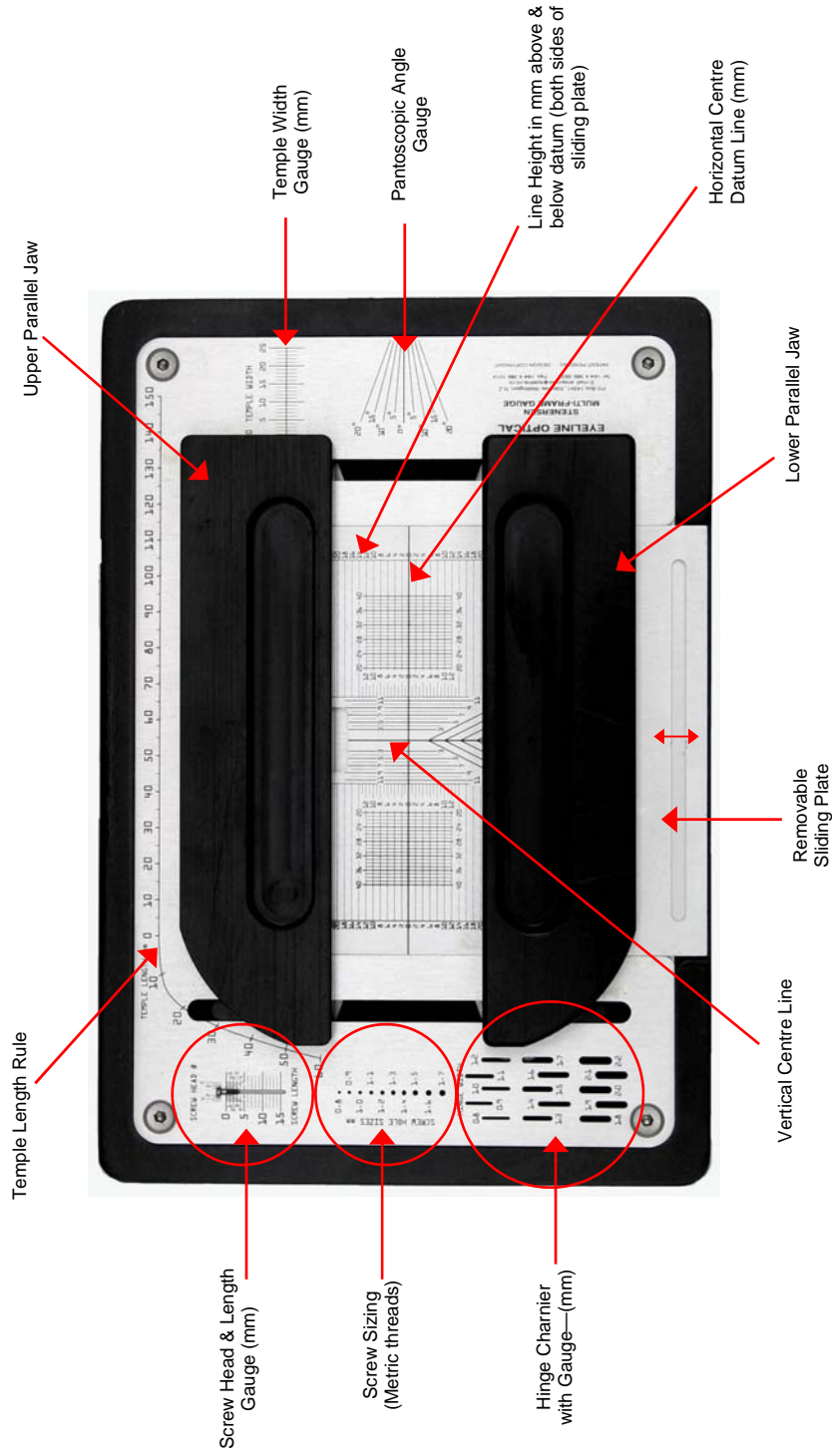


EYELINE OPTICAL  
STENERSEN FRAME GAUGE®  
INSTRUCTIONS

# EYELINE OPTICAL STENERSEN FRAME GAUGE®



# EYELINE OPTICAL

## Stenersen Frame Gauge®

### ABOUT THE STENERSEN FRAME GAUGE®

The Stenersen Frame Gauge® is a precision instrument designed to:

