



abdo

ABDO Frame Rule

Instruction manual



Front of ruler

1. Interpupillary distance (PD)

1.1 Lower scale for right handed person

1.2 Upper scale for left handed person

2. Boxed lens size

2.1 Horizontal lens size

Place the frame so that tangents to the upper and lower eye rims are parallel to the guidelines and, with the nasal edge of one eye on the centre vertical line, move the frame until the outer edge of the eye is on the horizontal centre line. Measure the distance along the line. (Figure 1: Example 46mm)

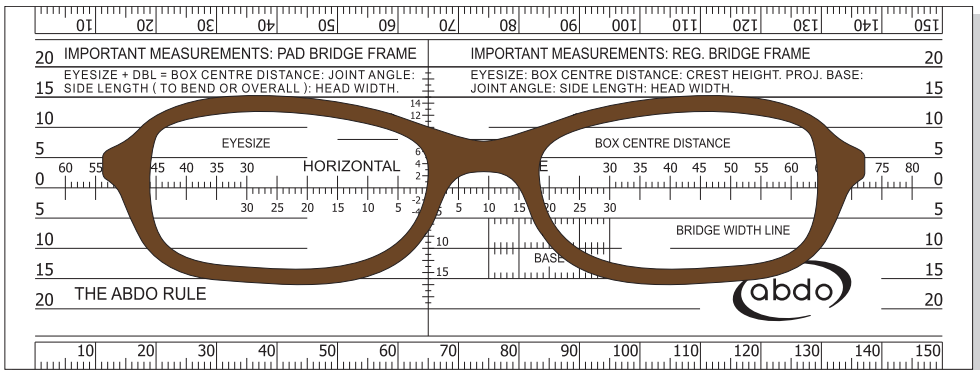


Figure 1: Horizontal Lens Size

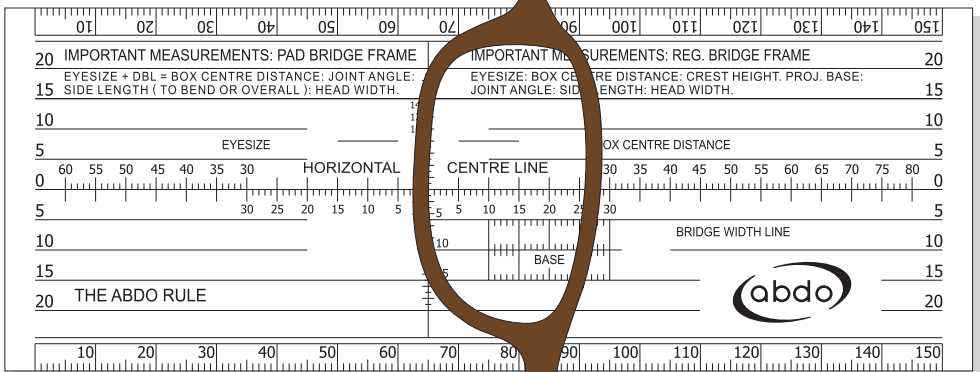


Figure 2: Vertical Lens Size

2.2 Vertical lens size

With the bottom edge of the eye shapes parallel to the lower edge of the ruler, measure off the vertical box measurement by locating the top edge of the eye shape on the vertical centre line. Add 25mm to the reading on this line.

For both of these measurements add 1mm if necessary to allow for the depth of the groove.

Alternatively, as per figure 2, turn the frame around and line up the lower edge with the vertical scale line. The vertical boxed lens size can then be read off the horizontal centre line, which in this instance is used as a vertical scale, by locating the top edge of the eye shape. (Figure 2: Example 26mm)

Front of ruler

3. Distance between lenses

Measure the minimum distance between lenses.
Deduct 1mm if necessary to allow for the depth of the groove. (Figure 3: Example 22mm)

