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## **TECHTRAN POLYLENCES LIMITED**

Plot No. S-7, T.I.E., Balanagar, I.D.A. (Behind Andhra Bank - Balanagar Branch)

# **SURFACING GUIDE**

**VARTEK PRIMA  
(NORMAL CORRIDOR) PROGRESSIVE**

**TECHTRAN POLYLENSES LIMITED**  
**VARTEK 'PRIMA' PROGRESSIVE**

**LENS MATERIAL SPECIFICATIONS**

MATERIAL	MATERIAL INDEX	ABBE VALUE	SPECIFIC GRAVITY
<b>A.D.C</b>	<b>1.498</b>	<b>59.0</b>	<b>1.32</b>

**DESIGN : VARTEK**

W.R.T Geometric Center		Minimum Fitting Height from fitting cross
Fitting Cross	Design Decentration	
4 MM Above	2.50 MM	20 MM

LENS BLANK DIMENSION		INDEX 1.498				* DIA 75 MM			
NOMINAL BASE	ACTUAL BASE		FRONT RADIUS	SAG 50MM	REAR RADIUS	ADD POWER		THICKNESS	
	W.R.T RI:1.53	W.R.T RI:1.498				FROM	TO	CENTER	EDGE
<b>2.00</b>	<b>2.06</b>	<b>1.94</b>	<b>257.20</b>	<b>1.22</b>	<b>84.55</b>	<b>0.75</b>	<b>3.50</b>	<b>7.00</b>	<b>13.00</b>
<b>4.00</b>	<b>4.06</b>	<b>3.81</b>	<b>130.54</b>	<b>2.42</b>	<b>78.46</b>	<b>0.75</b>	<b>3.50</b>	<b>7.50</b>	<b>11.50</b>
<b>5.50</b>	<b>5.55</b>	<b>5.21</b>	<b>95.50</b>	<b>3.33</b>	<b>82.15</b>	<b>0.75</b>	<b>3.50</b>	<b>7.00</b>	<b>6.97</b>
<b>7.50</b>	<b>7.33</b>	<b>6.89</b>	<b>72.31</b>	<b>4.46</b>	<b>108.10</b>	<b>0.75</b>	<b>3.50</b>	<b>9.33</b>	<b>5.56</b>

Indicative Total Rx Lens Power (Sph+Cyl)		
BASE	65MM DIA	70MM DIA
<b>2.00</b>	<b>-7.50</b>	<b>-7.00</b>
<b>4.00</b>	<b>-6.25</b>	<b>-5.50</b>
<b>5.50</b>	<b>+5.25</b>	<b>+4.75</b>
<b>7.50</b>	<b>+7.00</b>	<b>+6.75</b>

**TECHTRAN POLYLENSES LIMITED**  
**VARTEK 'PRIMA' PROGRESSIVE**

**LENS MATERIAL SPECIFICATIONS**

MATERIAL	MATERIAL INDEX	ABBE VALUE	SPECIFIC GRAVITY
SUNSENSOR GREY / BROWN	<b>1.555</b>	<b>38.0</b>	<b>1.16</b>
Mid Index	<b>1.555</b>	<b>33.0</b>	<b>1.27</b>

**DESIGN : VARTEK**

W.R.T Geometric Center		Minimum Fitting Height from fitting cross
Fitting Cross	Design Decentration	
<b>4 MM Above</b>	<b>2.50 MM</b>	<b>20 MM</b>

**LENS BLANK DIMENSION**

\* DIA 75 MM

NOMINAL BASE	ACTUAL BASE		FRONT RADIUS	SAG 50MM	REAR RADIUS	ADD POWER		THICKNESS	
	W.R.T RI:1.53	W.R.T RI:1.560				FROM	TO	CENTER	EDGE
	<b>1.50</b>	<b>1.60</b>							
<b>3.00</b>	<b>3.21</b>	<b>7.14</b>	<b>164.95</b>	<b>1.91</b>	<b>78.46</b>	<b>0.75</b>	<b>3.50</b>	<b>5.00</b>	<b>10.00</b>
<b>5.25</b>	<b>5.31</b>	<b>5.73</b>	<b>99.87</b>	<b>3.18</b>	<b>97.80</b>	<b>0.75</b>	<b>3.50</b>	<b>5.80</b>	<b>6.00</b>
<b>7.00</b>	<b>6.86</b>	<b>8.38</b>	<b>77.25</b>	<b>4.16</b>	<b>66.80</b>	<b>0.75</b>	<b>3.50</b>	<b>7.80</b>	<b>9.50</b>

