Reaching Our Goal

STREAMLINE AND ORGANIZE

With every new version of our software, AFT seeks to make engineers more productive while designing safer, more efficient, and more reliable systems.

Our development philosophy balances three facets with each new version:

- User Workflow
- Enhanced Capabilities
- Backend Improvements

This release cycle builds upon many of the features you've become accustomed to, streamlining the process to build and analyze your system.

We hope you're as excited to try out these new features as we are!

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YOUR LEARNING CURVE GUIDE

Use this guide to determine the level of new feature difficulty

NOVICE
New users will navigate with ease

INTERMEDIATE
Part-time users will navigate with ease

EXPERIENCED
Familiar users will navigate with ease

EXPERT
Fully competent users will navigate with ease

ADVANCED
Niche industry users with advanced mitigation and analysis skills will navigate with ease

New features across SEVERAL software applications

ANALYSIS SETUP

Streamline your setup from the new Analysis Setup menu, a user-friendly workflow condensing 14 model-wide specification windows into 1

Page 5

MULTI-SCENARIO GRAPHING

Visually analyze alternatives with Multi-Scenario Graphing, comparing profile graphs from multiple scenarios on a single plot

Page 6

OUTPUT ALERTS

Warnings, errors and Design Alerts shown in the Output are now color coded and organized in a prioritized list for quick review.

Page 7

ZERO-LENGTH CONNECTOR

Model component-to-component connections, for convenience, with no length and no frictional loss. This clearly shows short fictitious connector pipes.

Page 9

LIBRARY MANAGER

The Library Manager (previously the Database Manager) has been completely revised and now offers a consolidated way to use and customize libraries of fluids, pipe materials, junctions, etc.

Page 10

NEW PRODUCTS

Gas and Steam Simulation Software

AFT xStream

AFT xStream is a powerful fluid dynamic simulation tool for high-speed, acoustic transients that occur in steam and gas piping systems. Uncertainty in design and operations costs money and time. Now you can accurately simulate how your steam and gas systems will respond to potentially disruptive transient events. See page 23.

AFT xStream Add-On Module

PULSATION FREQUENCY ANALYSIS (PFA)

This module helps identify pipe acoustical frequencies to avoid resonance from excitation, especially in systems with reciprocating compressors. Problems can arise when the frequencies that are excited by pulsation are at or near the acoustic resonant frequencies of a fluid system. The module is used to calculate the acoustic resonance frequencies that could damage system equipment.

THE PFA MODULE HELPS:

- Avoid system weakening or failure
- Reduce operating and maintenance costs
- Minimize disruptions in production processes

THIS MODULE ALLOWS YOU TO:

- Predict and understand resonant frequencies in systems that use reciprocating compressors so they can be avoided in operation
- Graphically show the frequency response of a system to a simulated pulse
- Work with existing AFT xStream models

AFT Arrow Add-On Module

EXTENDED TIME SIMULATION (XTS)

The AFT Arrow Extended Time Simulation (XTS) Module helps engineers modeling compressed gas systems answer design and operation questions. Simulate how critical parameters vary over time.

Perform a series of steady-state gas flow solutions with variables changing automatically to achieve a dynamic simulation of your system. See page 18.

WHAT KINDS OF TRANSIENTS CAN AFT ARROW XTS MODEL?

TRANSIENT EVENTS

The XTS module can capture a wide range of transient events:

- Tank charging and blowdowns
- Compressor/fan speed changes
- Valves opening and closing

PASSIVE TRANSIENT EVENTS

The XTS Module can also capture many passive transient events in a system:

- Relief valves
- Check valves
- Control valves

Streamline your Setup

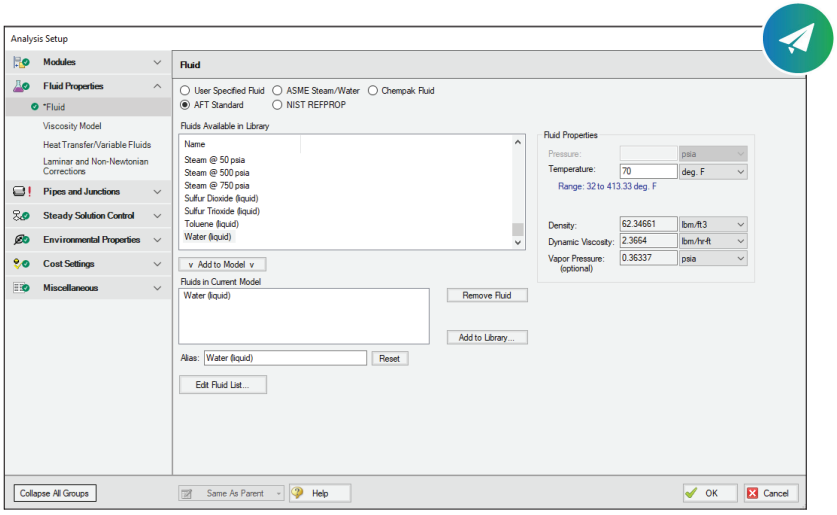
Significant feature #1

ANALYSIS SETUP

Streamline your model building process using the new Analysis Setup menu. Analysis Setup combines 14 model-wide windows into a single, user-friendly location. Previously, setting up model parameters required many windows to be opened and closed. Now, after building the system in the Workspace, you only need to visit one more location: Analysis Setup.

Analysis Setup consolidates these windows into one:

- System Properties
- Transient Solution Control
- Steady Solution Control
- Goal Seek and Control Manager for AFT Fathom and AFT Arrow
- Slurry Data for AFT Fathom and AFT Impulse

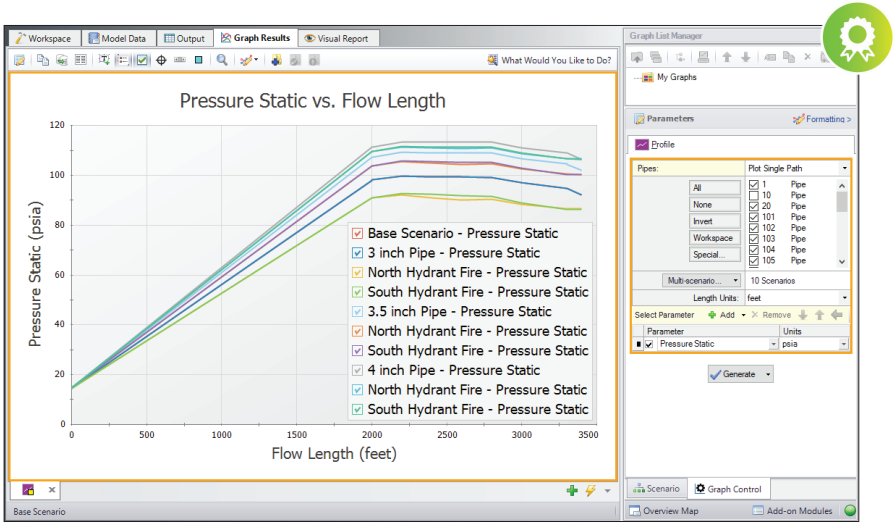


Visually Analyze Alternatives

Significant feature #2

MULTI-SCENARIO GRAPHING

Scenarios are an essential piece of AFT software, allowing you to consider multiple operating conditions, potential equipment modifications, and more, all from the same model. Comparing results between those scenarios is crucial for analyzing the system. Introduced in AFT Impulse 8, and expanded on in AFT Fathom 12, AFT Arrow 9, and AFT Impulse 9, multi-scenario graphing allows you to compare results from multiple scenarios on a single plot.



