

Vertex Conversion Chart

-	12mm	+
-3.87	4.00	+4.25
-4.00	4.25	+4.50
-4.25	4.50	+4.75
-4.50	4.75	+5.00
-4.75	5.00	+5.25
-5.00	5.25	+5.62
-5.12	5.50	+5.87
-5.37	5.75	+6.12
-5.62	6.00	+6.50
-5.75	6.25	+6.75
-6.00	6.50	+7.00
-6.25	6.75	+7.37
-6.50	7.00	+7.62
-6.62	7.25	+8.00
-6.87	7.50	+8.25
-7.12	7.75	+8.50
-7.25	8.00	+8.87
-7.50	8.25	+9.12
-7.75	8.50	+9.50
-7.87	8.75	+9.75
-8.12	9.00	+10.12
-8.37	9.25	+10.37

-8.50	9.50	+10.75
-8.75	9.75	+11.00
-8.87	10.00	+11.37
-9.37	10.50	+12.00
-9.75	11.00	+12.75
-10.12	11.50	+13.37
-10.50	12.00	+14.00
-10.87	12.50	+14.75
-11.25	13.00	+15.50
-11.62	13.50	+16.12
-12.00	14.00	+16.75
-12.37	14.50	+17.50
-12.75	15.00	+18.25
-13.00	15.50	+19.00
-13.50	16.00	+19.75
-13.75	16.50	+20.50
-14.12	17.00	+21.50
-14.50	17.50	+22.25
-14.75	18.00	+23.00
-15.12	18.50	+23.75
-15.50	19.00	+24.75

Vertex Conversion Chart – Extended

-	12mm	+
-15.87	19.50	+25.50
-16.12	20.00	+26.37
-16.50	20.50	+27.11
-16.75	21.00	+28.12
-17.12	21.50	+29.00
-17.37	22.00	+29.87
-17.75	22.50	+30.87
-18.00	23.00	+31.75
-18.37	23.50	+32.62
-18.62	24.00	+33.62
-18.87	24.50	+34.75
-19.25	25.00	+35.75
-19.50	25.50	+36.75
-19.87	26.00	+37.75
-20.12	26.50	+38.87
-20.37	27.00	+40.00
-20.75	27.50	+41.00
-21.00	28.00	+42.25
-21.25	28.50	+43.50
-21.50	29.00	+44.50
-21.87	29.50	+45.66
-22.12	30.00	+47.00

-22.37	30.50	+48.12
-22.62	31.00	+49.50
-22.87	31.50	+50.75
-23.12	32.00	+52.12
-23.37	32.50	+53.50
-23.62	33.00	+54.62
-23.87	33.50	+56.12
-24.12	34.00	+57.50
-24.50	34.50	+59.50
-24.75	35.00	+60.62

Vertex Conversion

Only powers (+/-)4.00 or greater need to be vertexed. The following programs are based on a vertex distance of 13.00 millimeters.

Enter the spectacle lens power in the appropriate input box and hit the Calculate button to get the vertexed contact lens power. All powers must be entered in eighth of a diopter steps (4.00, 4.12, 4.37, 4.50, 4.62, 4.75, 4.87) up to +/-21.00.

Please be sure to use the decimal point (4.37).

Plus Powers

Spectacle Lens Power: +

Calculate Reset

Vertexed Lens Power: +

Minus Powers

Spectacle Lens Power: -

Calculate Reset

Vertexed Lens Power: -

Toll Free | 800-223-1858

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Diopter to Radius (mm) Conversion Chart

