HydroComp PropCad® 2014 Released

This 3-year update is our most powerful release yet...

HydroComp PropCad is the industry-standard software for geometric modeling of marine propellers for design and manufacture. This tool provides automatic preparation of 2D design drawings, 3D offsets, thickness classification reports, and CAD/CAM data. Manufacturers, researchers and designers rely on PropCad for their modeling needs. The tool is widely used in over 40 countries for quickly generating propellers and design variants from small outboard production lines to large merchant ship propellers. The latest 2014 release of PropCad features a new table-driven interface, updated classification society rules, expanded 3D CAD exports, new smoothing tools, and more!

Updated interface and enhanced user experience

For the past three years, HydroComp has been developing enhancements to the PropCad software in order to update and expand PropCad’s propeller design capabilities. A substantial effort has focused on data entry and visualization. As a result, PropCad has moved to a table-driven interface that allows users to quickly enter and modify data in their designs. The content of the interface has been consolidated so that principle dimensions, radial distributions, and 2D section offsets are now all visible on the main screen. A new summary table displays the derived characteristics of the design, including weight, mass moment of inertia, total skew, and mean pitch. The display mode enables graphing of any radial distribution, such as chord, skew, or pitch angle. One-click graphing allows quick visualization of blade outlines, thickness profiles, and 2D section offsets.

Figure 1 - Main screen of PropCad 2014
New capabilities and expanded parametric control

PropCad 2014 features an improved, fully-parametric Builder that allows users to define radial distributions of parameters from HydroComp’s library propellers, from user-generated distribution files, or by entering the data directly into the sections spreadsheet. In 2014, the Builder includes presets for standard propeller designs. The Builder includes new options, including radial control of leading and trailing edge thickness, chordwise position of maximum thickness for Gawn-type sections, a CAD-friendly tip correction, and additional control of cup (with the ability to set the cup sweep angle, enable face-only cupping, and allowing cup around the tip). These added settings give PropCad users an unprecedented level of control in their designs.

PropCad’s table-driven entry supports cell formulas for on-the-fly calculations while improved data tools allow users to quickly visualize and smooth user-entered data. The 3D window includes hardware-accelerated anti-aliasing, smoothed 3D renders, new visualization modes, and even video recording! Users can also now add root fillets between the blade and hub, detect required hub length, and automatically set the blade position relative to the hub.

Updates, updates, updates…

In addition to new features, PropCad 2014 includes updates to existing Classification Societies and 3D CAD exports. CCS, NK, and Swedish/Finish rules for propeller thickness have been added to PropCad 2014. Additionally, ice class designations are available for ABS Steel, BV/RINA, LR Ship and LR Naval, and Swedish/Finnish rules. The Classification Thickness reports have been overhauled to include all intermediate calculations and data in addition to the required calculations for submittal and approval.

All 3D CAD exports have been updated for compatibility with the latest versions of the major CAD tools. A new export dialog allows the user to select the exported surfaces (face/back, root, tip, LE, TE, and root fillet) and also to increase the density of the model without altering their design. Lastly, a new IGES export has been included for universal CAD compatibility!

Visit www.hydrocompinc.com to learn how to increase your productivity with PropCad 2014.

About HydroComp

Celebrating its 30th year of operation in 2014, HydroComp provides software and services for resistance and propulsion prediction, propeller sizing and design, and forensic performance analysis. HydroComp is proud to have served over 700 industry, research, academic, and government clients from more than 60 countries.

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