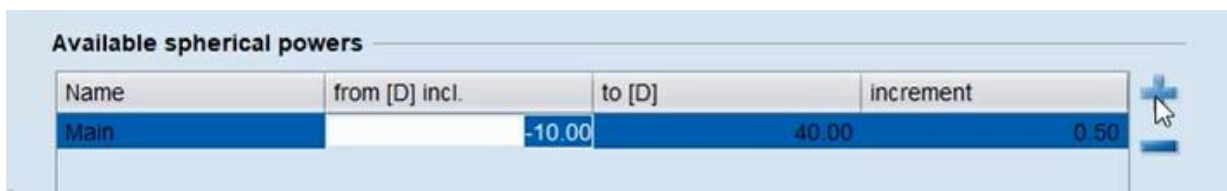
Step 5: Click on the "Calculation" tab and the blue "+" to the right of the "Spherical calculation constants" to add the available formula constants.

Constant	Device	from [D] incl.	to [D]	value
Barrett DF	optical	-10.00	40.00	
Barrett LF	optical	-10.00	40.00	
Haigis A0	optical	-10.00	40.00	
Haigis A1	optical	-10.00	40.00	
Haigis A2	optical	-10.00	40.00	
Hill RBF A	optical	-10.00	40.00	
Hoffer Q pACD	optical	-10.00	40.00	
Holladay SF	optical	-10.00	40.00	
Manufacturer A	optical	-10.00	40.00	
Olsen ACD	optical	-10.00	40.00	
Olsen AR	optical	-10.00	40.00	
Olsen LT	optical	-10.00	40.00	
Olsen N	optical	-10.00	40.00	

revision shown Version 1 — go back to this revision

Spherical calculation constants

Step 6: Begin entering the values for each of the formula constants.

Note: You will not be able to calculate without these values entered for any given formula.

Constant	Device	from [D] incl.	to [D]	value
Hill RBF A	optical	-10.00	40.00	
Hoffer Q pACD	optical	-10.00	40.00	
Holladay SF	optical	-10.00	40.00	
Manufacturer A	optical	-10.00	40.00	
Olsen ACD	optical	-10.00	40.00	
Olsen AR	optical	-10.00	40.00	
Olsen LT	optical	-10.00	40.00	
Olsen N	optical	-10.00	40.00	
Olsen PR	optical	-10.00	40.00	
Olsen SA	optical	-10.00	40.00	
SRK-II A	optical	-10.00	40.00	
SRK/T A	optical	-10.00	40.00	119.00
Shammas No-Hi.	optical	-10.00	40.00	119

revision shown Version 1 — go back to this revision

Spherical calculation constants

Step 7: Once you have entered a value in the value column, scroll up to the Barrett LF and select the row, then right mouse click to populate the option to "Calculate LF from SRK/T A-Constant". Click on that option to auto-populate a value. This value can also be typed in if you do not wish to utilize the calculated value based on the SRK/T A Constant for optical biometry.

Spherical calculation constants

Constant	Device	from [D] incl.	to [D]	value
Barrett LF	optical	-10.00	40.00	
Haigis A0	optical	-10.00	40.00	
Haigis A1	optical	-10.00	40.00	
Haigis A2	optical	-10.00	40.00	
Hill RBF A	optical	-10.00	40.00	
Hoffer Q pACD	optical	-10.00	40.00	
Holladay SF	optical	-10.00	40.00	
Manufacturer A	optical	-10.00	40.00	

Calculate LF constant from SRK/T A-Constant

Step 8: The Barrett DF may be entered if the lens shifts to a meniscus lens design for low powers. For example, some lenses will shift from a biconvex lens design to meniscus at 5.00D. Therefore, the value for the Barrett DF would be 5.00D.

Barrett DF	optical	-10.00	40.00	5.00

Note: Please refer to the Olsen IOL Data Collection Worksheet for calculated Olsen values.

Step 9: Once you have entered all of the formula constants, click "OK" to save your entries.

Manufacturer data   Calculation   Properties

revision shown   Version 1 (2020-11-18 10:30:39.0) ▼   go back to this revision

Spherical calculation constants

Constant	Device	from [D] incl.	to [D]	value
Barrett DF	optical	-10.00	40.00	5.00
Barrett LF	optical	-10.00	40.00	1.88
Haigis A0	optical	-10.00	40.00	1.080
Haigis A1	optical	-10.00	40.00	0.400
Haigis A2	optical	-10.00	40.00	0.100
Hill RBF A	optical	-10.00	40.00	119.00
Hoffer Q pACD	optical	-10.00	40.00	5.80
Holladay SF	optical	-10.00	40.00	1.96
Manufacturer A	optical	-10.00	40.00	118.80
Olsen ACD	optical	-10.00	40.00	4.66
Olsen AR	optical	-10.00	40.00	19.973
Olsen LT	optical	-10.00	40.00	0.80
Olsen N	optical	-10.00	40.00	1.55570

Guidance

Define spherical constants values for this IOL.

OK   Cancel

Adding Toric Lenses in EyeSuite

Step 1: Repeat steps 1-3 from "Adding Spherical Lenses in EyeSuite", EXCEPT in Step 3:

Choose "Toric"

Note: This also adds a section for "Available cylindrical powers".

Step 2: Click on the blue "+" next to the "Available cylindrical powers" to add each model of cylinder correction.

Note: It's best to add these one at a time. It is also recommended, to enter a "Non Toric" model for the lower amount of measured astigmatism so a calculator will still populate.

Step 3: Once you have finished entering each model and Power at IOL, Click on "Calculation" to continue.

Step 4: Repeat steps 5-8 from "Adding Spherical Lenses in EyeSuite".

Step 5: Click on the blue "+" to the right of the "Torical Calculation Constants" to pull over each toric model that was entered in the "Manufacturer Data" tab.

CAUTION: Do this one at a time!

Step 6: Modify the cylinder ranges and power at the IOL plane for the first model.

Note: EyeSuite does not allow for a gap between ranges. Therefore, ranges may require slight modifications.

Step 7: Click on the blue "+" to right of the "Torical calculation constants" to pull in the next model and modify the cylinder range and the "Power @ Cornea". Repeat Step 5 until completed.

Step 8: Click "OK" to save your entries.