



Propeller & Wing

Propellers propellant

capture energy turbines

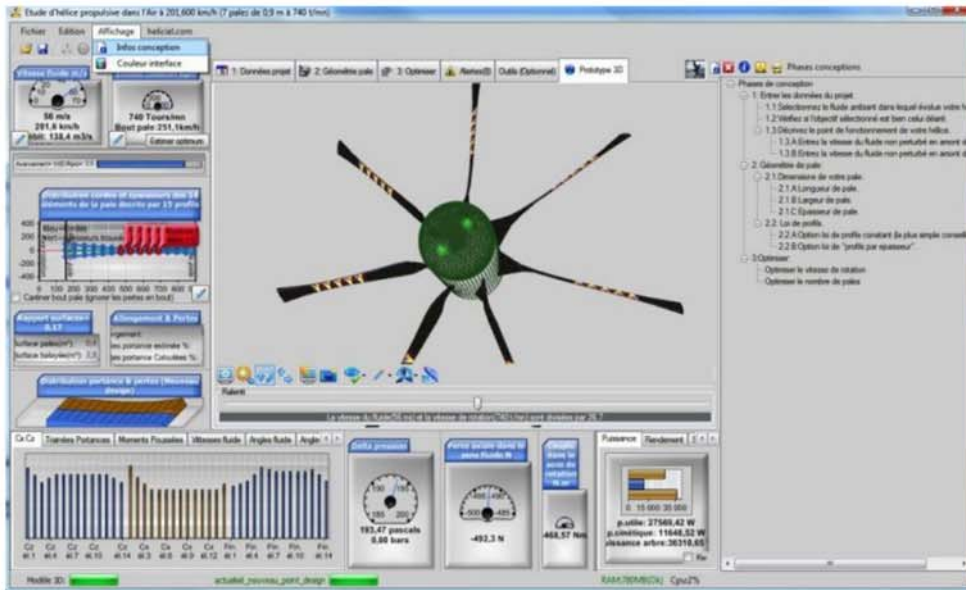
Software turbine propellers wings

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Parameters of propeller , wing or blade project

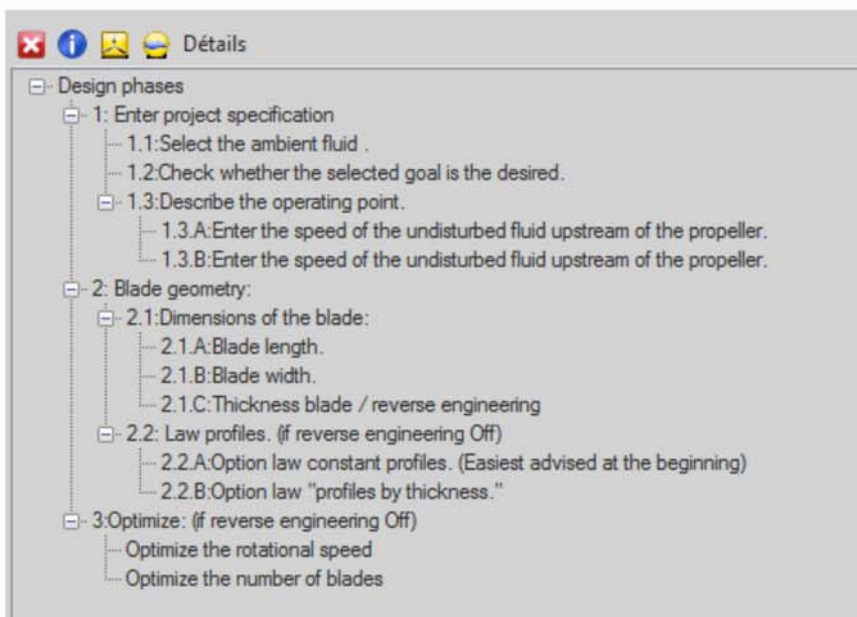
Access to detailed settings for your project has been set for that Heliciel offer maximum transparency.

To view detailed parameters of the project step by step, **use the View menu and select "design information" to open the Info pane design.**



The pane "information design" consists of three parts

- **design phases:** A tree navigation between different parameters of your project, structured according to a series of design phases, allows you to keep a thread of progression. In selecting a design phase, propeller or wing in the tree, the tab for the parameterization phase opens:



- **project Parameters :** List of parameters for the project, the propeller, the blade or wing in its globality. These parameters are read-only. To change use the tabs on the main interface.

Modeling aerial propeller in heliciel



Modeling boat marine propeller in heliciel



Modelisation helice ventilation dans heliciel



Modeling propeller ventilation in heliciel



tidal turbine modeling in heliciel



Kaplan propeller modeling in heliciel

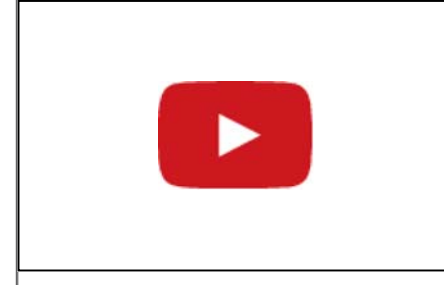
project parameters

- Analysis
 - Analysis Off design and reverse engineering
 - Analysis Wing
 - Blade Generator
 - Cavitation
 - Geometry

apparent angle blade tip rad	0,6765334
Blade aspect ratio	4,47407627
Blade base radius mm	153
blade lift area m2	0,124720484
blade shell mass Kg	0
blade shell volume mm3	0
Blade tip radius mm	900
Centered on lift	False
chord at blade base mm	197
chord at blade tip mm	82
chord exponent	0
Distance between elements mm	149,4
Nb_blades	7
No translate plus_grande_corde_emplanture_mm	199,84642
Pitch_blade_deg	0
propeller lift area m2	0,8730434
propeller pitch m	4,541
Ratio_propeller_pitch_diameter	2,523
Surface propeller without center m2	2,47114825
thickness at the blade base mm	47,437603
thickness at the blade tip mm	17,2200012
thickness exponent	2,1
thickness required at the blade base mm	382
thickness required at the blade tip mm	6,56164
total surface propeller disc m2	2,54469
Twist_blade_deg	0
variable pitch deg	0
 - Hulls

apparent angle blade tip rad

The speed and direction of the fluid at the blade tip, are the result of the blade rotation and the displacement of fluid upstream of the blade. The apparent angle at the blade tip is the angle between. : Direction of fluid upstream. Direction and fluid collected by the end of the blade. The induced velocities are not included in this parameter (in radians).



- Parameters elements:** The blade or wing being divided by elements, you can access each of the parameters of the elements for accurate analysis of the situation. These parameters are read-only. To change use the tabs on the main interface.

Détails
Element 2

- Analysis
- Angles profiles
- Blade tip loss factor
- Forces
- Geometry dimensions
- geometry generator
- Hulls
- Induction
- mechanical strength
- Performance profiles

cd_average	0,00843
Cd_base_active	0,00843
CL_base_active	0,7177
CL_end_active	0,7177
CL_lift_point	0,7177
Cm_lift_point	-0,0215
cx_end_active	0,00843
index_polar_used	10
reynolds approximate average	733422
reynolds used polar	800000
reynolds_approximate_base	717134
Xcp_lift_point	0,279956818

- Performance profiles (wings)
- pitching moment
- Pressures
- Profiles
- strength shell
- Strength of the reinforcement
- Velocities

CL_lift_point

Average coefficient of lift of the element. (CL profile base element + CL profile end element) / 2. This parameter determines the lift element

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