<i>Diopter to Radius Conversion Formula: $337.5/D = \text{mm}$</i>					
<i>Radius to Diopter Conversion Formula: $337.5/\text{mm} = D$</i>					
Diopter	Radius	Diopter	Radius	Diopter	Radius
23.00D	14.67mm	39.00D	8.65mm	49.00D	6.89mm
24.00D	14.06mm	39.25D	8.60mm	49.25D	6.85mm
25.00D	13.50mm	39.50D	8.54mm	49.50D	6.82mm
26.00D	12.98mm	39.75D	8.49mm	49.75D	6.78mm
27.00D	12.50mm	40.00D	8.44mm	50.00D	6.75mm
28.00D	12.05mm	40.25D	8.39mm	50.25D	6.72mm
29.00D	11.63mm	40.50D	8.33mm	50.50D	6.68mm
30.00D	11.25mm	40.75D	8.28mm	50.75D	6.65mm
31.00D	10.88mm	41.00D	8.23mm	51.00D	6.62mm
31.25D	10.80mm	41.25D	8.18mm	51.25D	6.58mm
31.50D	10.71mm	41.50D	8.13mm	51.50D	6.55mm
31.75D	10.63mm	41.75D	8.08mm	51.75D	6.52mm
32.00D	10.54mm	42.00D	8.04mm	52.00D	6.49mm
32.25D	10.46mm	42.25D	7.99mm	52.25D	6.45mm
32.50D	10.38mm	42.50D	7.94mm	52.50D	6.42mm
32.75D	10.30mm	42.75D	7.89mm	52.75D	6.39mm
33.00D	10.22mm	43.00D	7.85mm	53.00D	6.36mm
33.25D	10.15mm	43.25D	7.80mm	53.25D	6.34mm
33.50D	10.07mm	43.50D	7.76mm	53.50D	6.31mm
33.75D	10.00mm	43.75D	7.71mm	53.75D	6.28mm
34.00D	9.92mm	44.00D	7.67mm	54.00D	6.25mm
34.25D	9.85mm	44.25D	7.63mm	54.25D	6.22mm
34.50D	9.78mm	44.50D	7.58mm	54.50D	6.19mm
34.75D	9.71mm	44.75D	7.54mm	54.75D	6.16mm
35.00D	9.64mm	45.00D	7.50mm	55.00D	6.13mm
35.25D	9.57mm	45.25D	7.46mm	55.25D	6.10mm
35.50D	9.50mm	45.50D	7.42mm	55.50D	6.08mm
35.75D	9.44mm	45.75D	7.38mm	55.75D	6.05mm
36.00D	9.37mm	46.00D	7.34mm	56.00D	6.03mm
36.25D	9.31mm	46.25D	7.30mm	56.25D	6.00mm
36.50D	9.24mm	46.50D	7.26mm	56.50D	5.97mm

36.75D	9.18mm	46.75D	7.22mm	56.75D	5.95mm
37.00D	9.12mm	47.00D	7.18mm	57.00D	5.93mm
37.25D	9.06mm	47.25D	7.14mm	57.25D	5.90mm
37.50D	9.00mm	47.50D	7.11mm	57.50D	5.88mm
37.75D	8.94mm	47.75D	7.07mm	57.75D	5.85mm
38.00D	8.88mm	48.00D	7.03mm	58.00D	5.83mm
38.25D	8.82mm	48.25D	6.99mm	58.25D	5.80mm
38.50D	8.76mm	48.50D	6.96mm	58.50D	5.77mm
38.75D	8.70mm	48.75D	6.92mm	58.75D	5.75mm

(44.00).

Base Curve in Diopters:

Calculate

Reset

Base Curve in Millimeters:

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according to the chart.

Corneal Cylinder Flatten by

0 - .50	.50
.62 - 1.25	.25
1.37 - 3.00	On flat "K"
Over 3.00	Consider Toric

Flatten the smallest K reading by the adjustment factor (subtract). Then convert from diopters to millimeters.

Example: 45.00/46.00

46.00-45.00=1.00

Flatten by .25 according to the chart.

45.00-.25=44.75

44.75=7.54mm

RGP Prescription

Enter the K's below, hit the Calculate button and the chart will do the math. Be sure to use the decimal point (44.00).

K Readings:

First K Reading

Second K Reading

Prescription:

First Power

Cylinder Power

Axis

Calculate Reset

Base Curve Calculation Output

Corneal Cylinder:

Adjustment factor:

Base Curve in Diopters:

Base Curve in Millimeters"

Diameter:

Optical Zone:

Bevel:

Power Calculation Output

Rx Converted to Minus Cylinder:

☒

Type of Astigmatism:

Make Toric or Sphere?

Sphere Power

Sphere Power Vertexed if Necessary (13mm):

If the design requires a toric please call 1-800-223-1858 for expert consultation.

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Back Toric Base Curve Calculator



PARAGON
AUTHORIZED LABORATORY PARTNER

Fiat K 44.50-48.00

Secondary Base Curve

48.37	2.50
48.42	2.75
48.75	3.00
48.87	3.25
49.12	3.50
49.25	3.75
49.37	4.00
49.62	4.25
49.75	4.50
49.87	4.75
50.12	5.00
50.25	5.25

**Spectacle
Cylinder**

Fiat K 46.75
(Primary Base Curve)

Consider a back toric lens when the corneal cylinder and spectacle cylinder amount are relatively equal. Refer to bi-toric fitting guidelines.