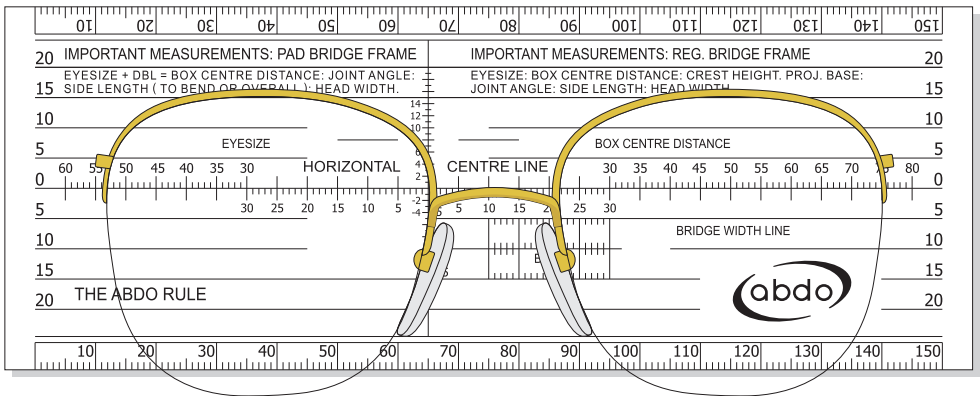


Figure 3: Distance between Lenses

4. Boxed centre distance

This measurement can be obtained by placing the most nasal point on the left lens on the vertical centre line and measuring to the most temporal point on the right lens along the horizontal centre line. Alternatively it is the sum of measurements 2.1 and 3.

5. Joint size

Measured along one of the horizontal scales along the bottom, or top edge, the 'joint size' is the overall length of the charniers, measured in millimetres. (Figure 4)



Figure 4: Joint Size

Regular bridge measurements

6. Crest height

Align the frame so that the lens shape is equidistant above and below the centre line and determine the height to the mid-point, of the lower edge, of the crest of the bridge above this line. (Figure 5: Example +3mm)

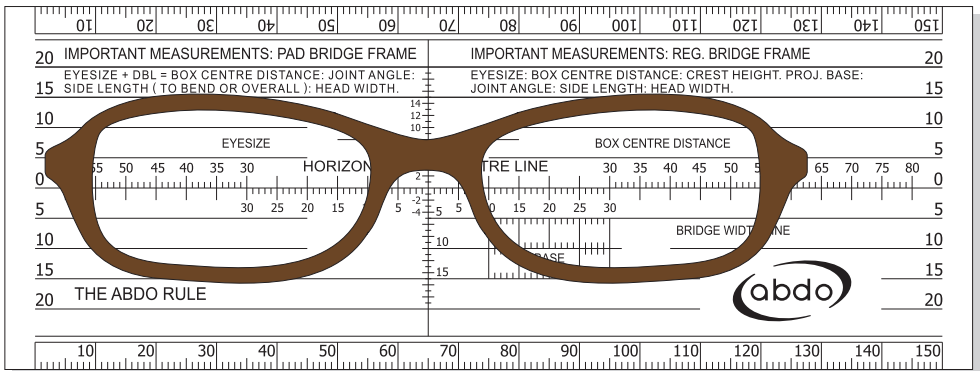


Figure 5: Crest Height

7. Bridge projection

The distance from the mid-point of the bridge to the back plane of the front. (Figure 6: Example +3mm)

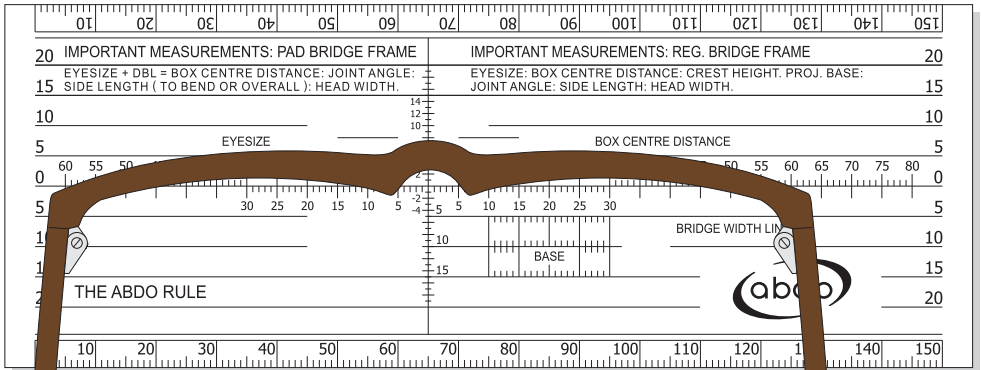


Figure 6: Bridge Projection

8. Distance between rims

This is normally measured at 10mm and 15mm below the crest. Place the frame so that the lower edge of the crest is on the horizontal centre line, and the nasal edge of the right eye is at the 10mm mark on the vertical scale. The DBR is measured along the horizontal scale. (Figure 7: Example 18mm measured at 10mm below crest)