The Graph Results window keeps the same interface as previous versions.

ENHANCED FEATURE IN AFT IMPULSE

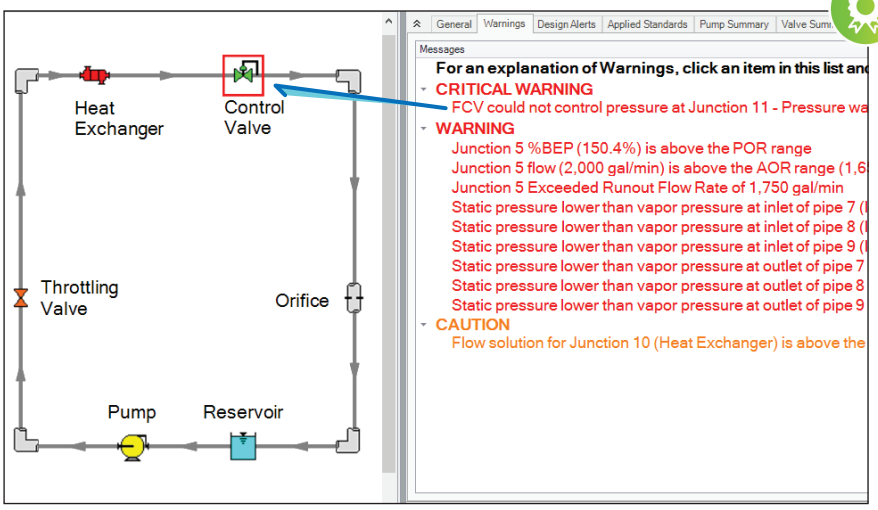
Multi-scenario graphing was enhanced in AFT Impulse 9 to allow users to plot results from any scenario. AFT Impulse 8 required that sectioning and simulation duration settings were consistent for scenarios being graphed.

Manage your Model Output

Significant feature #3

OUTPUT ALERTS

An AFT model can generate numerous warnings and other messages in the Output window. Those messages are now sorted, color coded, and organized in a prioritized list. Hopefully you won't see those messages in your model, but any that do show are now easier to read and find. And as always, visit our Help site or reach out to AFT Support for help understanding the messages.



Double-click a message to view the relevant object in the Workspace for easy identification.

Learning Resources

No matter your user level with AFT software products, we have training and assistance available to help you continue your education, or tools to advance your knowledge to expert levels.

FREE LEARNING CENTER

https://bit.ly/3G2mCbh

Upcoming Webinars | *Webinar Library* | *Help System* | *Tips & Tricks*

2022 SEMINAR DATES

In-Person, hands-on training held in Colorado Springs, Colorado, USA.

AFT Fathom
June 13-14, 2022 • October 3-4, 2022

AFT Arrow
June 15-16, 2022 • October 5-6, 2022

AFT Impulse*
June 15-17, 2022 • October 5-7, 2022

*New users must take AFT Fathom in combination with this class

CUSTOM TEAM TRAINING

Have a large group? Let us come to you! We will bring our detailed training seminars to your location, or AFT engineers can create a customized training that directly relates to your industry projects.

On-Site at Your Location

Virtual Custom Training with a Flow Expert Package

ADD-ON MODULES

EXTENDED TIME SIMULATION

Who would use XTS?

Those dealing with a wide range of operational changes including:

- Tank pressure tracking
- Tank level tracking (predict how long to fill and drain tanks)
- Pump or Compressor start/stop and speed variation
- Valve position changes
- Control valve set point variation

Why use XTS?

Understand how critical system parameters vary over time. Automatically change variables for a dynamic simulation of your system.

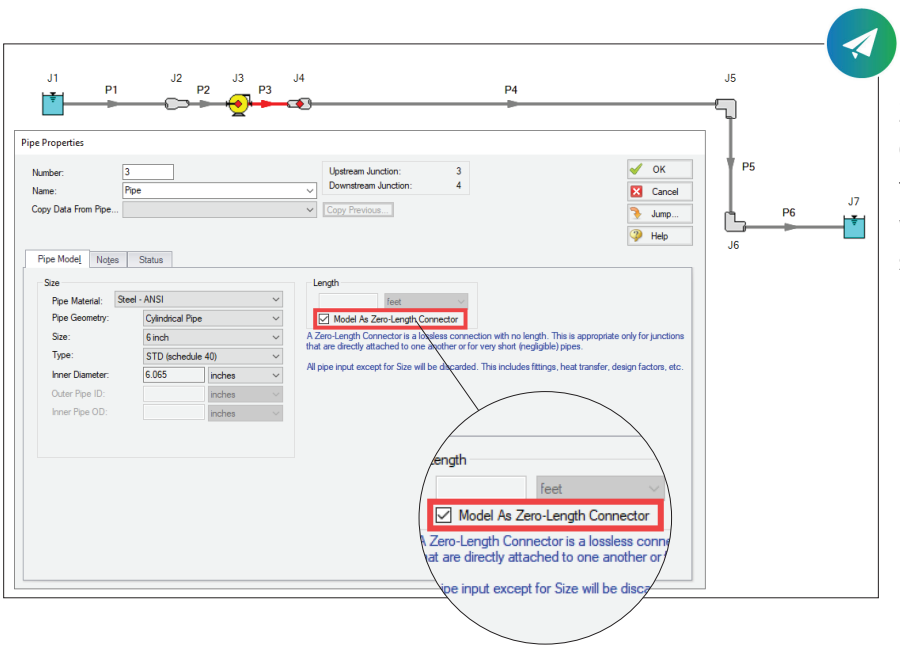
Connect Component-to-Component

Significant feature #4

ZERO-LENGTH CONNECTORS

AFT software requires all junctions be connected by pipes, but sometimes those connecting pipes are so short it doesn't make sense to include them. AFT software now makes connections between components in a system easy. This feature allows users to more conveniently connect junctions directly to each other when there is not a physical pipe between them.

Zero-Length Connectors takes the place of short pipes, allowing junctions to be connected in the model without any pipe length between them. Model direct component-to-component connections with the zero length connector option.