50.37	5.50
50.42	5.75
50.75	6.00
50.87	6.25
51.12	6.50
51.25	6.75
51.37	7.00
51.62	7.25
51.75	7.50
51.87	7.75
52.12	8.00
52.25	8.25
52.37	8.50
52.62	8.75
52.75	9.00

**Spectacle
Cylinder**

Instructions:
Set Fiat K in window.
Read Secondary Base Curve at Spectacle Cylinder.
See side 2 for more Fiat K numbers.

Calculating Back Toric

Lens Power:

Use vertex corrected spectacle sphere power as the final contact lens power. The cylinder is automatically induced by the base curve difference.

Consultation: 800-566-8001

Ordering: 800-253-9364

Fax: 800-648-2272

www.artoptical.com

PARAGON

Bi-Toric Base Curve Calculator



PARAGON
AUTHORIZED LABORATORY PARTNER

Fiat K 40.00-43.25

Secondary Base Curve

43.00	43.00
43.25	43.25
43.50	43.50
43.75	43.75
44.00	44.00
44.25	44.25
44.50	44.50
44.75	44.75
45.00	45.00
45.25	45.25
45.50	45.50
45.75	45.75

Sleep K

Fiat K 42.50
(Primary Base Curve)

45.00	46.00
45.25	46.25
45.50	46.50
45.75	46.75
46.00	47.00
46.25	47.25
46.50	47.50
46.75	47.75
47.00	48.00
47.25	48.25
47.50	48.50
47.75	48.75
48.00	49.00
48.25	49.25
48.50	49.50
48.75	49.75
49.00	50.00

Sleep K

Instructions:
Set Fiat K in window.
Read Secondary Base Curve at Sleep K.

Calculating Bi-Toric

Lens Power:

Use vertex corrected spectacle sphere power for first power. Correct cylinder value for vertex and add to sphere power for second power.

Consultation: 800-566-8001

Ordering: 800-253-9364

Fax: 800-648-2272

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PARAGON

Empirical Fitting in 4 Simple Steps!

EASY FITTING & REFERENCE GUIDE

Renovation®

**DETERMINE THE BASE CURVE FIT BY
REFERENCING THE FLAT K AND THE AMOUNT
OF CORNEAL CYLINDER PRESENT**

If Corneal Cylinder is: Select Base Curve:
Spherical to 1.25D On Flat K
1.50 to 2.25D 0.25D Steeper than K
2.50 to 3.00D 0.50D Steeper than K

**BASE CURVE
SELECTION**

Renovation®E

**DETERMINE THE BASE CURVE FIT BY
REFERENCING THE FLAT K AND THE AMOUNT
OF CORNEAL CYLINDER PRESENT**

If Corneal Cylinder is: Select Base Curve:
Spherical to 1.25D 0.50D Steeper than K
1.50 to 2.25D 0.75D Steeper than K
2.50 to 3.00D 1.00D Steeper than K

**DETERMINE THE DIAMETER BY THE
BASE CURVE SELECTED**

If Base Curve is: Diameter Selection:
8.50 to 8.45mm 10.0mm
8.40 to 8.20mm 9.6mm
8.15 to 7.50mm 9.5mm
7.45 to 7.20mm 9.2mm
7.15 to 6.90mm 9.0mm

**DIAMETER
SELECTION**

**DETERMINE THE DIAMETER BY THE
BASE CURVE SELECTED**

If Base Curve is: Diameter Selection:
8.50 to 8.45mm 10.0mm
8.40 to 8.20mm 9.6mm
8.15 to 7.50mm 9.5mm
7.45 to 7.20mm 9.2mm
7.15 to 6.90mm 9.0mm

DETERMINE THE DISTANCE POWER

Compensate for any vertex change (sphere
powers of (+/-) 4.00 diopters or greater)
and adjust for any tear layer change
generated from going steeper
than flat K.

**DISTANCE
POWER
SELECTION**

DETERMINE THE DISTANCE POWER

Compensate for any vertex change (sphere
powers of (+/-) 4.00 diopters or greater)
and adjust for any tear layer change
generated from going steeper
than flat K.

**DETERMINE THE NEAR
ADD POWER**

Add 0.25D to the spectacle add power.
If spectacle add power is +2.00, then
contact lens near add power will be +2.25.