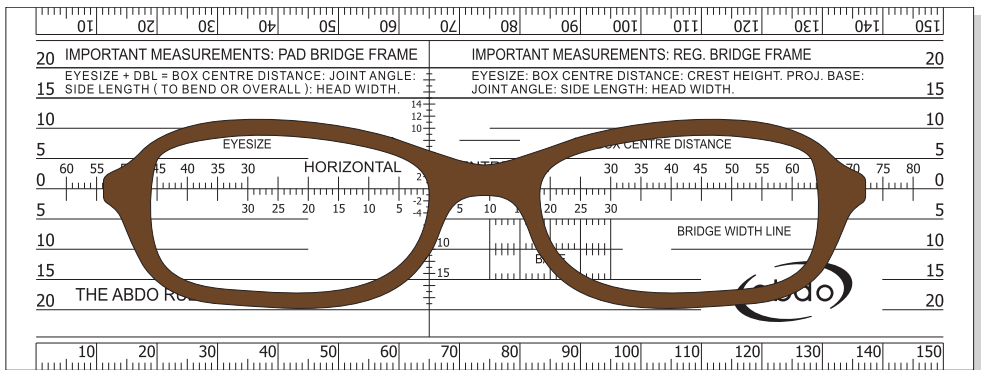


Figure 7: Distance Between Rims

9. Bridge height

This is the crest height, plus 5mm, i.e. the vertical distance from the bridge width line to the mid-point of the lower edge of the bridge.

10. Bridge width

This is the distance between rims measured along the bridge width line. Place the frame symmetrically on the ruler using the guidelines and move it horizontally so that the nasal edge of the right rim coincides with the 5mm mark on the vertical scale. The bridge width is measured along the bridge width line. (Figure 8: Example 25mm)

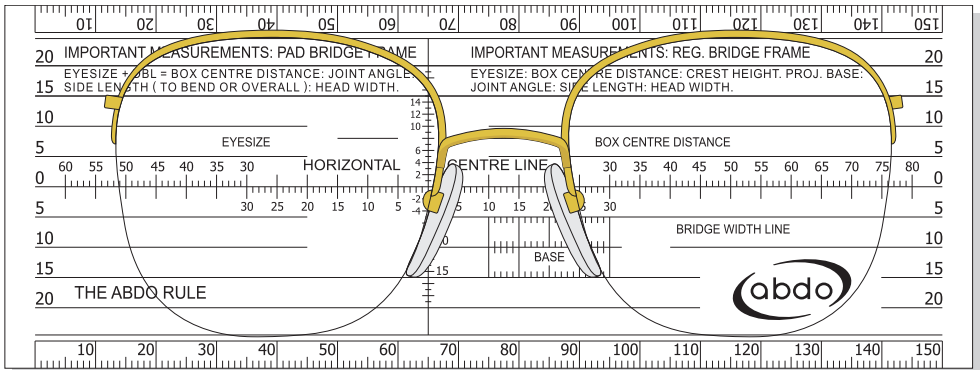


Figure 8: Bridge Width

11. Apical radius

The radius of the arc forming the lower edge of the bridge viewed perpendicularly to the back plane of the front of a regular bridge frame. (Figure 9: Example 7mm)

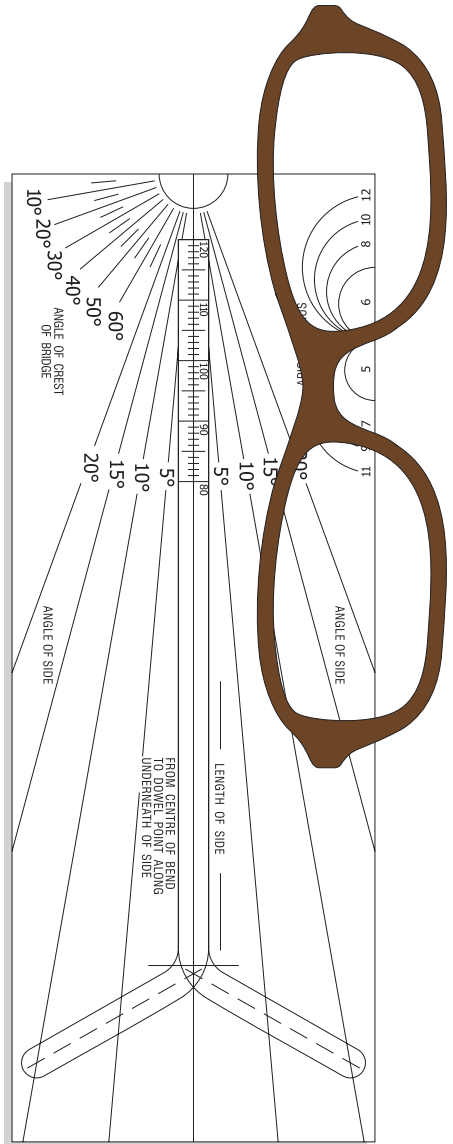


Figure 9: Apical Radius

Pad bridge measurements

12. Splay angle of pad

The angle between the pad plane and a normal to the back plane of the front. (Figure 10: Example 25°)