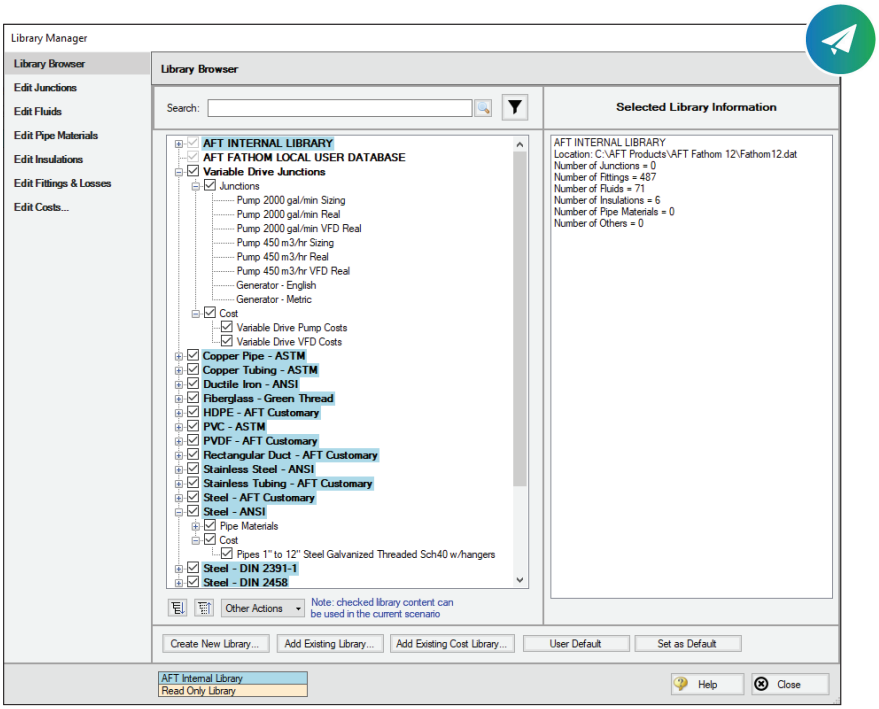
Zero-Length Connectors replace the pipe length field while retaining pipe size information.

Share Common Data in Libraries

Significant feature #5

LIBRARY MANAGER

Streamline your use of libraries using the new Library Manager.
The Library Manager combines 8 windows from the old Database system into a single, user-friendly location. Previously, organizing and editing database entries required many windows to be opened and closed. Now, you can create, edit, and organize libraries with your frequently used inputs all from the same location: the Library Manager.



NAME CHANGE

LIBRARIES WERE PREVIOUSLY CALLED DATABASES

Access the Library Manager from the Library menu to view all connected libraries, preview library information, and edit library entries.

AFT Fathom™ 12

Full list of new features

OVERALL

- Use the NEW online Help System for centralized documentation and examples from your browser
- Customize the display names for engineering units of measure 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 from the Workspace menu

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

JUNCTIONS

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

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 valves losing control and more
- 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

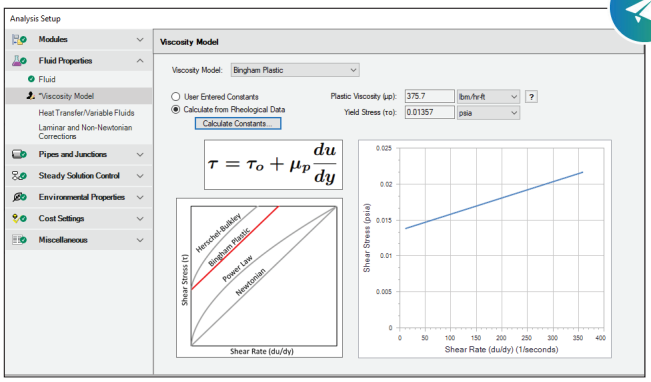
VERSION COMPARISON

Fathom 12	Fathom 11	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 ® neutral files and Piping Component Files (.pcf) as well as import/export model data from an EPANet file
The Library Manager (previously the Database Manager) has been completely revised and now offers a consolidated way to use and customize libraries of fluids, pipe materials, junctions, etc.	Cross-plot Pump vs. System curves across multiple operating scenarios	Enhanced Excel® 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 multiple 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

Rheometer Data Conversion

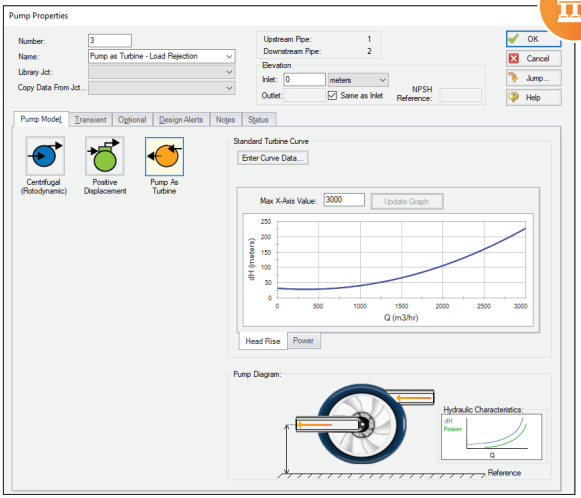
No more conversions:
Enter rheometer data directly and select Tube Flow Rheometer Data (8V/D) or Shear Rheometer Data (du/dy).

Both data types are available for Power Law and Bingham Plastic non-Newtonian viscosity models.



Pump as Turbine (PAT)

Model turbine losses and power generation using the PAT configuration in the Pump Junction. Model transient PAT events for Speed vs Time or Load Rejection using AFT Fathom XTS.

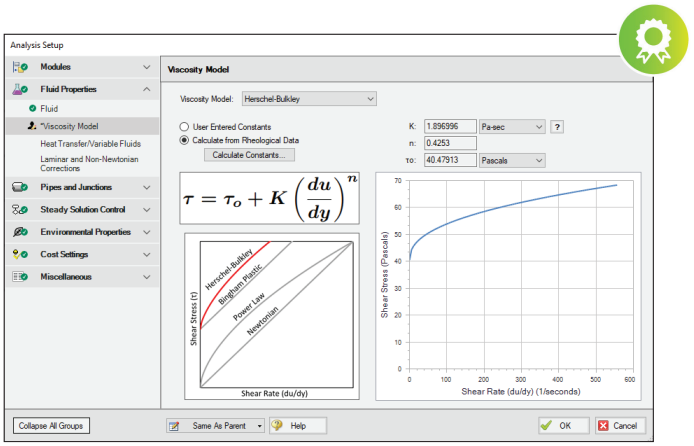


Find tips and tricks for specific Fathom 12 features here: https://bit.ly/3OIOZy6

