



3.10. Gradal® Top 1.67

Product Specifications

Material

- MR7, Super Hi-Index plastic
- $n_d=1.660$
- Abbe 32
- Specific Gravity 1.36 g/ccm
- 100% UV-A and UV-B Protection

Technical Processing Notes

- Gradal® Top 1.67 lenses can be processed like any other quality Super Hi-Index progressive lens. Zeiss recommends a minimum center thickness of 1.2 mm. Gradal® Top 1.67 lenses of this minimum thickness fulfill the FDA standards of impact resistance.
- After blocking please allow 30 minutes for the lenses to cool before generating.
- Gradal® Top 1.67 lenses emit a specific odor when surfacing or edging. This odor is proven to be non-toxic and non-irritating.
- Zeiss recommends deblocking by cold knock off or block ejector, not by hot water.
- To tint Gradal® Top 1.67 lenses a tintable back side hard coating must be applied.

Hard Coating

Zeiss Gradal® Top 1.67 semi-finished lens blanks feature a factory applied, scratch resistant, index matched hard coating. This hard coating is non-tintable.

Delivery Range

- Sph +6.00D to -16.00D
- Cyl up to -4.00D (total power not to exceed -16.00D)
- Adds 1.00D to 3.00D
- Prism up to 3.00D in addition to equithin



Lens Data Chart



Base Curve	Actual/Useable Diameter [mm]	Decentr. [mm]	True Curve [1.53]	CX Radius [mm]	Back Curve [1.53]	Center Thickness [mm]	Edge Thickness [mm]
2.00	65/70 round ¹	2.5	1.61	328.45	7.36	9.7	17.0
2.50	70/75 round	2.5	2.01	264.06	7.36	8.0	15.0
3.50	70/75 round	2.5	2.81	188.93	7.36	7.0	13.4
4.75	70/75 round	2.5	3.80	139.53	6.02	4.9	7.2
5.75	70/75 round	2.5	4.53	116.99	5.00	6.9	7.6
6.50	70/75 round	2.5	5.10	103.88	5.00	7.8	7.6
7.00	70/75 round	2.5	5.64	94.03	6.02	7.1	7.2
8.00	70/75 round	2.5	6.33	83.68	6.02	7.9	7.2

¹ Although the lens blank of Base Curve 2.00 is round the usable diameter is oval with a horizontal measurement of 65mm.

Zeiss Gradal[®] lenses are designed to work perfectly with a thickness reducing prism. To achieve the thinnest and lightest lenses possible, Zeiss recommends a base down (270°) prism in the following graduation depending on the power of the addition.

Addition [D]	1.00	1.25	1.50 1.75	2.00	2.25 2.50	2.75	3.00
Prism [D]	0.50	0.75	1.00	1.25	1.50	1.75	2.00

Permanent Engravings

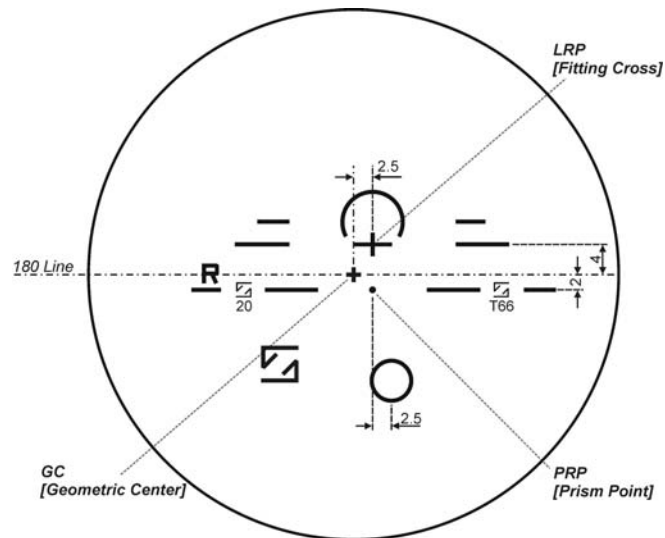
	Nasal Engraving	Temple Engraving
Gradal[®] Top 1.67	 T66	 10-30



Markings of the Semi-Finished Lens

Gradal® Top 1.67 features a round lens blank. For processing purposes the blank is marked with a cross at the geometric center and edge axis locators.