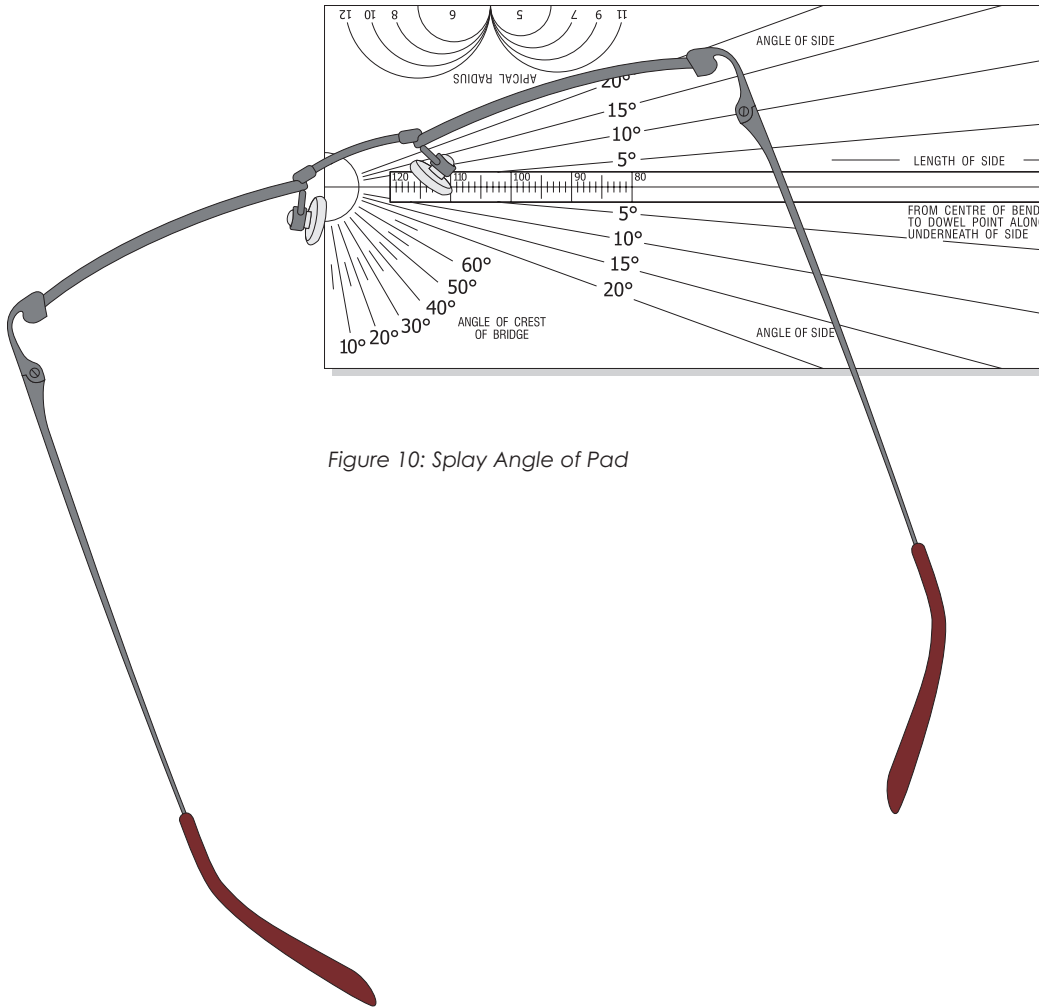


Figure 10: Splay Angle of Pad

13. Frontal angle of pad

The angle between the vertical and the line of intersection of the pad plane with the back plane of the front. (Figure 11: Example left pad 25°)