Herschel-Bulkley Application

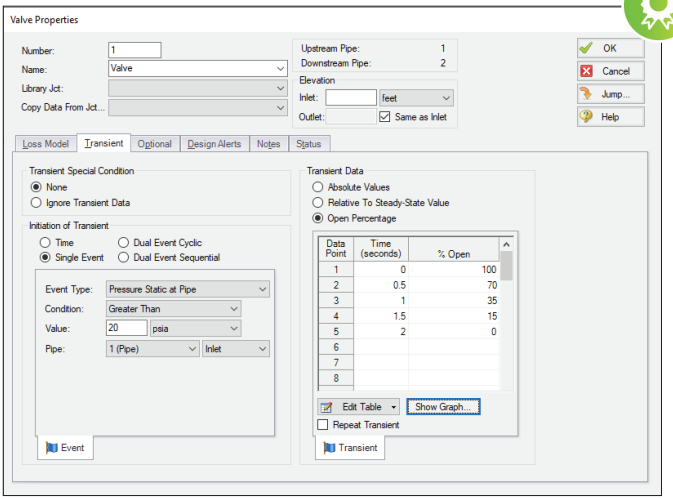
Apply the Herschel-Bulkley viscosity model for shear thinning or thickening fluids with a yield stress. This model is commonly used in applications such as modeling drilling fluids.

The Herschel-Bulkley constants can be entered directly, or the rheological data can be entered to perform a curve fit for the parameters using a non-linear regression method.



Extended Time Simulation (XTS)

New AFT Fathom XTS transient data input options for valves: enter Open Percentage versus Time on the Transient tab.



AFT Arrow™ 9

Full list of new features

OVERALL

- Use the NEW online Help System for centralized documentation and examples from your browser
- Customize the display names for engineering units of measure to accommodate language or notation differences
- Apply the Soave-Redlich-Kwong and the Peng-Robinson equations of state as additional methods to model your fluid

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 from the Workspace menu

OUTPUT

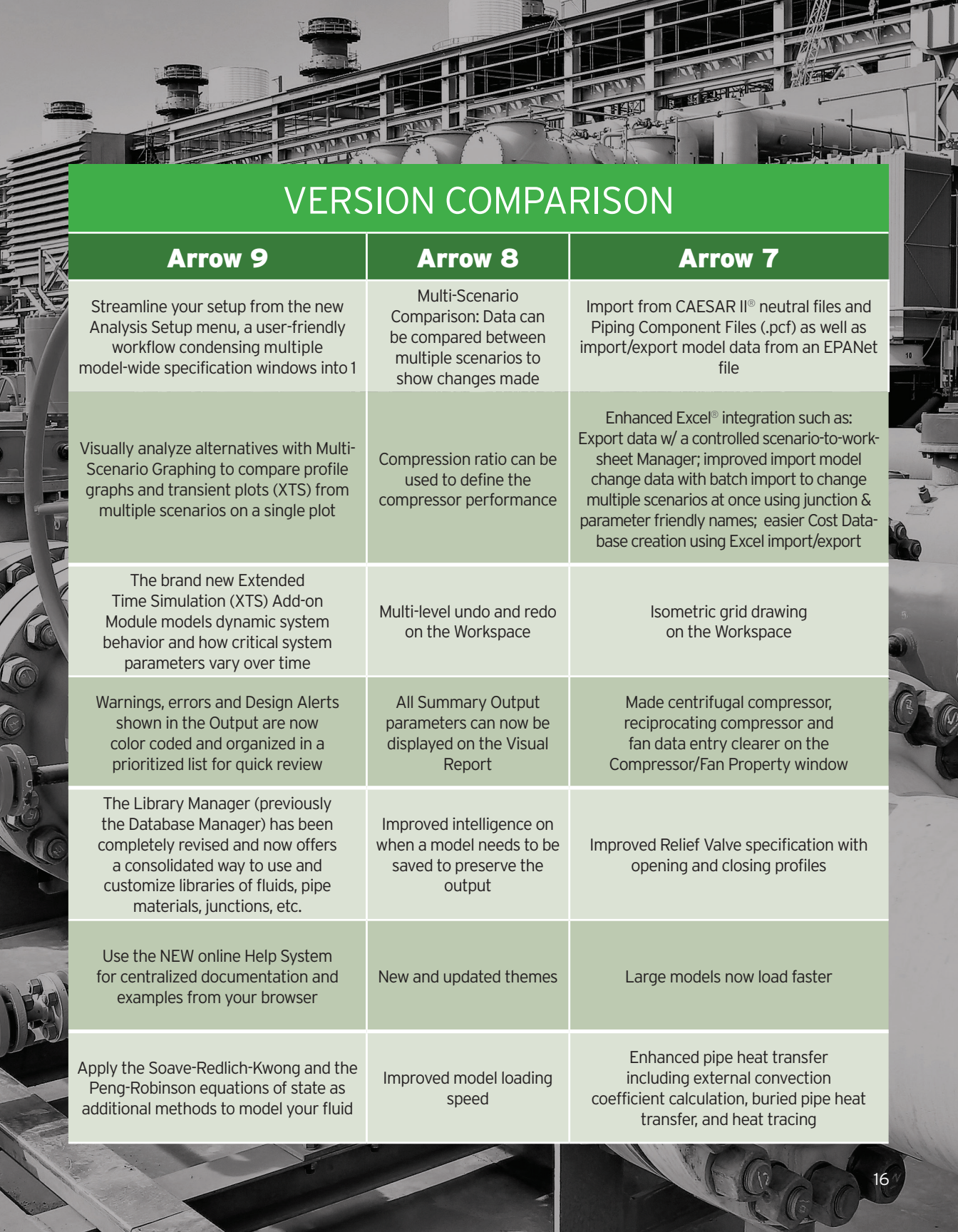
- Design Alerts are grouped together on their own tab in the General Output section for easy identification
- Spot concerns by reporting Warnings, Cautions and Design Alerts for each scenario in Multi-Scenario Output
- Save time with enhanced Output window data loading speed

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 valves losing control and more
- Consider Heat Transfer parameters in the context of the system from Visual Report
- Right-click a pipe or Junction in the Model Data window to quickly find the object on the workspace

AFT ARROW XTS MODULE

- Model transient events such as tank pressurizing and blowdown, changes in valve position, and changes to compressor operating condition
- Animate transient output, visualizing how parameters change over time at a point or along a flow path



