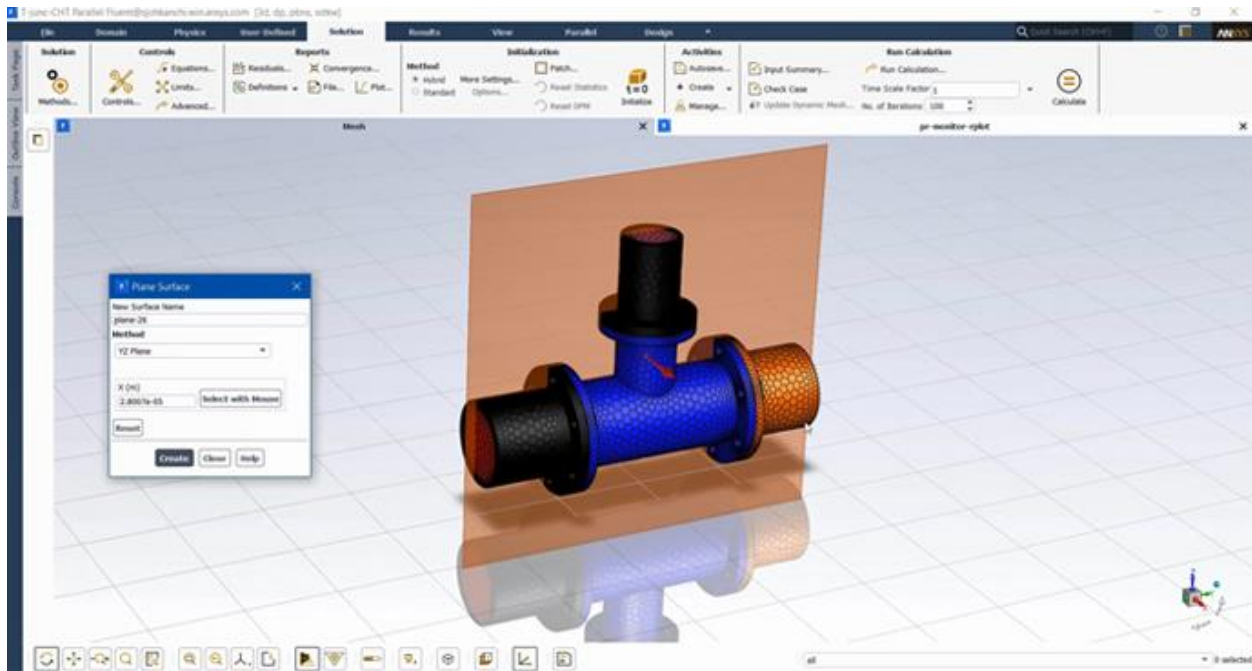


ANSYS FLUIDS Update in 2020 R1

Fluids – Computational Fluid Dynamics

ANSYS Fluent offers a new experience that enables novice or expert users to run robust computational fluid dynamics (CFD) simulations in less time and with less training than ever before. Easy-to-use, task-based meshing workflows and Mosaic technology — coupled with Fluent’s CFD solvers — deliver great results, without compromise.



Easier to use

A streamlined workflow facilitates multiphase simulation setup. A single, tabbed panel organizes setup into a logical, step-by-step flow. In a benchmark gas–liquid pipe flow simulation, the new setup proved 25% faster.

More CFD solutions

- An algebraic interface area density (AIAD) model accurately simulates [complex multiphase](#) regime transitions.
- A detailed electrochemistry model optimizes [lithium-ion battery cells](#).

- Harmonic analysis in [ANSYS CFX](#) is 2X faster and can now solve for multiple base frequencies.
- Complex fluid-structure interaction problems can be set up and solved faster and more easily.

Computational fluid dynamics (CFD) is a tool with amazing flexibility, accuracy and breadth of application. But serious CFD, the kind that provides insights to help you optimize your designs, can be out of reach unless you choose your software carefully. To get serious CFD results, you need serious software. ANSYS CFD goes beyond qualitative results to deliver accurate quantitative predictions of fluid interactions and trade-offs. These insights reveal unexpected opportunities for your product — opportunities that even experienced engineering analysts can miss.

All users can get great CFD simulation results with ANSYS Fluent

Built on top of the proven ANSYS Fluent solver, this single-window experience empowers novice or expert users to run great CFD simulations.

A new look with user-selectable themes and Japanese language localization.

Task-based workflows allow you to do more: Accurately solve complex problems in less time, with less training.

Speed and simplicity built into every step. User-focused enhancements power more problem-solving with less stress.

Applications:

FIVE CRITICAL CFD APPS

BATTERY SIMULATION

CAVITATION

ELECTRIC MOTOR COOLING

FLUID-STRUCTURE INTERACTION

RHEOLOGY

HPC-FLUIDS

HYPERSONICS

MULTIPHASE FLOWS

REACTING FLOWS & COMBUSTION

REDUCED-ORDER MODELS

SHAPE OPTIMIZATION

SIMULATING AIRCRAFT ICING

SINGLE PHASE, NON-REACTING FLOWS

THERMAL MANAGEMENT

TURBOMACHINERY

TURBULENCE MODELING







