

VPRS Measurement Guide

Hull

Hull length The overall length of the hull excluding the following: bowsprit and other rigging, stem fittings, stern fittings, railings, rubbing strakes or any overhanging rudder and rudder hangings.

Bow overhang The horizontal distance from the point where the stem cuts the water to the forward limit of the hull length, with the boat in the empty weight condition. If not submitted the bow overhang will be estimated from the difference between the hull length and the waterline length.

Stern overhang The horizontal distance from the point where the hull meets the water, ignoring any skeg, to the aft limit of the hull length, with the boat in the empty weight condition. If not submitted the stern overhang will be estimated from the difference between the hull length and the waterline length.

Waterline length The horizontal distance between the point where the stem cuts the water and the point where the hull meets the water at the stern, ignoring any skeg. Usually calculated by subtracting the bow and stern overhangs from the hull length.

Beam The maximum width of the hull, measured horizontally and excluding rubbing strakes, toe rails or other fittings.

Topside overhang The horizontal distance from the point where the side of the hull meets the water to a point vertically below the point of maximum beam, with the boat in the empty weight condition. If not submitted the topside overhang will be estimated as a proportion of the beam.

Waterline beam The maximum width of the hull at the waterline with the boat upright and in the empty weight condition. Usually calculated by subtracting twice the topside overhang from the beam.

Mean freeboard The average vertical height of the hull topsides, measured from the surface of the water to the edge of the deck. Calculated by taking the average of the freeboards measured at the bow and stern. If not submitted the mean freeboard will be estimated using a formula based upon the hull length.

Draught The maximum depth below the surface, including the keel and rudder, with the boat in the empty weight condition. If the boat has a lifting keel or rudder, the draught should be given with the keel and rudder fully down.

Empty weight The weight of the boat, fully rigged (spars, standing rigging, running backstays, halyards, main and mizzen sheets), engine installed or on board, batteries and all permanent fixtures and fittings for the accommodation in place. The empty weight excludes sails, headsail sheets and guys, spare rigging, fuel and water, anchors and cables, removable equipment, tools and personal effects.

Ballast weight The weight of the ballast keel and any internal ballast carried. Distinguish between the two if possible. If not submitted the ballast weight will be estimated as a standard percentage of the empty weight.

Essential hull measurements: hull length, waterline length, beam, draught, empty weight.

Hull details

Keel depth The vertical distance between the bottom of the hull and the bottom of the keel. If not submitted the keel depth will be estimated using a formula including waterline length and beam and the displacement.

Keel chord The horizontal distance from the leading edge of the keel to the trailing edge, measured at half the keel depth. Long keeled yachts with keel-hung rudders should exclude the rudder. If not submitted the keel chord will be estimated using a formula including the keel depth and sail area.

Keel type Description of the ballast keel including its form and material. For example, "iron fin", "long keel with lead ballast", "iron and lead fin with bulb", "iron lifting keel". Please also say if there is any additional ballast (usually iron or lead) in the hull intended to increase the yacht's weight or change the trim. The description submitted will be converted to one of a number of standard phrases on the certificate.

Rudder depth For rudders that are usually wholly submerged, the vertical distance from the top of the rudder (and skeg, if any) to its lowest point. For rudders that are partly out of the water (eg transom-hung rudders), the vertical distance from the waterline to the lowest point of the rudder (and skeg, if any).

Rudder chord The horizontal distance from the leading edge of the rudder (and skeg, if any) to the trailing edge, measured at half the rudder depth. For keel-hung rudders measure the rudder blade only.

Rudder type Description of the rudder including number, form/mounting and whether the rudder is fixed or lifting. For example, "spade", "twin spade", "skeg hung", "keel hung", "transom hung", "twin transom hung". The description submitted will be converted to one of a number of standard phrases on the certificate.

Propeller diameter The diameter of the circle described by the blade tips. For folding or feathering propellers, this measurement should be given with the blades in the unfolded, working position.

Propeller blades The number of blades on the propeller.

Propeller type Choose either "none", "fixed" or "folding". Vessels with outboard engines that are stowed with the propeller out of the water when sailing should choose "none".

Spar material Describe the principle material used for the spars, for example "aluminium alloy", "timber" or "carbon fibre".

Interior fit-out State whether, when racing, the boat is fully fitted out, partially stripped (rather Spartan), or fully stripped out.

Essential hull details: keel type, rudder type, propeller type, spar material, interior fit-out.

Mainsail

Mainsail hoist The hoist of the mainsail measured on the mast, from the top of the boom or the mainsail tack whichever is the lowest, and the bottom of a permanent 25mm band of contrasting colour at the top of the mast above which the mainsail shall not be hoisted. If there is no band the measurement shall be taken to the top bearing surface of the halyard shackle.