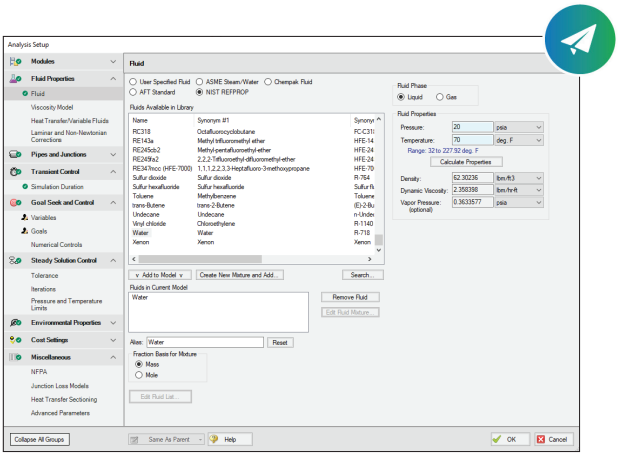
VERSION COMPARISON

Arrow 9	Arrow 8	Arrow 7
Streamline your setup from the new Analysis Setup menu, a user-friendly workflow condensing multiple model-wide specification windows into 1	Multi-Scenario Comparison: Data can be compared between multiple scenarios to show changes made	Import from CAESAR II® neutral files and Piping Component Files (.pcf) as well as import/export model data from an EPANet file
Visually analyze alternatives with Multi-Scenario Graphing to compare profile graphs and transient plots (XTS) from multiple scenarios on a single plot	Compression ratio can be used to define the compressor performance	Enhanced Excel® integration such as: Export data w/ a controlled scenario-to-worksheet Manager; improved import model change data with batch import to change multiple scenarios at once using junction & parameter friendly names; easier Cost Database creation using Excel import/export
The brand new Extended Time Simulation (XTS) Add-on Module models dynamic system behavior and how critical system parameters vary over time	Multi-level undo and redo on the Workspace	Isometric grid drawing on the Workspace
Warnings, errors and Design Alerts shown in the Output are now color coded and organized in a prioritized list for quick review	All Summary Output parameters can now be displayed on the Visual Report	Made centrifugal compressor, reciprocating compressor and fan data entry clearer on the Compressor/Fan Property window
The Library Manager (previously the Database Manager) has been completely revised and now offers a consolidated way to use and customize libraries of fluids, pipe materials, junctions, etc.	Improved intelligence on when a model needs to be saved to preserve the output	Improved Relief Valve specification with opening and closing profiles
Use the NEW online Help System for centralized documentation and examples from your browser	New and updated themes	Large models now load faster
Apply the Soave-Redlich-Kwong and the Peng-Robinson equations of state as additional methods to model your fluid	Improved model loading speed	Enhanced pipe heat transfer including external convection coefficient calculation, buried pipe heat transfer, and heat tracing

Analysis Setup

Previously, setting up model parameters required many windows to be opened and closed. Now, after building the system in the Workspace, you only need to visit one more location for:

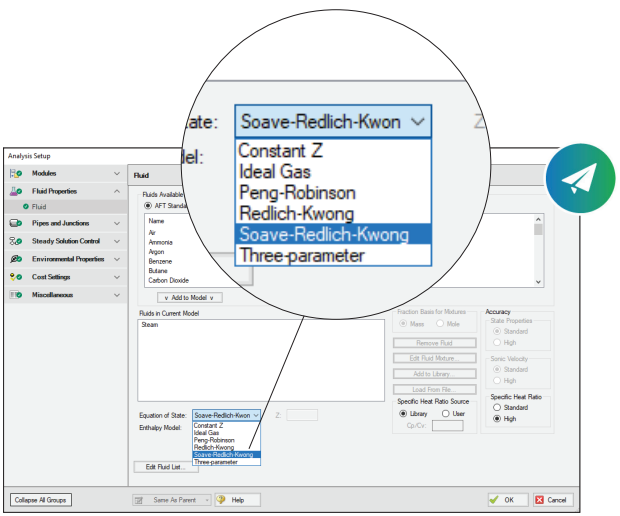
- Module check-out
- System Properties
- GSC Manager (GSC module only)
- Steady Solution Control
- Transient Control (XTS module only)
- Cost Settings



Soave-Redlich-Kwong & the Peng-Robinson Equations of State

EoS

The Soave-Redlich-Kwong and the Peng-Robinson equations of state are now available for the fluid properties in AFT Arrow. These equations of state improve upon the Ideal Gas and Redlich-Kwong equations, especially for non-polar carbons.

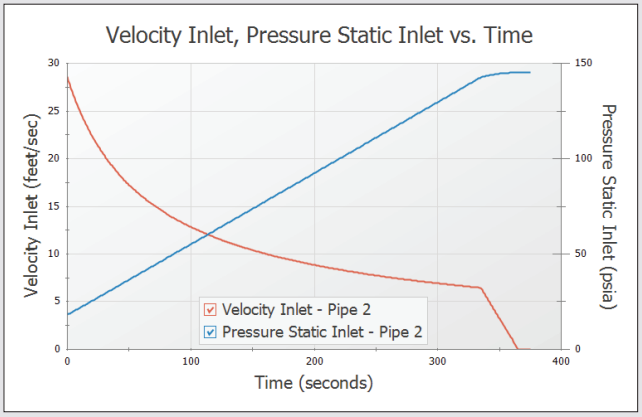


NEW MODULE

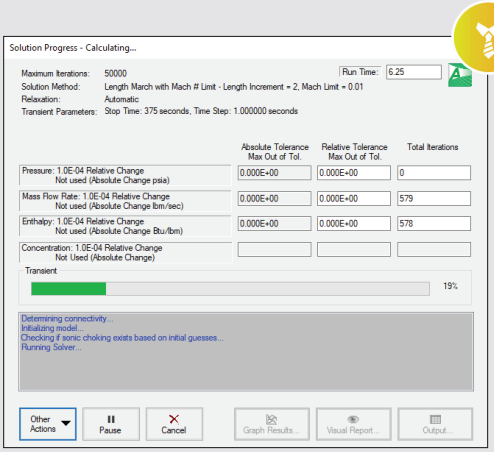
EXTENDED TIME SIMULATION (XTS)

This time-based simulation module allows engineers who are designing or troubleshooting industrial gas systems to easily model gas transients. Model dynamic system behavior and how critical system parameters vary over time.

Find a Tips and Tricks blog for Arrow XTS here: https://bit.ly/3FSQhnM



The AFT Arrow XTS module allows users to model and graph transient systems



The Solution Progress Window tracks the transient simulation

AFT Impulse™ 9

Full list of new features

OVERALL

- Elbows, Orifices, Venturis and Screens have been added to match AFT Fathom and aid in building models
- Use the NEW online Help System for centralized documentation and examples from your browser
- Customize the display names for engineering units of measure 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

JUNCTIONS

- The Vacuum Breaker junction has been renamed to an Air Valve
- Intuitively define submerged pumps using surface pressure and depth
- Valve transients can be specified as open percent vs time

WORKSPACE

- Contextually update Junction Special Conditions directly from the toolbar
- Reset Pipes and Junctions as 'Same as Parent Scenario' during specification from the Workspace menu

OUTPUT

- Design Alerts are grouped together on their own tab in the General Output section for easy identification
- Save time with enhanced Output window data loading speed