**Indicative Total Rx Lens Power (Sph+Cy)**

BASE	65MM DIA	70MM DIA
<b>1.50</b>	<b>-7.75</b>	<b>-7.25</b>
<b>3.00</b>	<b>-6.00</b>	<b>-5.50</b>
<b>5.25</b>	<b>+4.50</b>	<b>+4.00</b>
<b>7.00</b>	<b>+6.50</b>	<b>+6.00</b>

## *Surfacing Procedure*

The following information has been prepared so that the laboratory has all the information required for the manufacture of Techtran's Prima lenses to the highest standard.

Table 1 shows curve compensations which should be applied if the recommended centre thicknesses are not used.

## *Compensation for change in Centre Thickness*

Tool curve change required for 1.0mm centre thickness change :-

<b>Nominal Base Curve</b>	<b>Curve compensation</b>
+2.25D	0.001D
+4.25D	0.006D
+5.50D	0.018D
+7.50D	0.034D

All curves are given in Dioptres.

*Table 1*

## ***Lens Processing***

### **BLANK SIZE**

To ascertain the correct blank size required to give the best possible substance it is recommended that the following instructions are followed :

The fitting cross position is accurately marked on the frame to the optician's specification. The distance from the fitting cross to the furthest point of the frames rim is then measured. This measurement size is then doubled to give the effective diameter of the required blank size. Refer this blank size back to the surfacing chart to find the correct substance required. Please note that consideration should be given to the axis position to achieve the best substance possible. All substances shown in the charts have been calculated assuming the use of Prism Thinning.

To calculate the required amount of prism thinning simply refer to Table 2 opposite. It should be noted that in some extreme cases prism thinning may reduce the effective lens diameter. In these cases, the amount of prism thinning should be reduced as necessary.

### **MARKING**

On Hard Resin lenses it is recommended that the surface protection tape is applied before marking to avoid the markings being impressed onto the lens during blocking. This will also assist in preventing unwanted scratches etc. on all types of lenses. Normal laboratory procedures may then be used.

### **BLOCKING**

It is recommended that the largest possible chilled blocking ring and buttons are used to support the lens as this will result in the reduction of surfacing problems on the edge. Ensure that the correct alloy and temperature are being used on the Hard Resin versions (47°C to 58°C). Block the lens w.r.t. the geometrical center in a manual blocking m/c. In case of an automatic blocking m/c, refer to the fitting cross while blocking.

### **GENERATING**

Ensure that the alloy has sufficiently cooled before generating, after which the laboratory's normal procedure for progressives may be followed.

### **SMOOTHING/POLISHING**

No special procedures are required.

### *Prism Thinning Table*

<b>Addition Dioptres</b>	<b>Recommended Value  Prism Dioptres</b>
<b>0.75</b>	<b>0.25</b>
<b>1.00</b>	<b>0.50</b>
<b>1.25</b>	<b>0.50</b>
<b>1.50</b>	<b>0.75</b>
<b>1.75</b>	<b>0.75</b>
<b>2.00</b>	<b>1.00</b>
<b>2.25</b>	<b>1.00</b>
<b>2.50</b>	<b>1.25</b>
<b>2.75</b>	<b>1.50</b>
<b>3.00</b>	<b>1.75</b>

*Table 2*

### *Power Verification*

The distance vision is checked by placing the distance power measuring position (see Figure 1 overleaf) over the aperture of the focimeter. Ensure that the fitting line is horizontal when taking your reading for correct axis position.

The near vision is checked by placing the addition power measuring position over the aperture of the focimeter. The addition is then worked out as the difference between the distance and near front vertex power readings.