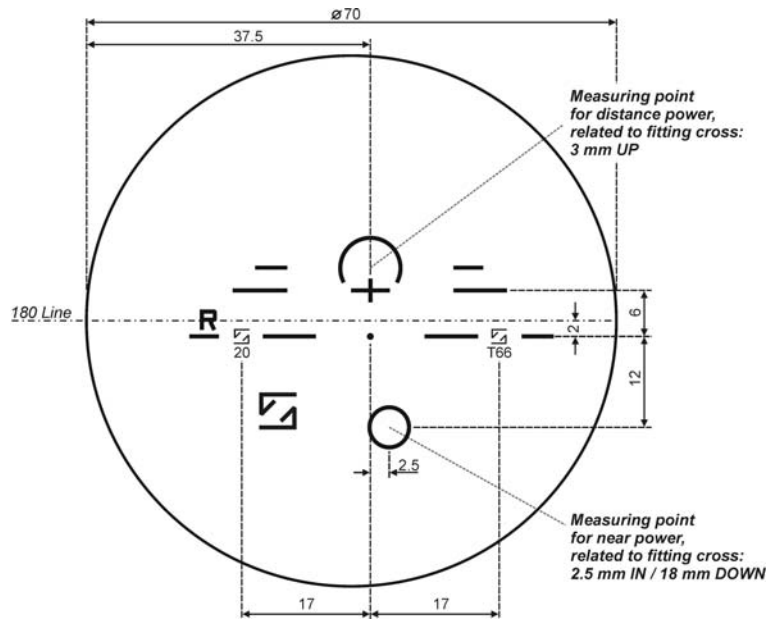
Please note that Zeiss Gradal® Top 1.67 lenses, if they are not to be cribbed at the generator, should be blocked on the geometric center to avoid producing unwanted prism during the fining operation.





Markings and Dimensions of the Finished Lens

Please note that Zeiss Gradal[®] Top finished lens markings differ slightly from the semi-finished lens markings in that the finished lenses are delivered to the customer without the geometric center cross and the edge axis locators. The markings are to be placed by the Zeiss partner lab using Zeiss Gradal[®] Top verification labels (Item #0000139.90270).





