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Crouch's Speed Calculator

Presenting a calculator for determining speed potential based on a hull's weight, its engine's horsepower, and a "hull factor" constant.

Planing Hull Speed Calculator

You provided 4 values, the shaded field has been ignored and re-calculated.

Weight	Power	Hull Factor	Boat Speed
2750.0 LBS	320.0 HP	169.0	57.6 MPH

Hull Speed Calculator Calculate

Calculator implemented in Perl by James F. Hebert.

This calculator is based on a formula developed by Naval Architect George Crouch who showed that a useful estimate of the speed of a moderate planing hull could be derived from the boat's weight, horsepower, and hull factor. The variables are related by

$$\text{MPH} = [(\text{HP} / \text{LBS}) ^{0.5}] \times C$$

where C = a constant ("hull factor") that depends on the hull form.

Crouch proposed that C would have a value for various hull types as follows

PLANING HULL SPEED CONSTANTS--MPH

C	Hull Type
172	Average runabout, cruiser, passenger vessel
218	High-speed runabout, very light high-speed cruiser
240	Race boat types
253	Three-point hydroplanes, stepped hydroplanes
265	Racing power catamarans and sea sleds

The hull factor is a constant which is used to convert the necessary dimension. Most Boston Whaler hulls are in the range of 180 to 200,

COMMENTS OR QUESTIONS

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