

May 28, 2024

HydroComp PropElements® 2024 What's New

New features for wake-adapted propeller design and analysis

Development in 2024 for HydroComp PropElements offers new technical features and workflow improvements.

Release Build 2024.0

Miscellaneous

- New scripting commands, and improvements in 3D rendering and mesh views.
- Updated lifting surface corrections for influence of skew, and improved jet compression model.

Interface Theme Update

Modifying the interface for one of our products is a careful balance between maintaining the efficiency of a known process and accommodating contemporary interface standards. Our priorities are to maintain the known workflow, but to also find aesthetic and process improvements that users expect with current versions of Windows. The interface updates for 2024 reflect transition to a more contemporary look-and-feel while still being anchored to the that users know. Select the new theme shown below by clicking **Tools | Options...** from the menu, then selecting **System** from the *Theme* dropdown list.

The screenshot displays the HydroComp PropElements software interface. The top menu bar includes File, Edit, View, Analysis, Tools, and Help. The ribbon contains sections for Project (New, Open, Save, Units), Simulation (Propeller, Performance, Strength, Calculate), and View (Column, Project, Save image). The main workspace is divided into several panels:

- PROJECT:** Project ID: Tutorial, Description: Example propell...
- CONFIGURATION:** Drive: Hub-driven, Type: Open FPP
- PROPELLER:** Rotation direction: Right (CW), Blade count: 4, Propeller diameter: 2100.00 mm, Hub-diam ratio: 0.167, Hub immersion: 2720.00 mm, Hub slope angle: 0.00 deg
- REFERENCE FOIL:** Foil type: NACA 16 a0.8
- SUMMARY:** Pmean: 2064.76 mm, Pmean/D: 0.9832, EAR: 0.8002, BTF: 0.0450, Skew: 24.51 deg
- Graph:** A plot of Chord [mm] vs. r/R showing a curved profile. A legend indicates settings for Basic, Loose, Moderate (checked), and Tight.
- Propeller Table:** A detailed table of section shapes and positions.

r/R	SECTION SHAPE							SECTION POSITION						
	Chord [mm]	Thickness [mm]	Camber [mm]	Pitch [mm]	c/D	t/c	f/c	P/D	PitchAngle [deg]	RakeHelix [mm]	SkewHelix [mm]	SkewAngle [deg]	fSkewAngle [deg/r/R]	LESkAngl [deg/r/R]
1.0000	15.69	6.30	0.00	2026.50	0.00747	0.40153	0.00000	0.96500	17.08	0.00	210.37	10.97	47.5	491.2
0.9900	352.54	7.18	0.44	2025.75	0.16788	0.02037	0.00125	0.96464	17.23	0.00	199.44	10.50	47.3	304.9
0.9750	473.91	8.51	1.10	2025.31	0.22567	0.01795	0.00233	0.96443	17.48	0.00	183.48	9.79	46.7	123.6
0.9500	606.64	10.71	2.21	2025.14	0.28888	0.01765	0.00363	0.96435	17.91	0.00	158.05	8.64	45.8	121.3
0.9000	767.24	15.12	4.41	2026.92	0.36535	0.01971	0.00575	0.96520	18.85	0.00	111.41	6.39	43.9	84.6
0.8000	896.48	23.94	8.82	2039.56	0.42690	0.02670	0.00984	0.97122	21.13	0.00	34.15	2.17	40.4	68.5
0.7000	917.93	32.76	13.23	2061.68	0.43711	0.03569	0.01441	0.98175	24.06	0.00	-23.45	-1.67	36.4	58.1
0.6000	912.65	41.58	16.42	2085.85	0.43460	0.04556	0.01800	0.99326	27.79	0.00	-63.51	-5.11	32.3	51.3
0.5000	875.83	50.40	16.96	2102.56	0.41706	0.05755	0.01937	1.00122	32.51	0.00	-88.17	-8.11	27.6	44.5
0.4000	816.62	59.22	15.15	2104.63	0.38887	0.07252	0.01855	1.00221	38.57	0.00	-99.63	-10.63	22.7	38.5

About HydroComp PropElements

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

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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