

Applications

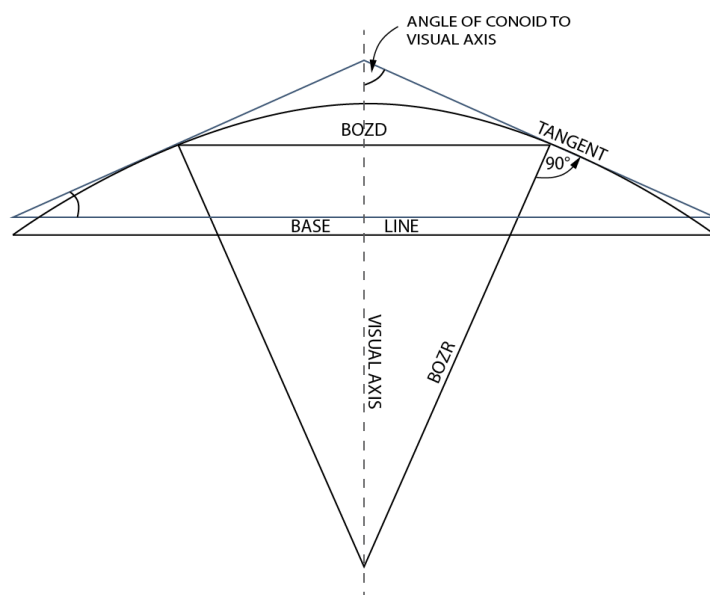
- **Primary indications:** Myopia, Hyperopia, Astigmatism, mild corneal irregularities.
- **Daily wear**

Design

Parameter Range:

- BC range: 6.0 to 10.0mm
- Diameter range: 5.0 to 11.0mm
- BOZD 4.0 to 9.0mm
- Power -35.00 to +35.00D
- Toric cylinder 0.00 to -5.00DC with axis 0 to 180 degrees (1 degree increments)
- Available as:
 - Bi-toric
 - Bi-sym
 - Toric periphery (TSP)
 - Quad-sym
 - Bifocal (concentric)

Design Schematic:



The Conoid has a spherical base curve that merges tangentially with a conoid periphery.

1. The apical clearance can be controlled by varying the base curve
2. The position of the circum-apical contact can be moved closer or further away from the center by varying the slope of the conoid band.

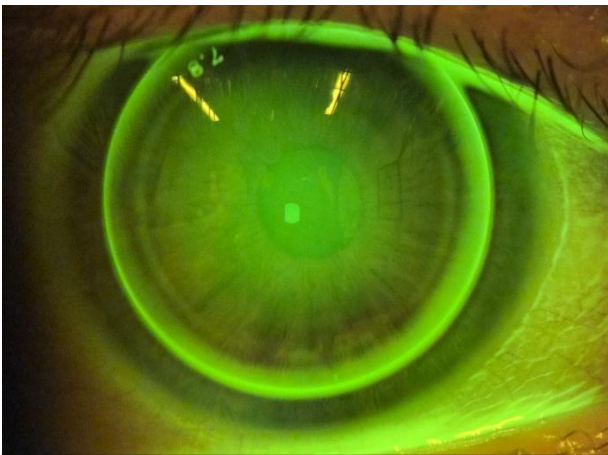
The unique conoid periphery permits a balanced pressure around the whole contact ring, resulting in better centration and comfort.

Conoid Fitting Procedure

Optimal Fit

An optimal fitting lens will have the following features:

- Apical clearance is observed.
- A near-circular contact ring approximately 1.0–1.5 mm wide at the circum-central corneal area is observed.
- Edge width no narrower than 0.3mm is observed.
- Locates over the central corneal area with 1- 2 mm vertical movement on blinking.



This photo shows an optimal fitting Conoid

Step 1: Diagnostic Lens Selection

Objective: Select a base curve that achieves apical clearance over the apex of the cornea.

- Start with a base curve 0.1mm steeper than Flat K.
- If there is apical touch, try a steeper BOZR until clearance is achieved.
- If there is excessive apical pooling and/or bubbles forming under the BOZD, flatten the BOZR until light clearance is achieved.

Note: You will need to assess the apical clearance whilst the lens is centered over the cornea.

Step 2: Mid-peripheral Fit

Objective: To achieve a near-circular contact ring on the mid-peripheral cornea

- If the contact ring on the mid-peripheral cornea is asymmetrical, consider a bi-sym, toric periphery, quad-sym or bi-toric.
- The Conoid will fit on most corneas with up to 2 diopters of corneal astigmatism without a toric back surface.
- If a clear toric fitting pattern is observed, a toric periphery (TSP) is recommended. A minimum amount of TSP to be considered is 0.6.
- Please get in touch with one of our technical consultants for assistance or more information.