Mainsail foot The foot of the mainsail measured along the top of the boom from the back of the mast to the inside of a permanent 25mm band of contrasting colour beyond which the mainsail clew point shall not be set. If there is no band the measurement shall be taken to the aft end of the boom.

Upper width The shortest distance between the 7/8th leech point and the luff, bridging any hollows in the leech. If not submitted the upper width will be assumed to include a roach and will be estimated from the mainsail foot.

Three quarter width The shortest distance between the three-quarter leech point and the luff, bridging any hollows in the leech. If not submitted the three-quarter width will be assumed to include a roach and will be estimated from the mainsail foot.

Half width The shortest distance between the half leech point and the luff, bridging any hollows in the leech. If not submitted the half width will be assumed to include a roach and will be estimated from the mainsail foot.

Area No measurement is required for area; it is calculated from the measurements above.

Essential mainsail measurements: mainsail hoist, mainsail foot.

Mizzen

Mizzen hoist The hoist of the mizzen sail measured in the same way as the mainsail hoist.

Mizzen foot The foot of the mizzen sail measured in the same way as the mainsail foot.

Staysail luff length The longest luff length of any mizzen staysail, measured in the same way as the headsail luff length.

Staysail luff perpendicular The longest luff perpendicular of any mizzen staysail, measured in the same way as the headsail luff perpendicular.

Area No measurement is required for area; it is calculated from the measurements above.

Essential mizzen measurements: mizzen hoist, mizzen foot, staysail luff length and perpendicular.

Upwind headsail

An upwind headsail is a sail tacked forward of the foremost mast that can be used to sail close to the apparent wind. It may be attached to a stay or have a loose luff. The working area of the largest sail used for this purpose should be measured with reference to the shape of the sail when it is set.

Forestay length The length measured from the point where the forestay is attached to the deck (or bowsprit) and to the point where the forestay attaches to the mast – or to the point where any headsail is attached to the mast, if higher.

Foretriangle base The horizontal distance from the front face of the mast to the point where the forestay attaches to the deck (or bowsprit) – or to the point where any upwind headsail is tacked, if further forward.

Luff length The shortest distance from head to tack when stretched sufficiently to remove creases.

Luff perpendicular The shortest distance from the clew to the luff or part of the sail that behaves as the luff. For a cutter the luff perpendicular is measured as the shortest distance from the aftmost clew of any jib or headsail when set on the centre line of the boat, to the foremost forestay.

Half width The shortest distance between the half leech point and the luff, bridging any hollows in the leech of the sail. If not submitted the half width will be estimated from the luff perpendicular.

Three-quarter width The shortest distance between the three-quarter leech point and the luff, bridging any hollows in the leech of the sail. If not submitted the three-quarter width will be estimated from the luff perpendicular.

Headboard width The width of the headboard. If not submitted the headboard width will be estimated from the luff perpendicular.

Area No measurement is required for area; it is calculated from the measurements above.

Essential upwind headsail measurements: forestay length, foretriangle base, luff length, luff perpendicular. For boats where the luff perpendicular is less than 110% of the foretriangle base, the half width and threequarter width must also be submitted.

Downwind headsail

A downwind headsail is a sail, set forward of the foremost mast from three corners only, with half width greater than 75% of the foot (measured as defined below). It may be symmetrical or asymmetrical. Examples include spinnakers and cruising chutes. The working area of the largest sail used for this purpose should be measured with reference to the shape of the sail when it is set.

Tack type State whether the sail is tacked to a spinnaker pole, a bow sprit or to the deck on the centreline.

Pole or tack length The length of the longest spinnaker pole or bowsprit measured on or near the centre line of the boat from the forward face of the mast to the extremity of the pole or sprit, or the horizontal length from the forward face of the mast to the spinnaker tack point on deck, whichever is the greatest.

Leech length The leech length of the largest downwind headsail, measured with the sail pulled taught from the clew to the head. For a symmetrical sail the designation of leech and luff is arbitrary, so long as both are measured.

Luff length The luff length of the largest downwind headsail on board, measured with the sail pulled taught from the tack to the head. For a symmetrical sail the designation of leech and luff is arbitrary, so long as both are measured.

Half width The distance between the half leech and half luff point, with the sail held taught between the two.

Foot width The distance between the clews, with the sail held taught between them.

Area If measurements for leech and luff lengths, half width and foot are given the area is calculated. Alternatively, state the area given by your sailmaker, as calculated for a spinnaker under IRC.

Essential downwind headsail measurements: tack point, pole or tack length, and either area OR luff length, leech length, half width and foot width.