- Accurately measure and pre-mark the horizontal centre line (datum line) of a spectacle frame
- Check and verify seg heights and centres
- Gauge screw threads, lengths and head sizes
- Measure the lengths of temples including curl sides
- Gauge the width of a temple hinge charnier
- Measure the width of a temple
- Measure the pantoscopic angle of a frame

The Stenersen Frame Gauge® is designed for exactness, simplicity and ease of use when measuring and/or verifying these important measurements. It is manufactured from aircraft quality aluminium and hardened by anodizing for long life durability to provide years of precise and trouble free service.

Essential for accurately measuring and verifying progressive and multifocal lens centres. There is no schewing or racking of the parallel jaws because of the precision mechanism made for this instrument.

The monocular PD lines and vertical graduations on the sliding plate allow for easy markings of PD's and heights for bifocals, aspherical and progressives lenses. It also makes verification of bifocal, trifocal , progressive occupational and aspheric heights simple and accurate.

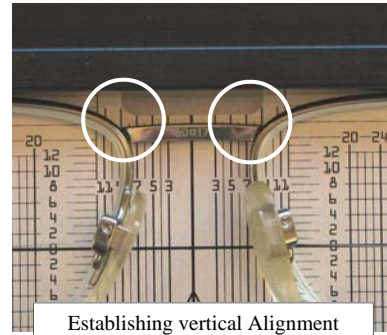
These benefits make the Stenersen Frame Gauge® a perfect professional companion for use by the Optometrist, Dispensing Optician, Optical Mechanic/Technician and trainees.

#### **TIP TO REMEMBER**

*When using the Stenersen Frame Gauge® it is very important for accuracy that your gaze is not converged or off-centre. Always read the gauge using the alternate eye that corresponds with the side of the gauge that you are reading i.e. use the left eye when reading the right lens measurement. This will help eliminate any parallax errors.*

## 1. To find the horizontal centre line (datum line) of a spectacle

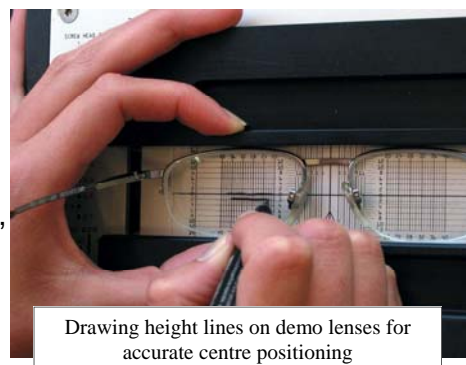
- Pull the jaws apart and placing the spectacle frame face down onto the sliding plate.
- Gently bring the jaws together to allow the spectacle frame to be clamped between them.
- To centre the frame, take the same points on both sides of the frame, (e.g. where the bridge connects to the lens rim) and move the frame right or left until they match the same position on the vertical centre line of the sliding plate. (see above)
- The horizontal centre line (datum line) can now be marked on the inserts, decals, tape or demo lenses with a fine tipped marking pen.



**NOTE:** There are two internationally recognised forms of recording height measurements. The first is above or below horizontal centre line (datum line). The second is from lowest point of the lens (that is, the peak of the bevel at the lowest point).

## 2. To pre-mark a lens insert for bifocal, progressive or aspheric heights and record using the horizontal centre line (datum line) rule

- Find the horizontal centre line (datum line), as above.
- Measure patient monocular PD's.
- Using the vertical reference lines on sliding plate, mark monocular PD's on the inserts, decals, tape or demo lenses.\*
- Mark 2 mm horizontal graduation lines from the monocular PD point
- Place frame on patient and note the reference line according to lens type, when patients head is in the appropriate position.