OTHER

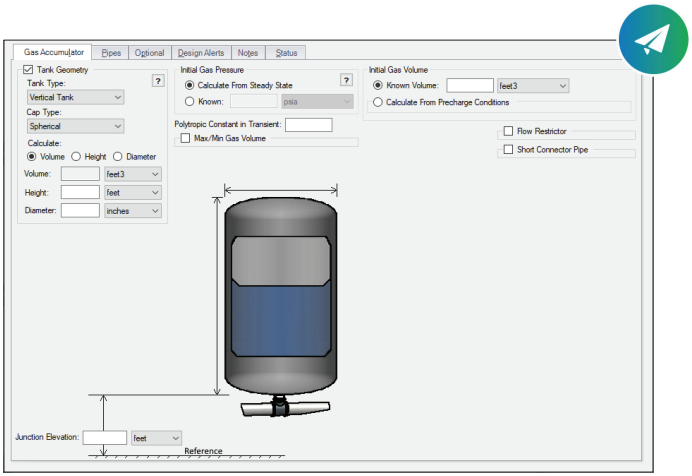
- Multi-scenario graphs can now be plotted for scenarios with different pipe sectioning and time steps
- Batch runs of multiple scenarios now report the number of Warnings and Design Alerts in each Scenario
- Run batch runs "silently" in the background to minimize interruptions as each scenario completes
- Search for text in Pipe and Junction Notes, useful for component specifications or intended operating conditions
- Right-click a pipe or Junction in the Model Data window to quickly find the object on the workspace

VERSION COMPARISON

Impulse 9	Impulse 8	Impulse 7
Streamline your setup from the new Analysis Setup menu, a user-friendly workflow condensing multiple model-wide specification windows into 1	Multi-Scenario Comparison: Data can be compared between multiple scenarios to show changes made	Import from CAESAR II® neutral files and Piping Component Files (.pcf) as well as import/export model data from an EPANet file
The Library Manager (previously the Database Manager) has been completely revised and now offers a consolidated way to use and customize libraries of fluids, pipe materials, junctions, etc.	Multi-scenario graphing allows easy comparison of results	Enhanced Excel ® 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 using 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
No more limitations on pipe sectioning and time steps which allows more complete analysis using multi-scenario graphing	No more limitations on pipe sectioning and time steps which allows more complete analysis using multi-scenario graphing	Made rotodynamic (centrifugal) and positive displacement pumps data entry clearer on the Pump Property window
Elbows, Orifices, Venturis and Screens have been added to match AFT Fathom and aide in building models	New capability to model unsteady friction	New color animation in the Visual Report window
Apply the Herschel-Bulkley viscosity model for shear thinning or thickening fluids with a yield stress	New pump four-quadrant curves added	Finite tank option for the Reservoir junction allows modeling of tank level changes over time
Warnings, errors and Design Alerts shown in the Output are now color coded and organized in a prioritized list for quick review	Forces can be shown on the Visual Report	Additional parameters available for Transient Junction graphs

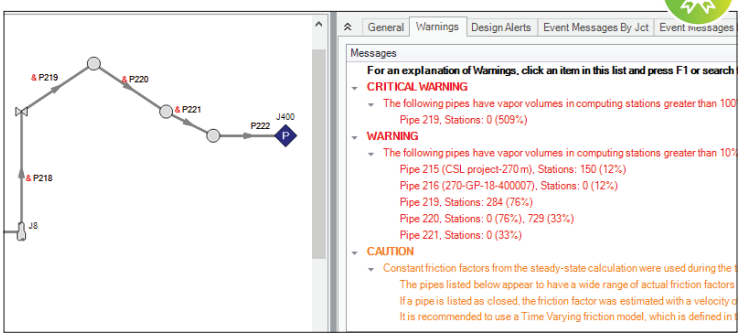
Updated Gas Accumulator

Capture the nuance of Gas Accumulator Tank Geometry and its effects on liquid and gas volume during a transient event. The Gas Accumulator Properties window has been redesigned to improve usability and add ability to new features such as calculating liquid height.



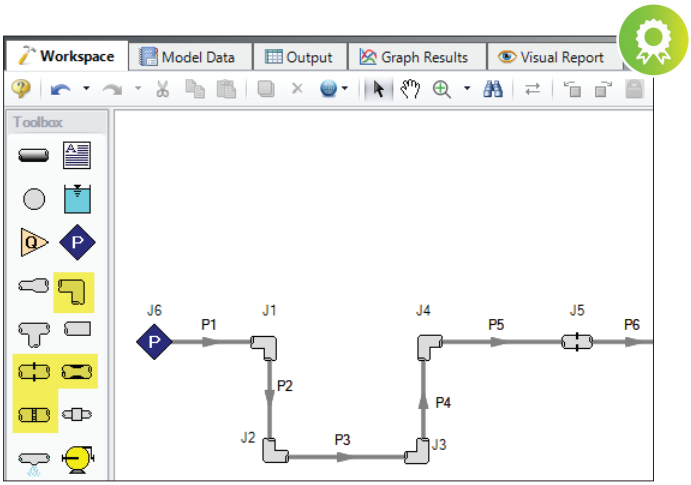
Output Alerts

An AFT model can generate numerous warnings and other messages in the Output window. Those messages are now sorted color coded and organized in a prioritized list. Hopefully you won't see those messages in your model, but any that do show are now easier to read and find. And as always, visit our help site or reach out to AFT Support for help understanding the messages.



Elbows, Orifices and Venturis

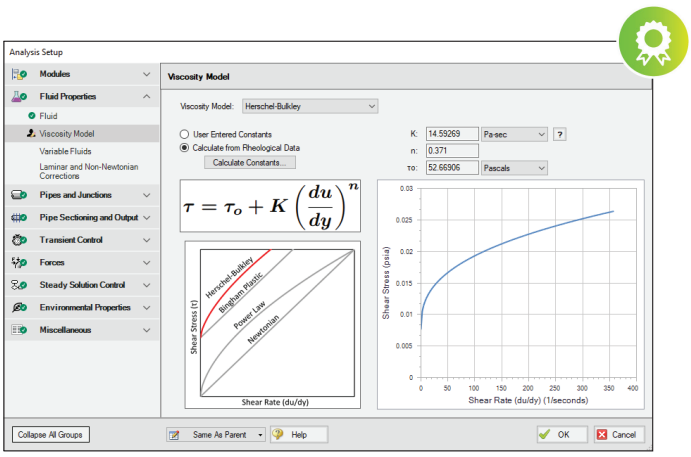
Elbows, Orifices, Venturis and Screens have been added to match AFT Fathom and aid in building models. These new junctions allow the user to accurately model components in their system.



Herschel-Bulkley Application

Apply the Herschel-Bulkley viscosity model for shear thinning or thickening fluids with a yield stress. This model is commonly used in applications such as modeling drilling fluids.

The Herschel-Bulkley constants can be entered directly, or the rheological data can be entered to perform a curve fit for the parameters using a non-linear regression method.