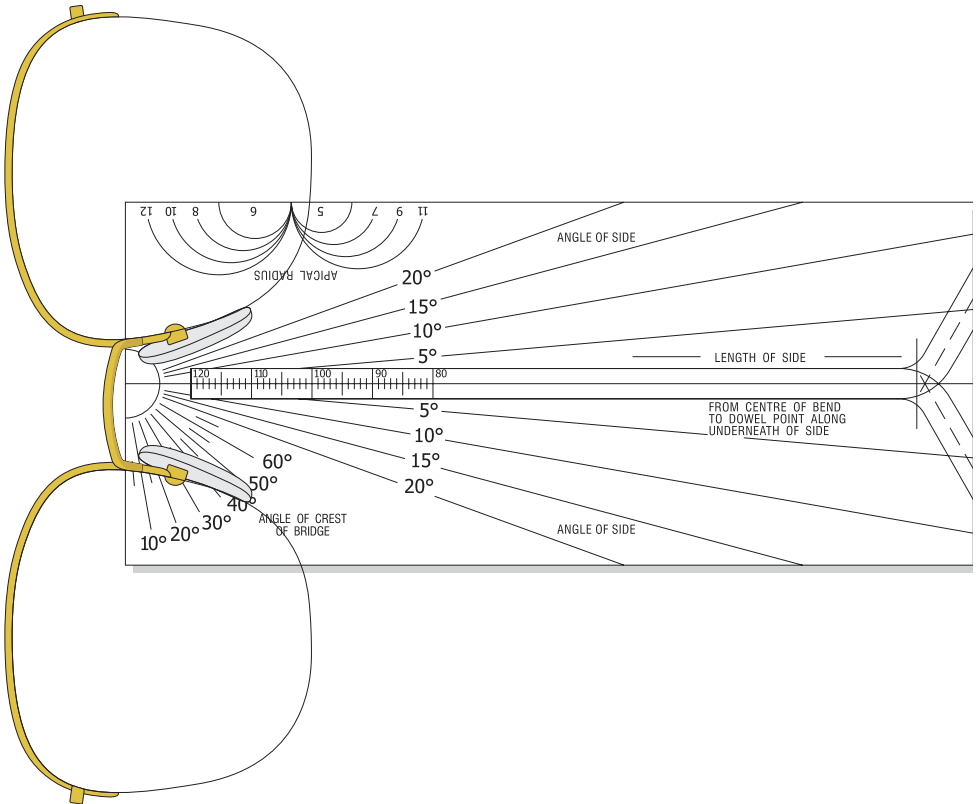


Figure 11: Front Angle of Pad

14. Distance between pad centres

The horizontal distance between the two pad centres. Place the bearing surfaces of the pads along one of the horizontal scales, and estimate the distance between the pad centres.

15. Distance between pad tops

The horizontal distance between the tops of the pads.

16. Height of pad centres

The vertical distance from the horizontal centre line to the pad centre.

17. Height of pad tops

The vertical distance from the horizontal centre line to the highest point of the pad.

18. Width of pad

The maximum width of the pad surface, measured from the back of the rim.

Note: for rocking pads, pad centre is the point on the bearing surface opposite the point of attachment of the pad.

Side of the ruler

19. Angle of side

The vertical angle between a normal to the back plane of the front and the line of the opened side.

(Figure 12: Example 7.5°)

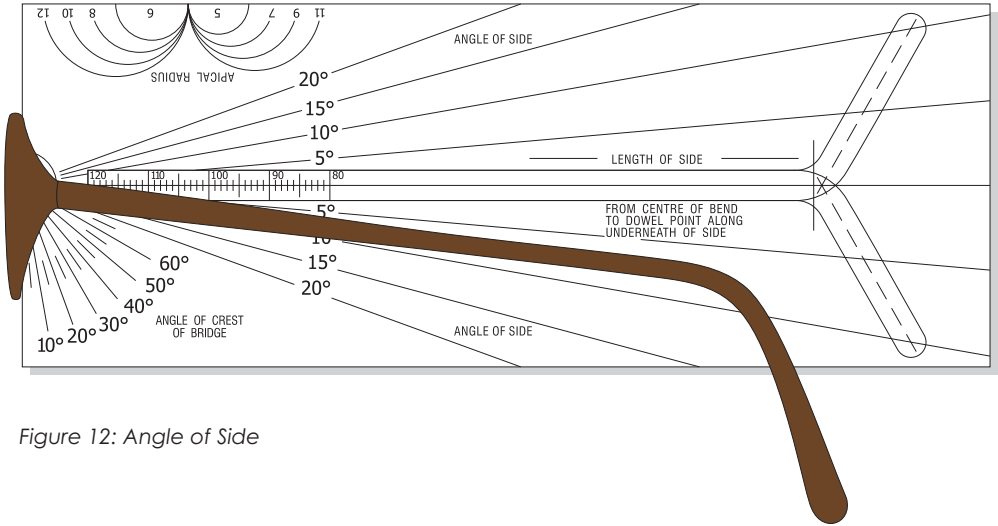


Figure 12: Angle of Side

20. Frame temple width

The distance between sides 25mm behind the back plane of the front. (Figure 13: Example 124mm)