- Place frame back on the frame gauge and extend the noted reference line.
- Re-check on the patient and record measurement.

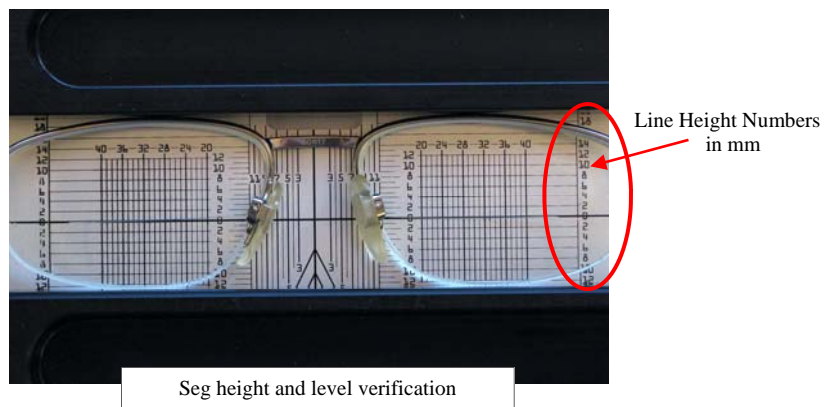
**\*NOTE:** These may be drawn above or below the horizontal centre line (datum line) depending on lens type to be fitted i.e. progressive fittings above and bifocal fittings below the horizontal centre line (datum line).

**3. To pre-mark a spectacle frame for bifocal, progressive or aspheric heights and record using the lowest point of the lens**

- Proceed as before (2) to establish horizontal centre line (datum line) then,
- Read height off *Line Height Numbers* on the edge of plate (see illustration below)

**4. Verifying bifocal, progressive, aspheric and other heights using the Stenersen Frame Gauge**

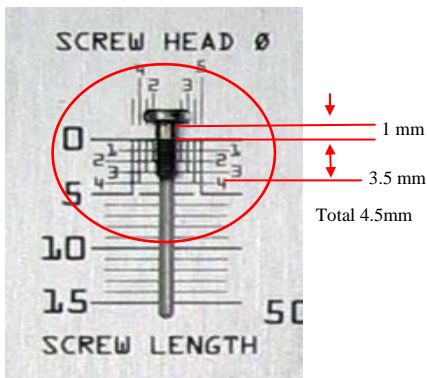
- Pre-mark lenses with manufacturer markings and fitting heights
- Place frame on Stenersen Frame Gauge<sup>®</sup> and align horizontally and vertically as above
- Ensuring your gaze is directly above Stenersen Frame Gauge<sup>®</sup> to verify seg heights, seg lines for horizontal straightness and correct centres.



## OTHER GAUGE USES

### 5. ASCERTAINING SCREW HEAD DIAMETER

Place the screw head into the slot with the screw shank sitting in the groove. Press the screw head against the lower slot edge and read off the diameter measurement from scale.



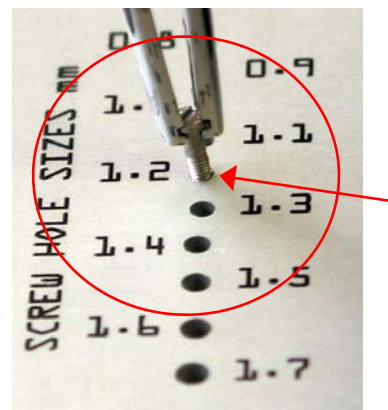
Screw Length = 4.5 mm  
Screw Head dia = 3 mm

### 6. ASCERTAINING SCREW LENGTH

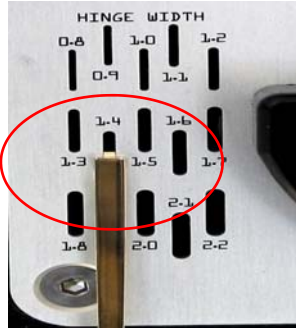
Place the screw head into the slot with the screw shank sitting in the groove. Press the screw head against the lower slot edge and read off the length of the screw from the vertical scale measurement. e.g. Screw length 3.5mm + 1mm = 4.5mm