Prism thinning is checked at the prism measuring position (see Figure 1) and should be read as stated in the prism measuring table. Ensure that any corrective prism specified by the optician is taken into account when checking.

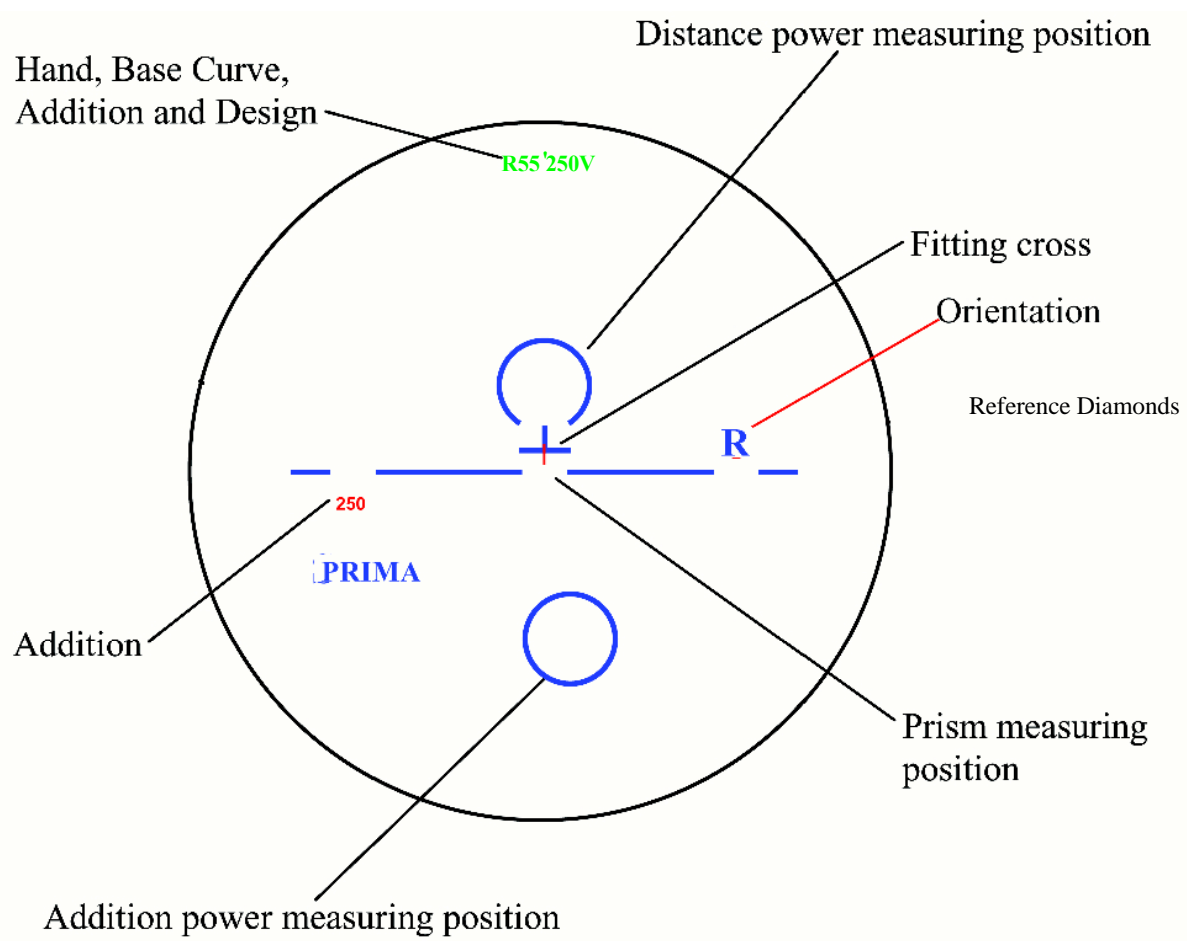


Figure 1

- TEMPORARY MARKING
- PERMANENT MARKING
- PERMANENT SEMI-VISIBLE MARKING