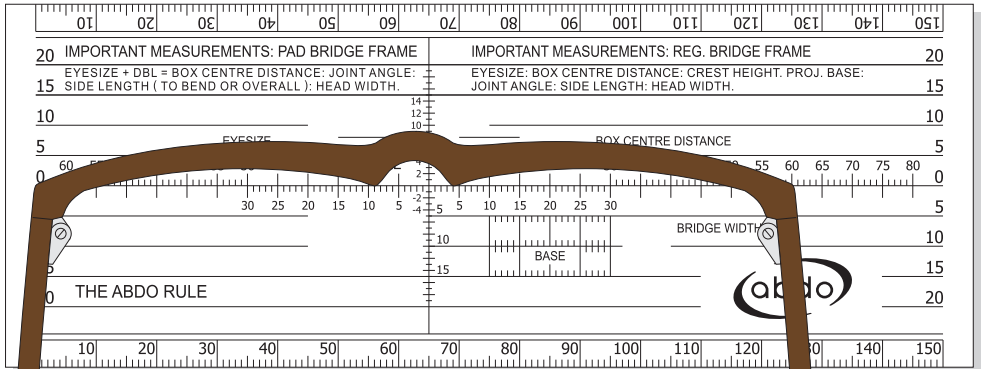


Figure 13: Frame Temple-Width

21. Frame head width

The distance between the sides at the ear points.

(Figure 14: Example 137mm)

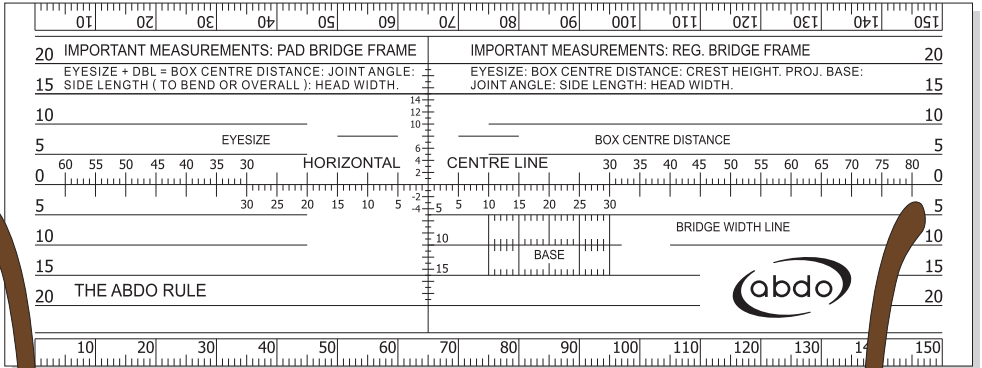


Figure 14: Frame Head-Width

22. Length to bend

The distance between the dowel point and the ear point. (Figure 15: Example 109mm)

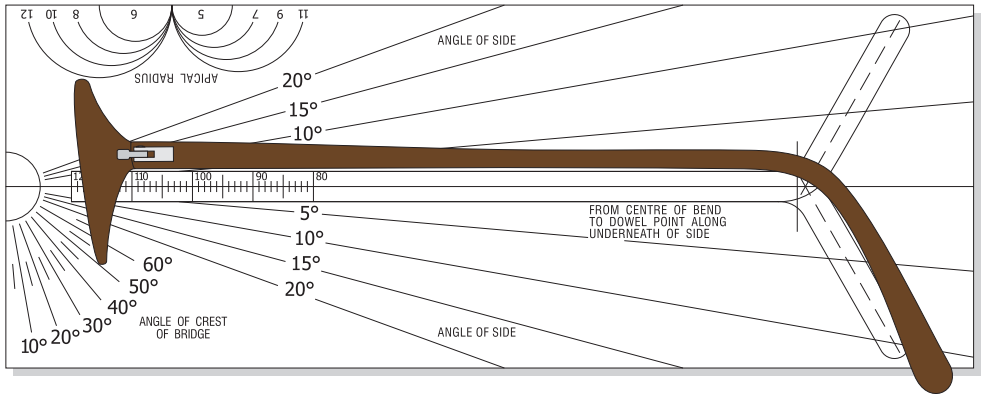


Figure 15: Length to Bend

23. Length of drop

The distance from the ear point to the extreme end of the side. (Figure 16: Example 42mm)

