



**CAD Near Lens (Computer Aided Design) Fitting Guide**

**Parameter Selection:**

**1. Diameter Selection:**

- The lens diameter of 10.0mm is chosen as an average diameter.
- A 9.5mm diameter can also be ordered in the CAD Near Multifocal Lens design.

**2. Base Curve Selection:**

- Select a base curve that is .50D flatter than the base curve of a single vision sphere.

**OR**

- Since the back surface is that of a simple CAD lens, the CAD base curve selection chart is included with this CAD Near fitting guide.

Flat K Reading	Amount of Corneal Astigmatism			
	0.00 to 1.00D	1.12 to 1.50D	1.62 to 2.00D	2.12 to 2.50D
47.00D	47.00/7.18	47.25/7.14	47.50/7.10	47.75/7.06
46.75D	46.75/7.21	47.00/7.18	47.25/7.14	47.50/7.10
46.50D	46.50/7.25	46.75/7.21	47.00/7.18	47.25/7.14
46.25D	46.25/7.29	46.50/7.25	46.75/7.21	47.00/7.18
46.00D	46.00/7.33	46.25/7.29	46.50/7.25	46.75/7.21
45.75D	45.75/7.37	46.00/7.33	46.25/7.29	46.50/7.25
45.50D	45.50/7.41	45.75/7.37	46.00/7.33	46.25/7.29
45.25D	45.25/7.45	45.50/7.41	45.75/7.37	46.00/7.33
45.00D	45.00/7.50	45.25/7.45	45.50/7.41	45.75/7.37
44.75D	44.75/7.54	45.00/7.50	45.25/7.45	45.50/7.41
44.50D	44.50/7.58	44.75/7.54	45.00/7.50	45.25/7.45
44.25D	44.25/7.62	44.50/7.58	44.75/7.54	45.00/7.50
44.00D	44.00/7.67	44.25/7.62	44.50/7.58	44.75/7.54
43.75D	43.75/7.71	44.00/7.67	44.25/7.62	44.50/7.58
43.50D	43.50/7.75	43.75/7.71	44.00/7.67	44.25/7.62
43.25D	43.25/7.80	43.50/7.75	43.75/7.71	44.00/7.67
43.00D	43.00/7.84	43.25/7.80	43.50/7.75	43.75/7.71
42.75D	42.75/7.89	43.00/7.84	43.25/7.80	43.50/7.75
42.50D	42.50/7.94	42.75/7.89	43.00/7.84	43.25/7.80
42.00D	42.00/8.03	42.25/7.98	42.75/7.89	43.00/7.84
41.75D	41.75/8.08	42.00/8.03	42.25/7.98	42.75/7.89
41.50D	41.50/8.13	41.75/8.08	42.00/8.03	42.25/7.98
41.25D	41.25/8.18	41.50/8.13	41.75/8.08	42.00/8.03
41.00D	41.00/8.23	41.25/8.18	41.50/8.13	41.75/8.08
40.75D	40.75/8.28	41.00/8.23	41.25/8.18	41.50/8.13
40.50D	40.50/8.33	40.75/8.28	41.00/8.23	41.25/8.18
40.25D	40.25/8.38	40.50/8.33	40.75/8.28	41.00/8.23
40.00D	40.00/8.43	40.25/8.38	40.50/8.33	40.75/8.28



**3. Power Calculation for Distance Vision**

- Perform a spectacle refraction and place prescription in minus cylinder.
- If base curve is steeper than the flat K reading, add minus to the lens (SAM).
- If the spherical component of the spectacle fraction is greater than + or – 4.00D, adjust for vertex distance (see vertex chart).

**4. Power calculation for Near Vision**

- Use spectacle add for first trial lens.
- With trial lens on, over refract in .25D steps to arrive at best near vision that does not take away too much from distance vision.

Lens Fitting
The first trial lens based on the selected parameters is placed on the patient’s eye and allowed to equilibrate for 10 minutes.
The base curve should be adjusted steeper or flatter until an alignment fluorescein pattern is noted centrally across the flat corneal meridian, (horizontal, 180 degrees meridian, in the case of with-the rule astigmatism).
This lens should demonstrate a slight area of fluorescein thinning (near touch) at the edge of the posterior optical zone along the flat meridian.
The lens should move approximately 1 to 3mm with the blink and retain a slightly superior or central resting position.

Problem Solving Techniques	
Objective Findings	Parameter Change
Excessive lens movement	Steepen the base curve
Nasal or temporal dislocation	Steepen the base curve
Restrictive vertical movement	Flatten the base curve
Low resting lens	Flatten the base curve
Peripheral Impingement	Flatten the base curve
Excess peripheral clearance	Steepen the base curve