NEW PRODUCT

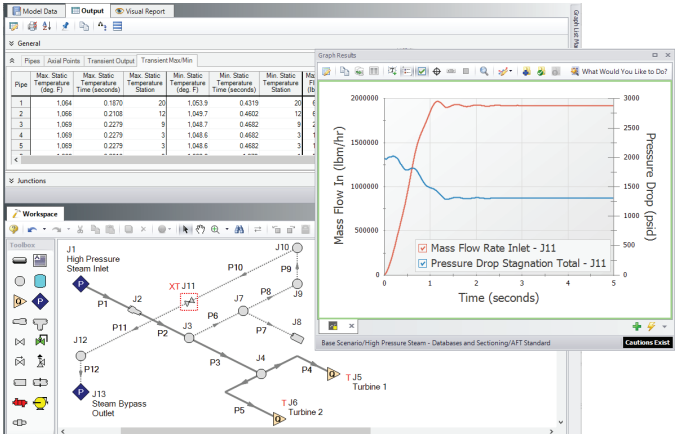
Introducing AFT's first Steam & Gas Transient Analysis Software

AFT xStream is a powerful fluid dynamic simulation tool for high-speed, acoustic transients that occur in steam and gas piping systems. Accurately simulate how your steam and gas systems will respond to potentially harmful transient events.

AFT xStream™

HOW DOES IT WORK

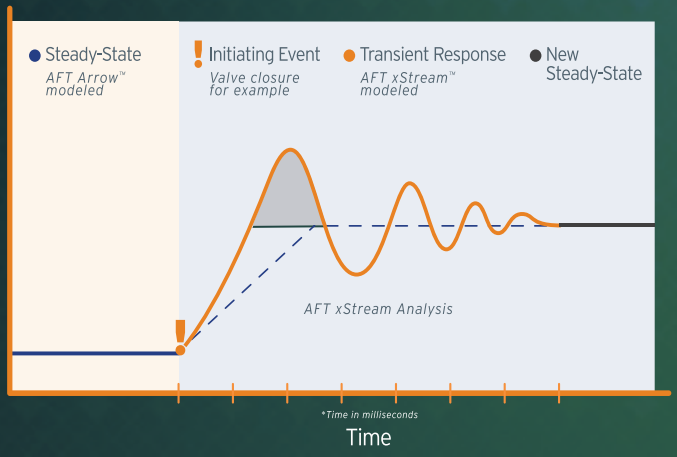
AFT xStream incorporates a steady-state solver providing seamless transfer of initial conditions to the transient analysis. Steady-state solutions are determined using a modified Newton-Raphson matrix iteration. A specialized Method of Characteristics is used to solve the transient mass, momentum and energy equations of pipe flow.



IDENTIFY AND AVOID RESONANT FREQUENCIES, ESPECIALLY THOSE CAUSED BY RECIPROCATING COMPRESSORS

WHAT IS A COMPRESSIBLE TRANSIENT?
A time-dependent deviation from standard steady-state operation where compressibility effects are significant.

COMPRESSIBLE TRANSIENT APPLICATIONS INCLUDE:
- Blowdowns and depressurization studies
- Turbine trip and start-up events
- Emergency shutdowns
- Relief/safety valve operation



ADD-ON MODULES

PULSATION FREQUENCY ANALYSIS

Who benefits from PFA?

Those who deal with frequencies that are excited by pulsation that are at or near the acoustic resonant frequencies of a fluid system.

Why use PFA?
Don't wait until pulsation problems occur; proactively calculate and visualize acoustic resonant frequencies, especially those caused by reciprocating compressors and positive displacement pumps that could damage system equipment.

AFT xStream™ 2

Full list of new features

SIGNIFICANT

- Model transient heat transfer in piping walls, including internal/external convection and thermal capacitance for more realistic simulation
- Finite tanks now allow specified transient heat transfer into or out of the tank, specified tank volume change over time, and more flexible initial conditions

OVERALL

- Customize the display names for engineering units of measure to accommodate language or notation differences
- New equation of state options are available for Soave-Redlich-Kwong and Peng-Robinson

OUTPUT

- Design Alerts are grouped together on their own tab in the General Output section for easy identification
- Warnings, Cautions and Design Alerts are now displayed for all scenarios when using the Multi-scenario Output feature
- Save time with enhanced Output window data loading speed

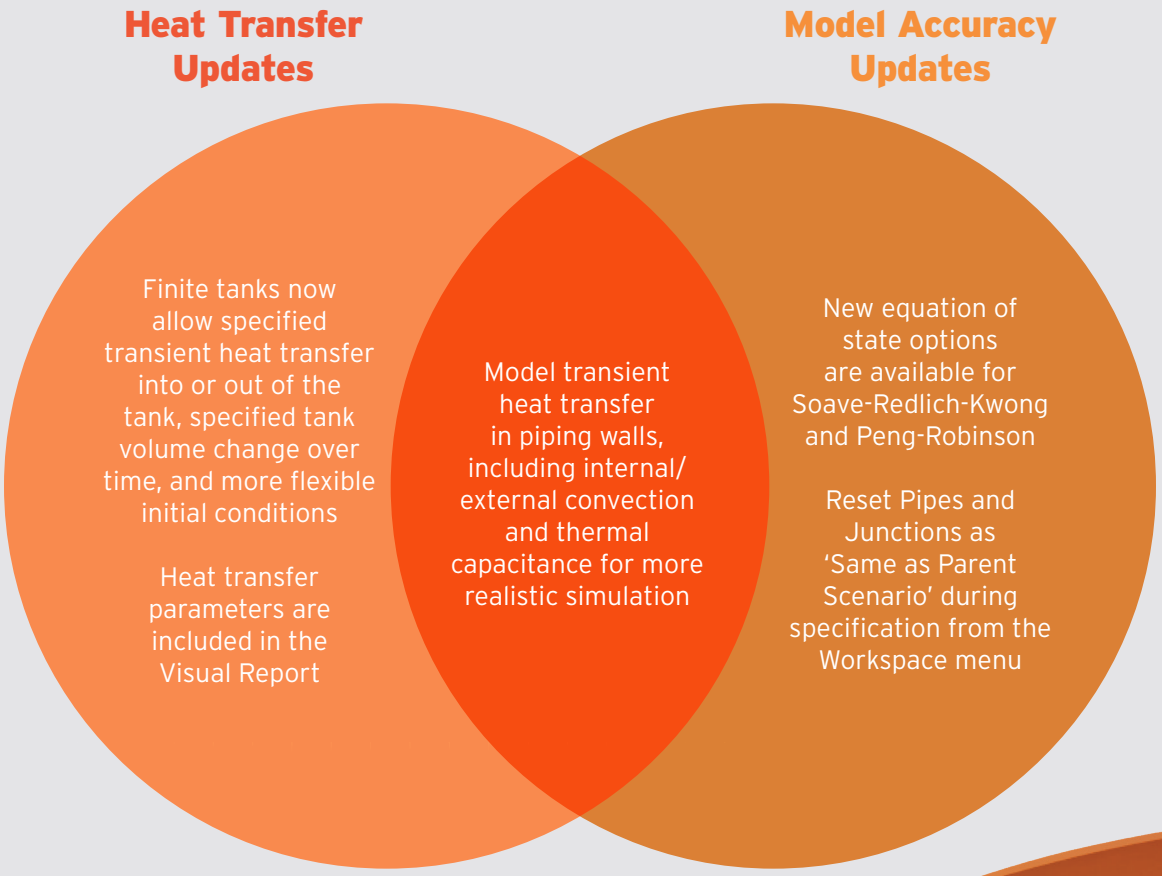
WORKSPACE

- Contextually update Junction Special Conditions directly from the toolbar
- Reset Pipes and Junctions as 'Same as Parent Scenario' during specification from the Workspace menu

