HydroComp, Inc.

August 4, 2026

HydroComp NavCad® 2026 What's New

New features for improved Vessel-Propulsor-Drive system simulation

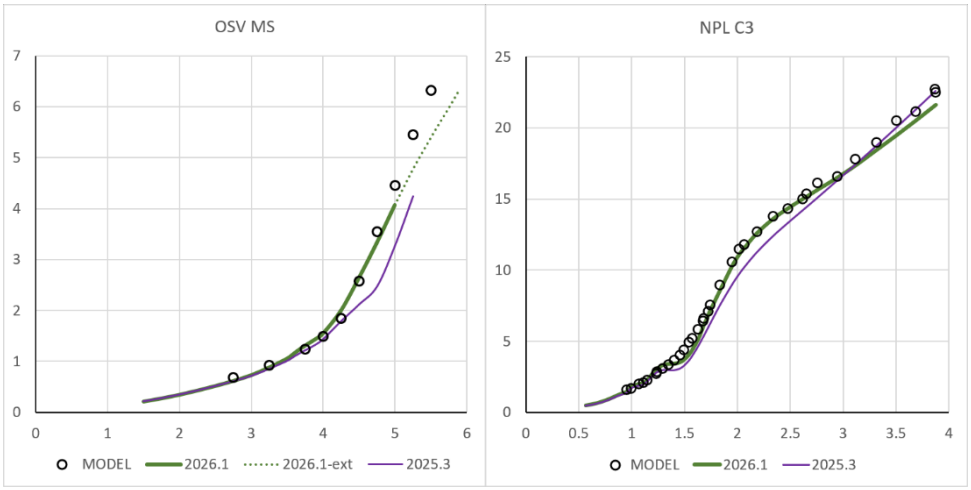
Development in 2026 offers new technical features and workflow improvements.

Build 2026.1

ADVM Update [Premium]

ADVM (Analytical Distributed Volume Method) is NavCad's higher-order resistance prediction method for displacement and semi-displacement ships. Unlike NavCad's many parametric methods, ADVM uses the longitudinal distribution of section area and waterplane for a more refined data model, and predicts the wave-making system via direct integration rather than parametric fitting. (See the NavCad help content for details.)

New to ADVM is an analytical, speed-dependent sinkage and trim correction applied to the section area and waterplane dataset. The prior correction – now called the Simple option – shifted the distribution in a manner similar to a Lackenby transform, but it could not account for cases where sinkage and trim introduced substantial changes in wetted geometry at the stern (e.g., transom immersion, new wetted area). The new correction instead performs a full hydrostatic refinement of the dataset. Two examples below illustrate the benefit.



These are model test validations for two very different hulls: a wide-beam offshore supply vessel (left) and a variant of the high-speed NPL series (right). The purple line shows the prediction using the Simple dynamic trim correction. Note the dashed line in the OSV validation – this marks a new speed-range check included with the ADVM prediction. Full, wide-beam hulls are typically challenging for analytical wave-making methods of this type, and the new check flags when predictions fall outside the tested range of applicability. Additional improvements have also been made to the method's viscous drag prediction.

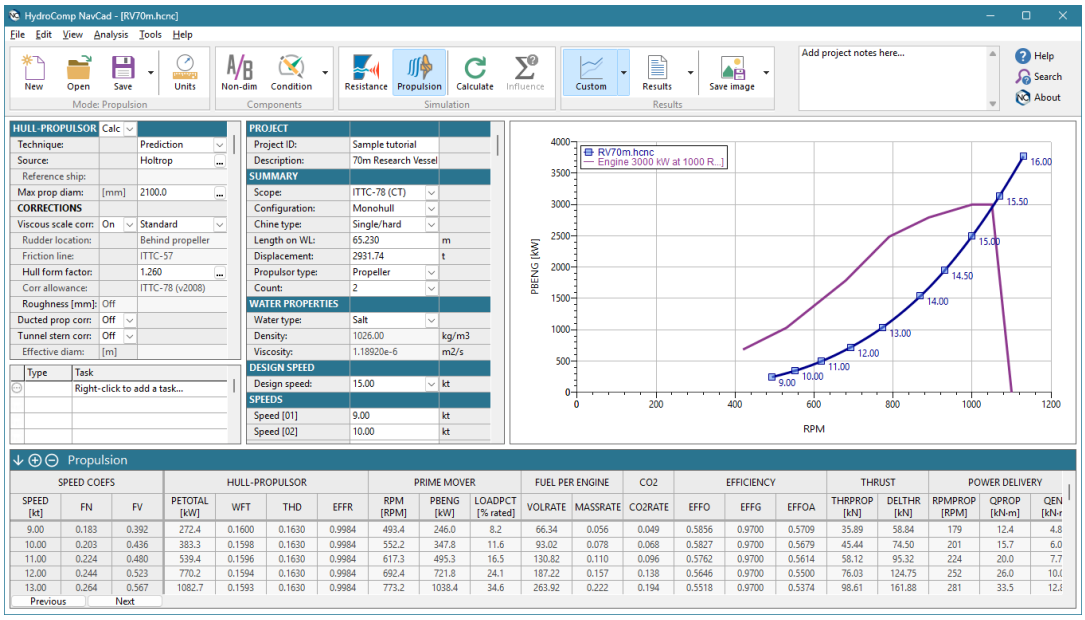
Miscellaneous

- Windows 11 interface improvements (e.g., screen centering on multiple monitors)
- Updated SJTU sinkage and trim method for better results at high speed (FN>0.45)

WIP Build 2026.0

Interface Updates

Continuing the interface design objectives for all HydroComp's tools, NavCad 2026 now has new control functions and entry cell navigation on main forms, enhanced hull CAD import, and improved coordinate plot visualization and export quality.



Miscellaneous

- Improved planing hull prediction, particularly for long narrow hulls
- Miscellaneous interface and graphics updates

About HydroComp NavCad

For additional information, click to: www.hydrocompinc.com/solutions/navcad

About HydroComp

Since 1984, HydroComp has been a leader in providing hydrodynamic software and services for resistance and propulsion prediction, propeller sizing and design, and forensic performance analysis. Through its unique array of software packages and services, HydroComp now serves over 1400 naval architectural design firms, shipyards, yacht owners, ship operators, propeller designers, universities, and militaries around the globe.

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