### 7. ASCERTAINING SCREW THREAD SIZE

Using screw holding tweezers, hold the screw by its head and insert the threaded section into the largest hole (1.7 mm). If it is loose, insert it into the next size hole i.e. 1.6 mm. Repeat this process until the screw fits firmly into a hole. This will be the metric thread size of the screw, e.g. M1.2.



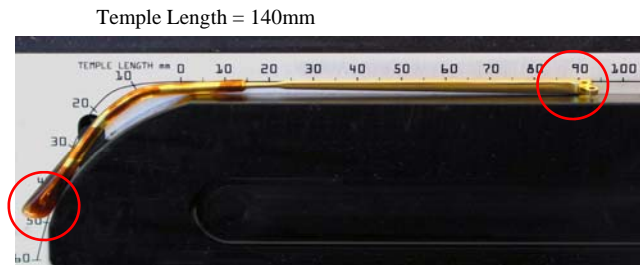
Sizing Screw Threads  
1.2 mm



Hinge Charnier  
Width 14. mm

## 8. ASCERTAINING HINGE CHARNIER WIDTH

The width of a single hinge temple charnier can be determined by placing it into a large slot then moving down to the next smaller slots until it fits firmly. That will be the width of the hinge charnier.



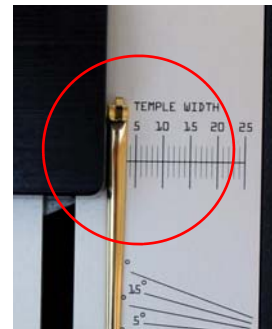
## 9. MEASURING TEMPLE LENGTH - (both hockey and curls)

Open the jaws of the frame gauge. Place the temple against the top of the top jaw so that the bend starts at the zero (0). The temple length is measured (depending on the method used - see below) by adding the two lengths both sides of the "0". E.g. 90 mm to the right and 55 mm to the left - total 145 mm.

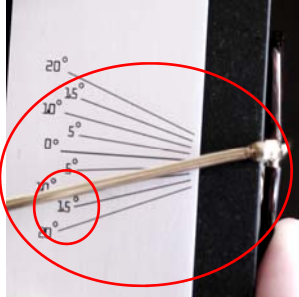
*Note: In some countries, temple lengths are measured "to the bend" - in others it is the total length.*

## 10. MEASURING TEMPLE WIDTH & HEIGHT

The same method is used for measuring both the width and height of a temple. Open the jaws of the frame gauge and place the temple against the right side of the jaws and read off the measurement.



Temple Height 3.5mm



15° Pantoscopic Angle

## 11. MEASURING PANTOSCOPIC TEMPLE ANGLE

The pantoscopic angle of a frame can be measured by opening the jaws to their widest position. Placing the inside rim against the right side of the gauge body with the temple plate against the 0° mark. The pantoscopic can then be read.

### GENERAL INFORMATION

With the continual release of specialised lenses into the market place, the fitting of correct heights is critical to the success of these lenses. The Stenersen Frame Gauge® will accurately measure heights and centration for lenses including anti-metropes, anisometropes or any other atypical prescriptions.

The Stenersen Frame Gauge® is made for robust use, but it is a precision measuring device so please take care in its use. It has copyrights and patents pending and any breaches will be vigorously enforced.

### CALIBRATION CHECK

1. When the jaws are closed and the sliding plate is pushed up tight, the horizontal centre line on the sliding plate will appear exactly down the centre of the crack between the jaws.
2. When the jaws are open, they will register equally above and below datum. This is indicated by the same line height numbers.

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*Stenersen Frame Gauge® registered trademark.  
Patent No: 536244 2004*

*(Release No: Feb06-02)*