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	Revision: 0	Issue Date: 29/06/26

Step 3: Edge lift and Movement

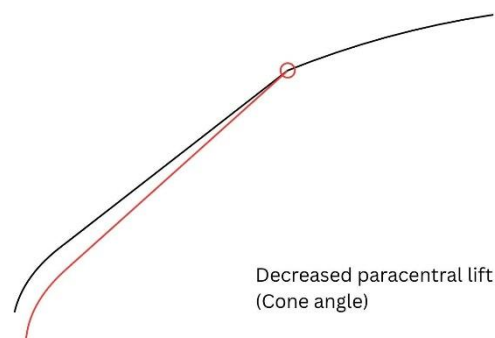
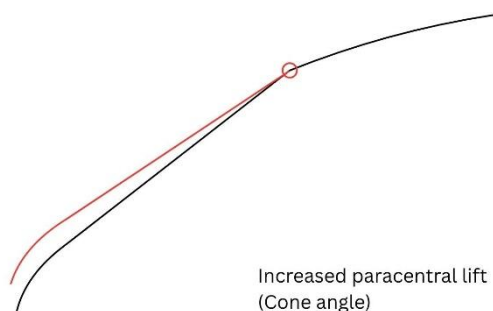
Objective: To achieve an even edge width and lift and healthy lens movement for tear exchange.

- A narrow edge **width** is typically associated with a cone angle that is too steep, whilst an excessively wide edge lift is associated with a cone angle that is too flat.
 - A standard increase or decrease lift will have a cone angle equivalent to a base curve that is 0.2mm flatter or steeper.
 - E.g. a 7.0/9.5/7.25 Conoid has a cone angle of 58.8 degrees. Requesting the same lens with an increase lift will result in a cone angle of that of a 7.2mm base curve Conoid (59.8 degrees).
- Edge lift (height) often goes hand-in-hand with edge width. However, if the edge width looks optimal but the height appears too low or too high, an increased or decreased edge **lift** can be requested.
 - The standard edge radius for the Conoid is 12.25mm.
 - Reducing the edge lift will increase the edge radius to 13.00mm.
 - Increasing the edge lift will decrease the edge radius to 11.50mm.

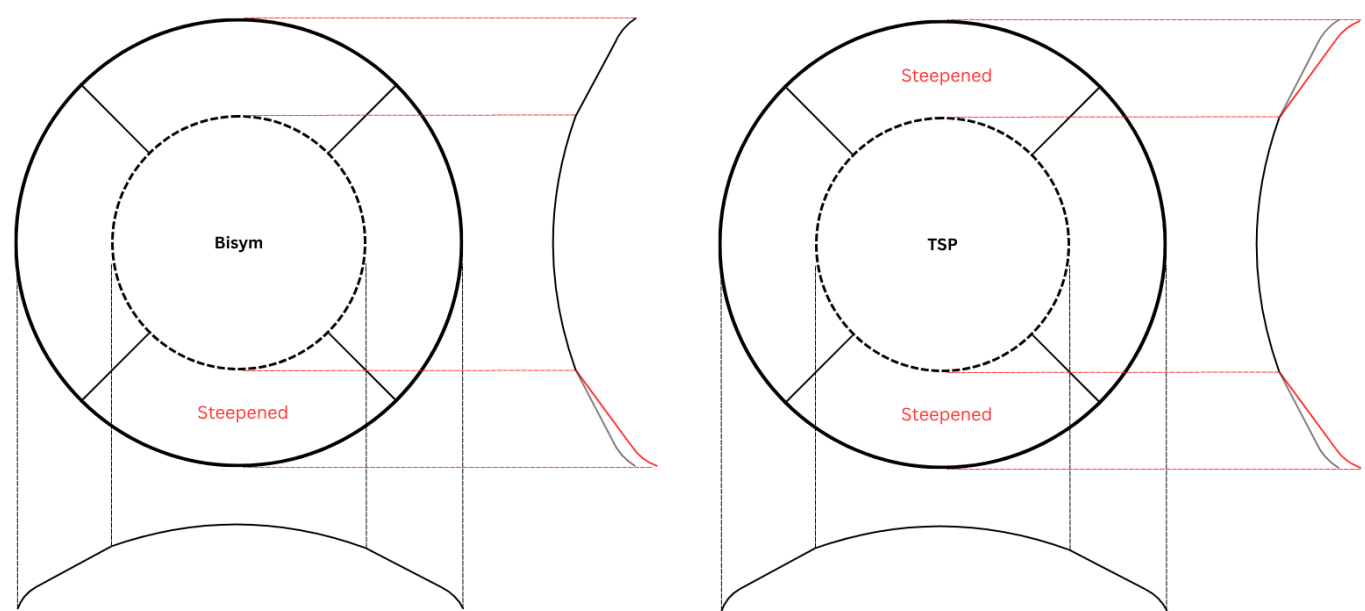
Evaluating Vision

- Perform a sphere-cyl over-refraction over the chosen diagnostic lens.
- The final BVP is a combination of the trial lens BVP + over-refraction found.
 - Consider the best sphere power if a low magnitude of cylinder is found.