**ADD POWER
SELECTION**

**DETERMINE THE NEAR
ADD POWER**

Add 0.25D to the spectacle add power.
If spectacle add power is +2.00, then
contact lens near add power will be +2.25.

Customer Care Center
phone 800.253.9364
fax 800.648.2272

ARToptical
contact lens, inc.

Online www.artoptical.com

Consultation Department
800.566.8001 phone
800.421.5991 color fax

Three Step Fitting Guide:

FITTING & REFERENCE GUIDE

1. Select diameter by keratometry range

Diameter selection is based on corneal diameter relative to corneal curvature. Flatter corneas are typically larger and may require a larger lens size while steeper corneas are typically smaller and may require a smaller lens size. This is only considered a starting point and may be altered as needed to optimize the fitting relationship.

<u>If Keratometry Range is:</u>	<u>Select Diameter:</u>
Flatter than 39.25D.....	10.0
39.50 to 42.50D.....	9.5
42.75 to 45.50D.....	9.0

2. Determine base curve according to corneal cylinder and diameter selected

<u>Corneal Cylinder</u>	<u>8.5 Diameter</u>	<u>9.0 Diameter</u>	<u>9.5 Diameter</u>	<u>10.0 Diameter</u>
SPH to 0.50D	On Flat K	.25D Flatter	.50D Flatter	.50D Flatter
0.75 to 1.25D	.25D Steeper	On Flat K	.25D Flatter	.25D Flatter
1.50 to 2.00D	.50D Steeper	.25D Steeper	On Flat K	On Flat K
2.25 to 2.75D	.75D Steeper	.50D Steeper	.25D Steeper	.25D Steeper

Trial Lens Fitting Set Parameters:

Base Curves: 7.30-7.90mm and 7.70-8.30mm in .10mm steps
Diameter: 9.0 (7.30-7.90 base curves)
Diameter: 9.5 (7.70-8.30 base curves)
Power: -3.00D

3. Power Selection

Determine power by compensating for any vertex change (sphere powers of +/- 4.00D or higher) and adjust for any tear layer change generated from going flatter or steeper than flat K.

ARToptical
contact lens, inc.

toll-free ordering **800.253.9364**
 consultation direct **800.566.8001**

Made in
Bausch & Lomb
Boston[®] XO₂
 Material

Envision Fitting Guide

by Art Optical Contact Lens, Inc.

STEEP K

	41.50	41.75	42.00	42.25	42.50	42.75	43.00	43.25	43.50	43.75	44.00	44.25	44.50	44.75	45.00	45.25	45.50	45.75	46.00	46.25	46.50	46.75	47.00	47.25
40.50	8.30	8.30	8.30	8.20	8.20	8.20	8.20	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
40.75	8.30	8.30	8.30	8.30	8.20	8.20	8.20	8.20	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
41.00			8.20	8.20	8.20	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
41.25				8.20	8.20	8.20	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
41.50					8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
41.75						8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
42.00							8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
42.25								8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
42.50									8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
42.75										7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90
43.00											7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90
43.25												7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90	7.90
43.50													7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80
43.75														7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80

STEEP K

	45.00	45.25	45.50	45.75	46.00	46.25	46.50	46.75	47.00	47.25	47.50	47.75	48.00	48.25	48.50	48.75	49.00	49.25	49.50	49.75	50.00	50.25	50.50	50.75
44.00	7.70	7.70	7.70	7.60	7.60	7.60	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
44.25		7.60	7.60	7.60	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
44.50			7.60	7.60	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
44.75				7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
45.00					7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
45.25						7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
45.50							7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40
45.75								7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40
46.00									7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30
46.25										7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30
46.50											7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30
46.75												7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20
47.00													7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20
47.25														7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
47.50															7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
47.75																7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
48.00																	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

1. Determine proper base curve. Follow flat K and steep K on chart for proper base curve. Base curves available in .10 steps.

2. Determine diameter. Standard diameter for optimum performance is 9.6, but diameters are available from 9.3 to 10.3 in .10 steps.

3. Determine vertex corrected spectacle sphere power. Compensate for vertex power over +/-4.00 diopters.

4. Determine contact lens power. Take vertex corrected power and compensate for tear film. (steeper add minus)

5. Envision lenses are made from Boston 7 material, blue handling tint, with UV.





catch the wave.

Precise Prescription
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Soft Lenses

Intelligently designed, made-to-order soft contact lenses featuring advanced wavefront technology

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