

Class Rule Clarification 2026-001

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Optimist Class Rule Clarification

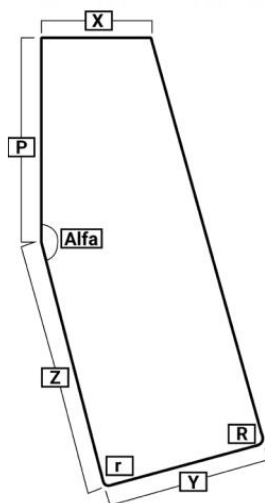
Measurement of Rudder Leading Edge Angle Alfa (Rule 3.4.2.1)

Guidance for sailors, measurers and manufacturers using a digital angle meter.

1. Class Rule Reference

Rule 3.4.2.1 defines the rudder geometry and specifies Alfa = $165^\circ \pm 1^\circ$. Angle Alfa is the angle formed between the straight sections identified as dimensions P and Z in the class-rule drawing.

3.4.2.1 The rudder shape shall be as follows:



X: 175 mm $\pm 0/-2$ mm
Y: 260 mm $\pm 0/-3$ mm
Z: 400 mm $\pm 0/-2$ mm
P: 337 mm $\pm 0/-2$ mm
Alfa: 165 degrees ± 1 degrees
r: Angle 90 degrees ± 1 , radius 40mm (± 5)
R: Angle 90 degrees ± 1 , radius 90mm (± 5)
The corners at each end of X shall be rounded to a radius of 4 mm ± 1 mm
Between radius limits all sides shall be straight edges (± 2 mm)

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Figure 1. Extract from Rule 3.4.2.1 showing the rudder geometry and definition of angle Alfa.

2. Definition of Angle Alfa

The measurement shall be taken between the straight portions of side P and side Z. Radiused corner transitions are not included in the measurement. The nominal value is 165° with a permitted tolerance of $\pm 1^\circ$, giving an acceptable range of 164° to 166° .

3. Recommended Measurement Method

Step 1: Remove Pintles/gudgeons and Tiller from Rudder

Step 2: Place the digital angle meter on the straight surface identified as P and press ZERO.

Step 3: Move the angle meter to the straight surface identified as Z and record the displayed reading β .

Step 5: Calculate Alfa using: $\text{Alfa} = 180^\circ - \beta$.

Step 5: Verify that the result is between 164° and 166° .

Figure 2 – Measurement Principle

Digital meter on P side = 0.0° .

Digital meter on Z side = β° .

$\text{Alfa} = 180^\circ - \beta$.

4. Measurement Locations

Measurements must be taken at the point of intersection of the P/Z interface. It is recommended this is repeated a minimum of 3 times.

If the measurement falls outside the permitted range, the rudder should be considered non-compliant until further assessment.

5. Acceptance Criteria

Compliant: $164^\circ \leq \text{Alfa} \leq 166^\circ$

Non-compliant: $\text{Alfa} < 164^\circ$ or $\text{Alfa} > 166^\circ$

6. Notes to Measurers

The angle meter shall bear fully on the straight sections of P and Z.

Measurements should not be taken across local repairs, filler, paint build-up, or within the radius transitions.

Where there is disagreement between measurements, a calibrated measurement device should be used for verification.

7. Correction of Non-Compliant Angles

If the angle is found to be non-compliant, seek advice from the manufacturer on how to correct this.