Paracentral Lift



Conoid Bi-sym, Toric Periphery (TSP), and Quad-sym



- A Bi-sym 0.7 will steepen the inferior paracentral quadrant by 0.7mm.
 - Use the following values as a general guide:
 - Bi-sym 0.4 for mild inferior lift-off or edge lift
 - Bi-sym 0.7 for moderate inferior lift-off or edge lift
 - Bi-sym 1.2 for a just-visible tear-break in the inferior quadrant
 - Bi-sym >1.5 for a constant, visible tear-break in the inferior quadrant
- A TSP 0.8 will steepen the superior and inferior paracentral quadrants by 0.4mm each.
 - Use the following values as a general guide:
 - TSP 0.6 for a mild toric fluorescein pattern
 - TSP 1.0 for a moderate toric fluorescein pattern
- Quad-syms are also available and are specified from axis 0 to 270 (counter-clockwise).

Examples:

 - Specified by paracentral or mid-P values:
 - 7.3 / 6.7 / 7.3 / 6.7.
 - Specified by cone angles:
 - 68.9 / 66.9 / 68.9 / 66.2.

Optic Diameters formed by different Tangential Cone Angles

The following is a table of standard tangential cone angles for different combinations of base curves and back optic zone diameters.

The Conoid lens design is not limited to the values in the table. Cone angles can be altered within limits.

	Optic Diameter in Millimeters								
		5.25	5.75	6.0	6.25	6.5	6.75	7.0	7.25
Base Curve in Millimeters	6.0	64.1	61.4	60.0	58.6	57.2	55.8	54.3	52.8
	6.1	64.5	61.9	60.5	59.2	57.8	56.4	55.0	53.5
	6.2	65	62.4	61.1	59.7	58.4	57.0	55.6	54.2
	6.3	65.4	62.8	61.6	60.2	58.9	57.6	56.2	54.9
	6.4	65.8	63.3	62.1	60.8	59.5	58.2	56.8	55.5
	6.5	66.2	63.6	62.5	61.2	60.0	58.7	57.4	56.2
	6.6	66.6	64.2	63.0	61.7	60.5	59.2	58.0	56.7
	6.7	66.9	64.6	63.4	62.2	61.0	59.8	58.5	57.2
	6.8	67.3	65.0	63.8	62.6	61.5	60.2	59.0	57.8
	6.9	67.6	65.4	64.2	63.1	61.9	60.7	59.5	58.3
	7.0	68.0	65.8	64.6	63.5	62.3	61.2	60.0	58.8
	7.1	68.3	66.1	65.0	63.9	62.8	61.6	60.5	59.3
	7.2	68.6	66.5	65.4	64.3	63.2	62.0	60.9	59.8
	7.3	68.9	66.8	65.7	64.6	63.6	62.5	61.4	60.2
	7.4	69.2	67.1	66.1	65.0	64.0	62.9	61.8	60.7
	7.5	69.5	67.5	66.4	65.4	64.4	63.3	62.2	61.2
	7.6	69.8	67.8	66.8	65.7	64.7	63.6	62.6	61.5
	7.7	70.1	68.1	67.1	66.1	65.0	64.0	63.0	61.9
	7.8	70.3	68.4	67.4	66.4	65.4	64.4	63.3	62.3
	7.9	70.6	68.7	67.7	66.7	65.7	64.7	63.7	62.7
	8.0	70.8	68.9	68.0	67.0	66.0	65.0	64.0	63.1
	8.1	71.1	69.2	68.3	67.3	66.4	65.4	64.4	63.4
	8.2	71.3	69.5	68.5	67.6	66.7	65.7	64.7	63.8
	8.3	71.6	69.7	68.8	67.9	67.0	66.0	65.0	64.1
	8.4	71.8	70.0	69.1	68.2	67.2	66.3	65.4	64.4
	8.5	72.0	70.2	69.3	68.4	67.5	66.6	65.7	64.8
	8.6	72.2	70.5	69.6	68.7	67.8	66.9	66.0	65.1

NOTE: A numerical decrease in angle steepens the cone.

Examples:

1. A standard diameter Conoid of 9.5mm has a BOZD of 7.25mm.
 - a. A 7.0mm base curve Conoid with a 9.5mm diameter and 7.25mm BOZD has a cone angle of 58.8 degrees.
2. A 9mm diameter Conoid has a BOZD of 6.5mm.
 - a. A 7.5mm base curve Conoid with a 9.0mm diameter and 6.50mm BOZD has a cone angle of 64.4 degrees.