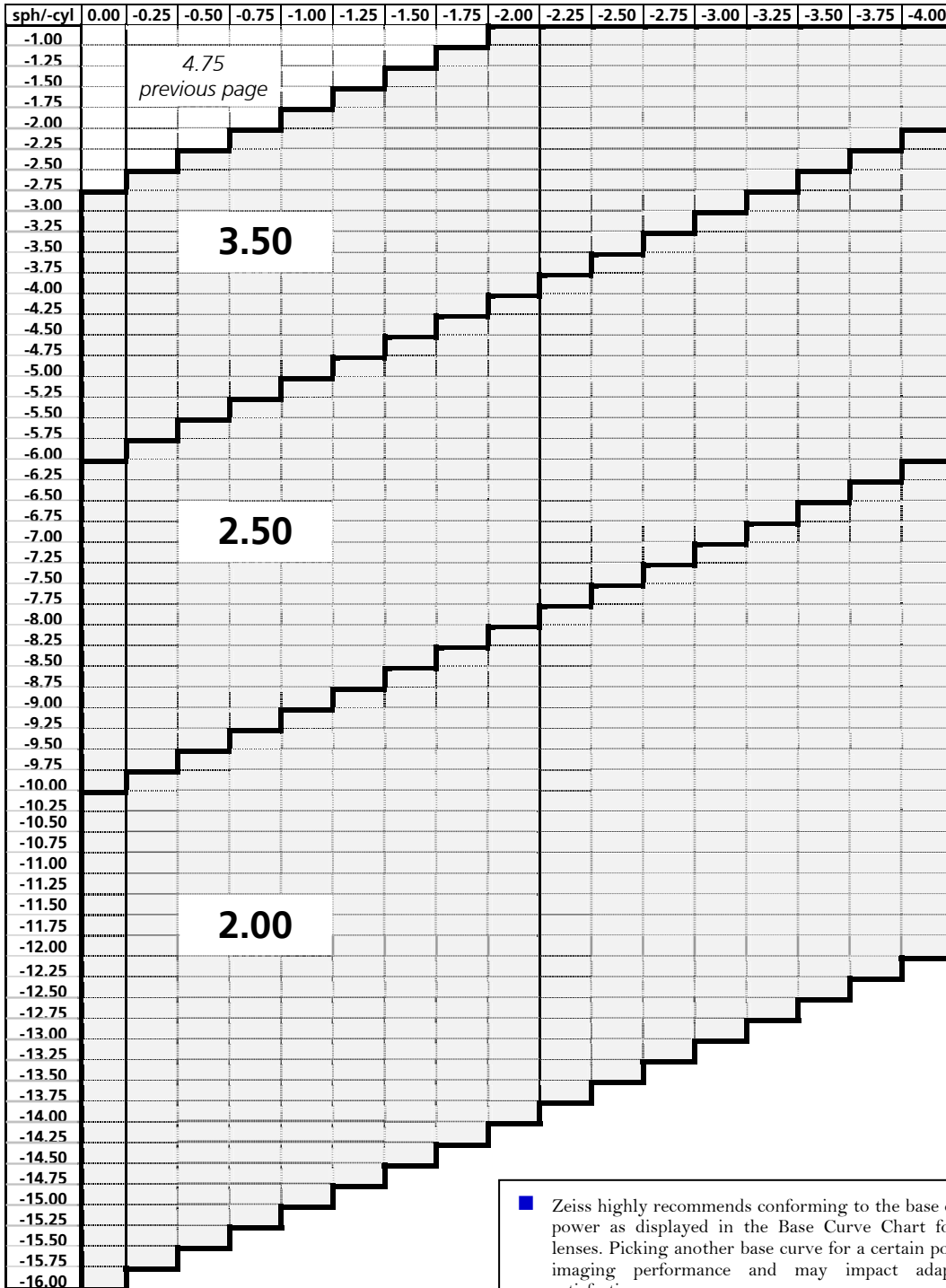
Base Curve Chart
Gradal® Top 1.67

sph/-cyl	0.00	-0.25	-0.50	-0.75	-1.00	-1.25	-1.50	-1.75	-2.00	-2.25	-2.50	-2.75	-3.00	-3.25	-3.50	-3.75	-4.00
6.00																	
5.75																	
5.50																	
5.25																	
5.00																	
4.75																	
4.50																	
4.25																	
4.00																	
3.75																	
3.50																	
3.25																	
3.00																	
2.75																	
2.50																	
2.25																	
2.00																	
1.75																	
1.50																	
1.25																	
1.00																	
0.75																	
0.50																	
0.25																	
0.00																	
-0.25																	
-0.50																	
-0.75																	
-1.00																	
-1.25																	
-1.50																	
-1.75																	
-2.00																	
-2.25																	
-2.50																	
-2.75																	

The Base Curve Chart continues on next page.



Base Curve Chart (cont'd)
Gradal® Top 1.67



- Zeiss highly recommends conforming to the base curve for a specific Rx power as displayed in the Base Curve Chart for Gradal® Top 1.67 lenses. Picking another base curve for a certain power will decrease the imaging performance and may impact adaptation and patient satisfaction.
- Please be also aware that the base curve and the add power determine the nasal inset of the near portion. A base curve other than recommended restricts the usability of the intermediate zone and near portion due to a mismatch of distance power, add and required inset.