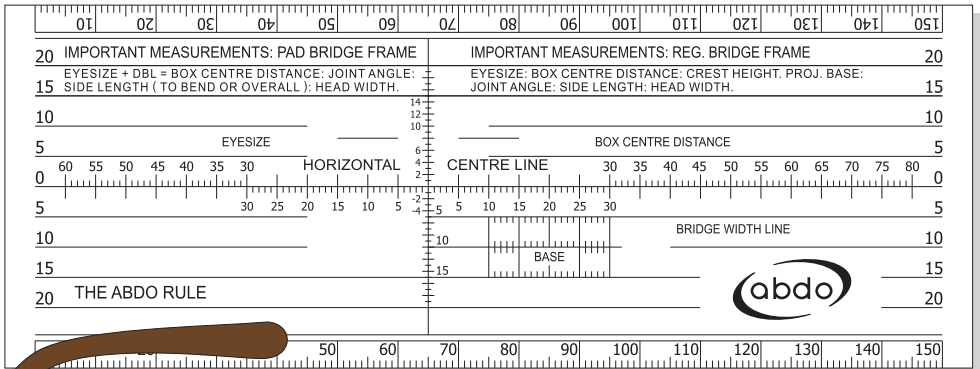


Figure 16: Length of Drop

24. Total length

The length from the dowel point to the extreme end of a curl side. (Figure 17: Example 112mm)

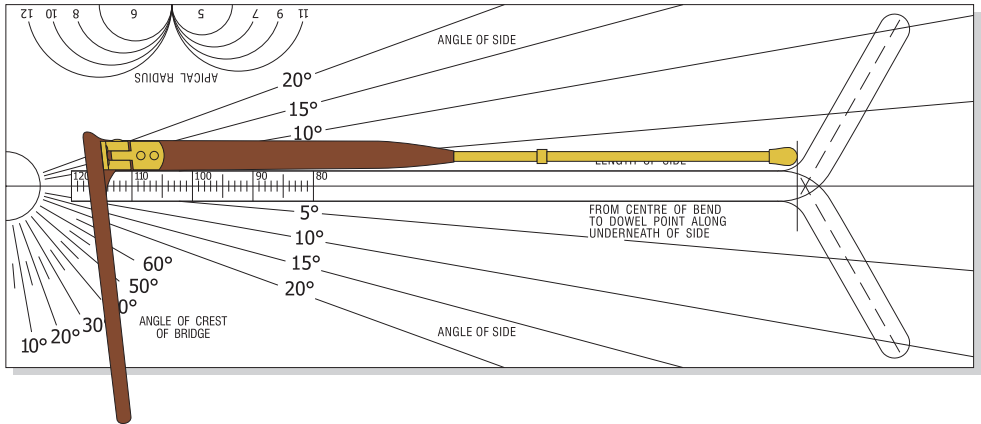


Figure 17: Total Length

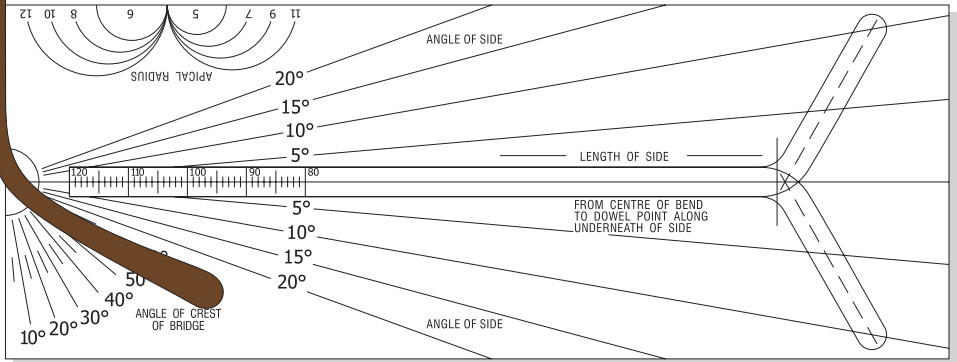


Figure 18: Downward Angle of Drop

25. Downward angle of drop

The downward angle of the drop from the line of the side measured at the ear point and in the vertical plane containing the line of the side.

(Figure 18: Example 60°)