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
- Select Special can search for text in the Pipe and Junction Notes
- The Solution Progress window will indicate which junction had a special condition change during the run causing the model to be rerun
- Heat transfer parameters are included in the Visual Report

What's new with AFT xStream?



Project Guidance

FLOW EXPERT PACKAGES

AFT provides extended consulting services beyond the typical support requests to help your team design projects quickly, efficiently, and professionally. Extend your team with an experienced fluid systems engineer assigned specifically to you.

- Request help on **model results interpretation**
- Receive online **training on specific topics** of your choice
- Get a **second opinion** of your assumptions, modeling choices, and reports
- Have an **expert check your model** input and point out common modeling mistakes
- And much more!

Large Project Consulting

Purple Mountain
Technology Group


Dylan Witte, P.E.


Cort Hanson

Project Confidence

Performing a hydraulic analysis can be time-consuming and contain extensive detail. Let our experts complete the analysis for you.

Expert Analysis with Advanced Tools

Our Engineers help customers around the world with piping systems.

Time is Money

Purple Mountain Engineers have extensive training and knowledge to complete the project in a fraction of the time.

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Software Leasing & Consulting Options

QUARTERLY LEASE

- For short term projects
- One half of lease amounts paid may be applied to a full license purchase before the end of the lease
- Support, Upgrade & Maintenance (SUM) is provided during lease term

ANNUAL LEASE

- For long term projects
- One half of lease amounts paid may be applied to a full license purchase before the end of the lease period
- Support, Upgrade & Maintenance (SUM) is provided during lease term

CONSULTING

- AFT Flow Expert Package available in block of 5, 10 and 20 hours and tailored to fit your individual needs
- Purple Mountain Technology Group (sister company of AFT) is available for project consulting

Support Upgrade Maintenance

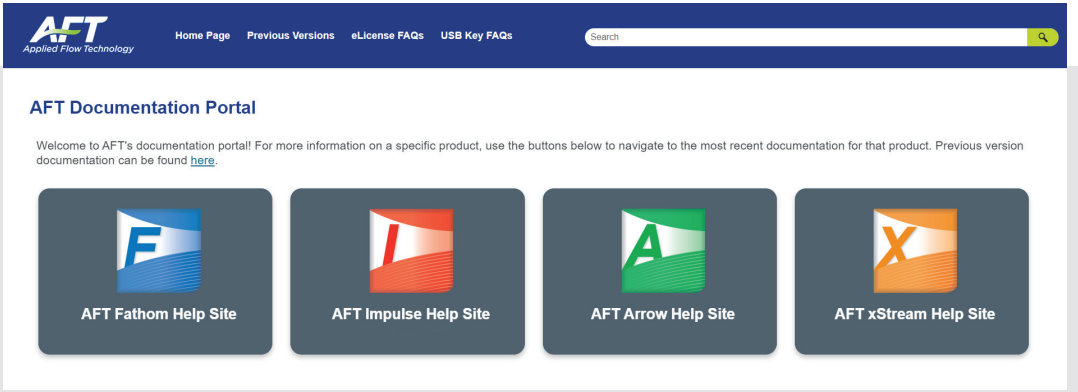
You count on AFT for important projects. Make the most of it with a Support, Upgrade & Maintenance subscription.

- Get premiere support to help troubleshoot model issues and installation
- Automatically upgrade to the most recent version at no extra cost
- Receive training seminar discounts

All new licenses come with one year of complimentary Support, Upgrades & Maintenance

Introducing the NEW Documentation Help System

Check out our brand new documentation portal! Discover AFT's central location for all your software support needs. Find the most recent documentation for specific products. Previous version documentation can be found here as well.



What you will find

THEORY & FUNDAMENTALS

- Methodology
- Nomenclature
- Modeling Concepts

SUPPORT

- Technical Support
- Module Information
- Tips

LEARNING

- Quick Start Guides
- Example Models
- How To's

GET ANSWERS TO FREQUENTLY ASKED QUESTIONS

Direct URL: bit.ly/3nFMEea

Other Add-On Modules

Earlier in the digest, you may have learned about the XTS Add-on Modules for AFT Fathom and AFT Arrow, as well as the PFA Add-on Module for AFT Impulse and AFT xStream. Below are three additional popular add-on modules that help you extend the capability of your AFT software products.

SETTLING SLURRY

Who benefits from SSL?

Those who account for slurry properties, changing solids concentrations, slurry pump reliability and avoiding excess operating costs.

Why use SSL?

Avoid system failures and excessive operational costs

Prevent plugged pipes and misapplied pumps

Reduce energy usage

Improve system performance

Reduce operating and maintenance costs

GOAL SEEK & CONTROL

Who benefits from GSC?

Those that need to meet specific hydraulic behaviors while avoiding manual techniques.

Why use GSC?

A powerful benefit of system modeling is the ability to evaluate the effects of changing system parameters such as:

Saving time by avoiding manual iterative analyses

Defining multiple variables and goals at multiple locations throughout the system

Simulating control system behavior

AUTOMATED NETWORK SIZING

Who benefits from ANS?

Those who aim to save both capital and recurring costs as well as significantly reduce energy usage.

Why use ANS?

Allow the ANS module to smartly manage your iterations. This enables efficient comparison of more design concepts in the same time to avoid deadline driven compromise

Use design cases to size an initial system while anticipating different operating conditions or the increased flow requirements of future expansions

Nuclear Verification and Validation

NV&V packages enable the use of AFT Fathom, AFT Arrow or AFT Impulse software in **safety-related applications in the nuclear industry.** These packages assist with the performance of a Commercial Grade Dedication process.

Ensure the safest system analysis possible with:

AFT Fathom
AFT Fathom GSC Module
AFT Fathom XTS Module

AFT Arrow
AFT Arrow GSC Module

AFT Impulse

Canada Sales, Education & Technical Support:
www.flumen.ca
patrick.tremblay@flumen.ca