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AFT Fathom 12	AFT Fathom 11	AFT Fathom 10
Visually analyze alternatives with Multi-Scenario Graphing, comparing profile graphs from multiple scenarios on a single plot	Multi-Scenario Comparison: Data can be compared between multiple scenarios to show changes made	Import from CAESAR II <sup>®</sup> neutral files and Piping Component Files (.pcf) as well as import/export model data from an EPANet file
Compile data for custom components, pipes, and fluids into the revised Library Manager to save time, share common data among your team, and avoid input error	Cross-plot Pump vs. System curves across multiple operating scenarios	Enhanced Excel <sup>®</sup> integration such as: Export data with a controlled scenario-to-worksheet Manager; improved import model change data with batch import to change multiple scenarios at once and use junction and parameter friendly names; easier Cost Database creation using Excel import/export
Use the NEW online Help System for centralized documentation and examples from your browser	Multi-level undo and redo on the Workspace	Isometric grid drawing on the Workspace
Streamline your setup from the new Analysis Setup menu, a user-friendly workflow condensing 14 model-wide specification windows into 1	All Summary Output parameters can now be displayed on the Visual Report	Made rotodynamic (centrifugal) and positive displacement pumps data entry clearer on the Pump Property window
Convert Shear Rheometer data for Power Law and Bingham Plastic viscosity models with a helpful visual guide	Double-click on a junction on the Toolbox to add multiple to the Workspace (similar to pipes)	Acceleration head loss calculation for PD pumps
Apply the Herschel-Bulkley viscosity model for shear thinning or thickening fluids with a yield stress	Convert intermediate elevations to new pipes and branches	Enhanced pipe heat transfer including external convection coefficient calculation, buried pipe heat transfer, and heat tracing
Warnings, errors and Design Alerts shown in the Output are now color coded and organized in a prioritized list for quick review.	Can now save 'design alerts' and load from a file	Large models now load faster

Ready to access these new features? Email [info@aft.com](mailto:info@aft.com)

# Full list of **New Features** you can use in AFT Fathom™ 12

## Significant New Features

- Streamline your setup from the new Analysis Setup menu, a user-friendly workflow condensing 14 model-wide specification windows into 1
- Compile data for custom components, pipes, and fluids into the revised Library Manager to save time, share common data among your team, and avoid input error
- Warnings, errors and Design Alerts shown in the Output are now color coded and organized in a prioritized list for quick review
- Visually analyze alternatives with Multi-Scenario Graphing, comparing profile graphs from multiple scenarios on a single plot

## Overall

- Use the NEW online Help System for centralized documentation and examples from your browser
- Customize the display names for units to accommodate language or notation differences
- Convert Shear Rheometer data for Power Law and Bingham Plastic viscosity models with a helpful visual guide
- Apply the Herschel-Bulkley viscosity model for shear thinning or thickening fluids with a yield stress

## Workspace

- Model component-to-component connections with the new Zero Length Connector pipe option
- Contextually update Junction Special Conditions directly from the toolbar
- Reset Pipes and Junctions as 'Same as Parent Scenario' during specification

## Junctions

- New Pump as Turbine (PAT) pump option to model turbine losses and power recovery
- Intuitively define submerged pumps using surface pressure and depth

## Output

- Spot concerns by reporting Warnings, Cautions and Design Alerts for each scenario in Multi-Scenario Output
- Save time with enhanced Output window data loading speed

## Other

- Batch runs of multiple scenarios now report the number of Warnings and Design Alerts in each scenario
- Run batch runs "silently" in the background to minimize interruptions as each scenario completes
- Search for text in Pipe and Junction Notes, useful for component specifications or intended operating conditions
- Junctions which changed states during a run will be reported to the user, indicating check valve closures and control valve failures for example
- Consider Heat Transfer parameters in the context of the system from Visual Report

## AFT Fathom XTS Module

- Specify a valve transient as open percent vs. time

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## Add-On Modules

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### Goal Seek & Control

Identifies input parameters that yield desired output values and simulates control functions



### Extended Time Simulation

Models dynamic system behavior and how critical system parameters vary over time



### Settling Slurry

Models the effects of pumping fluids containing settling solids using the Wilson/GIW method



### Automated Network Sizing

Automatically size your network to meet design requirements and minimize system cost

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