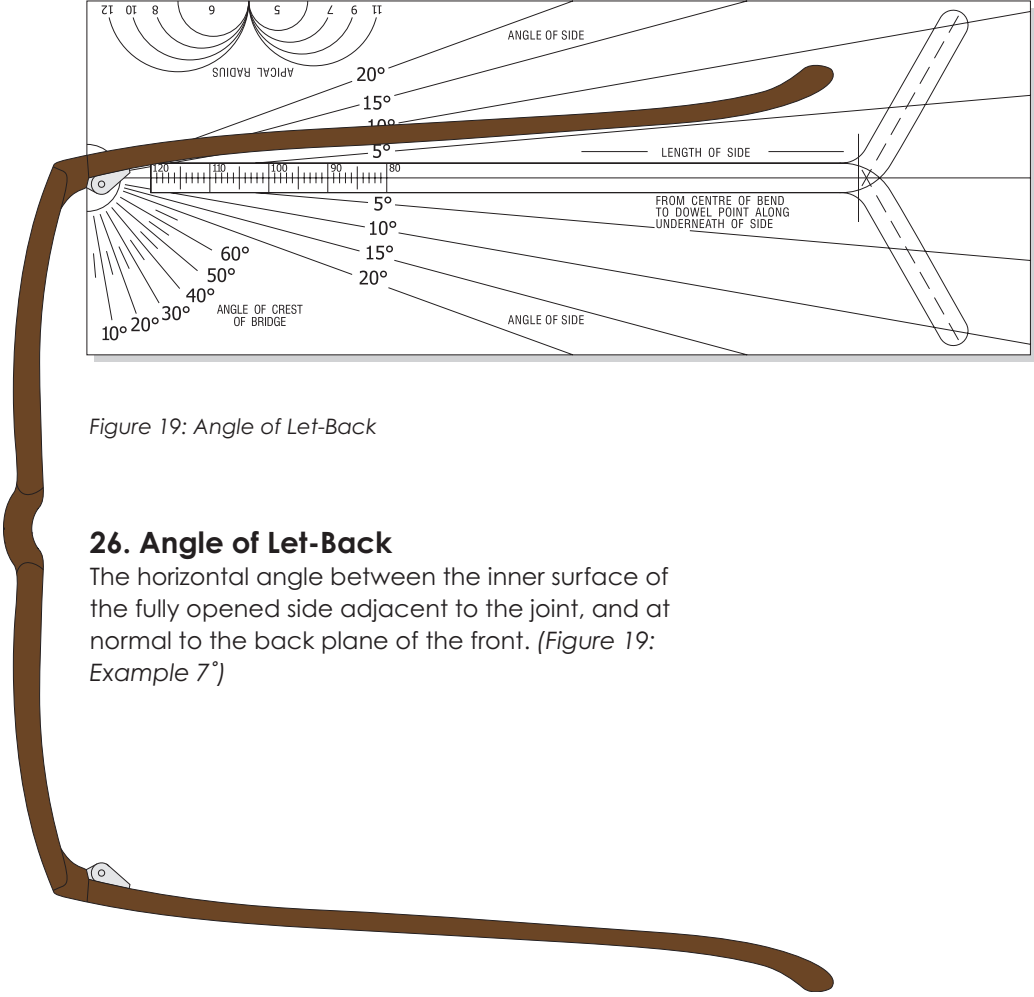


Figure 19: Angle of Let-Back

26. Angle of Let-Back

The horizontal angle between the inner surface of the fully opened side adjacent to the joint, and at normal to the back plane of the front. (Figure 19: Example 7°)

27. Length to tangent

The distance from the dowel point to the tangent of the inner surface of a curl side at rest, perpendicular to the line of the side. (Figure 20: Example 112mm)

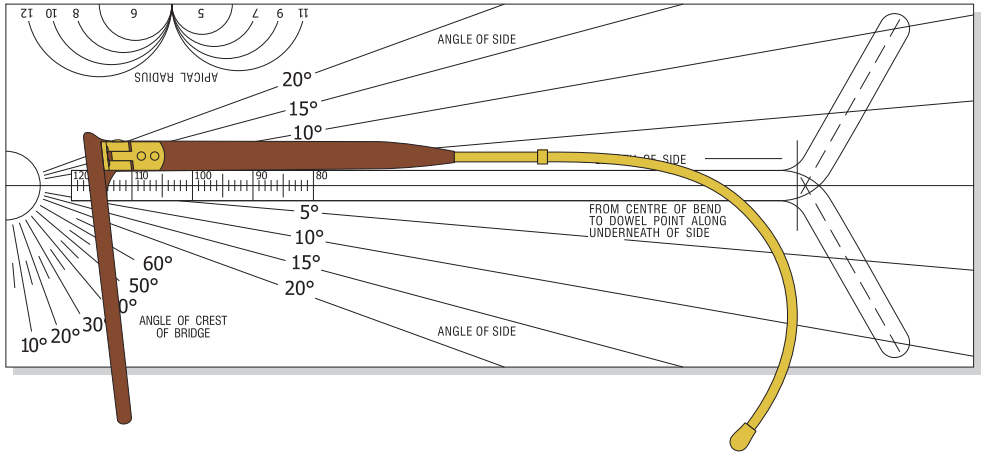


Figure 20: Length to Tangent



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