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AFT Arrow 10	AFT Arrow 9	AFT Arrow 8
<p>The Workspace Layers toolset significantly enhances the model building process. Easily update Pipe &amp; Junction size, color, Display Text, visibility, and more from a centralized location.</p>	<p>Streamline your setup from the new Analysis Setup menu, a user-friendly workflow condensing 14 model-wide specification windows into 1</p>	<p>Multi-Scenario Comparison: Data can be compared between multiple scenarios to show changes made</p>
<p>The new Valve Window now clearly distinguishes between different data sources such as User Specified, Characteristic, or Handbook, to understand the available options.</p>	<p>Visually analyze alternatives with Multi-Scenario Graphing to compare profile graphs and transient plots (XTS) from multiple scenarios on a single plot</p>	<p>Compression ratio can be used to define the compressor performance</p>
<p>Model centrifugal compressors more accurately by accounting for multiple curves from a non-dimensional or corrected Compressor Map.</p>	<p>The brand new Extended Time Simulation (XTS) Add-on Module models dynamic system behavior and how critical system parameters vary over time</p>	<p>Multi-level undo and redo on the Workspace</p>
<p>Estimate junction Sound Power Level according to Energy Institute Guidelines.</p>	<p>Warnings, errors and Design Alerts shown in the Output are now color coded and organized in a prioritized list for quick review</p>	<p>All Summary Output parameters can now be displayed on the Visual Report</p>
<p>The Design Alert Manager has been reorganized to improve the process of creating and applying user-defined alerts.</p>	<p>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.</p>	<p>Improved intelligence on when a model needs to be saved to preserve the output</p>
<p>Draw on the isometric grid without forcing any particular pipe routing with Isometric Freeform drawing mode.</p>	<p>Use the NEW online Help System for centralized documentation and examples from your browser</p>	<p>New and updated themes</p>
<p>New Annotation shapes and a line tool allow more flexible markup such as revision numbers or change requests.</p>	<p>Apply the Soave-Redlich-Kwong and the Peng-Robinson equations of state as additional methods to model your fluid</p>	<p>Improved model loading speed</p>

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

# Full list of New Features you can use in AFT Arrow™ 10

## Significant New Features

- **Workspace Layers** - The Workspace Layers toolset significantly enhances the model building process, providing unparalleled customization options.
- **Compressor Map** - Model centrifugal compressors more accurately by accounting for multiple curves from a non-dimensional or corrected Compressor Map.
- **Calculate Sound Power Levels** - Estimate junction Sound Power Level according to Energy Institute Guidelines.
- **Improved Valve Window** - Clarifies and expands the available valve loss models, and makes it easier to define a valve characteristic, which can be critical for an accurate model.
- **Streamlined Design Alerts** - Greatly simplified the Design Alert Manager to allow easier and faster specification of important design limits.

## Notable Features

- **Custom Junction Icons** - Use your own images.
- **Isometric Freeform Drawing** - Draw without forcing any particular pipe routing.
- **New Annotations** - Use shapes and tools to allow flexible markup such as revision numbers or change requests.
- **Set Workspace Print Area** - Show printing page borders on the workspace and customize the printing area.
- **Customize Graph From Workspace Options** - Custom selection of any graph parameter on the Workspace.

## Modeling Additions and Improvements

- **Prevent Backflow at Sprays** - New "No Inflow" Special Condition for Spray junctions.
- **Zero-Length Connector Improvements** - Now behave like standard pipes, including selection and graphing tools.
- **Distinguish User and AFT Fluids** - Easily find custom entries.

## Improved Importing

- **Import Bend r/D** - Import PCF bends with appropriate r/D
- **Import Speed Increase** - Import up to 10x faster
- **Better Defaults and Display** for Imported Models
- **Improved Import of Pipe Material Links**
- **Display CAESAR II Node Names** as junction names.

## Behind the Scenes Improvements

- **Graphing Optimizations** - Significant improvements to backend graphing code, to provide additional stability now and more capabilities in the future.
- **eLicense Access Improvements** - Improved security and the release of license seats not in use.
- **Output Improvements** - Improvements to backend output code provides additional stability.
- **Timed Recovery File** - Automatically generate a backup of your model to recover unsaved work.

## Output Parameters and Messages

- **Compressor RPM Output Parameter** - Report speed in RPM, in addition to percent.
- **Dimensionless Heat Transfer Output Parameters** - Grashof, Nusselt, Prandtl, and Rayleigh Numbers
- **Valve xT Output Parameter** - Report and graph
- **Estimated xT Output Parameter** as used in the solver for valve loss models that do not use Cv/xT.
- **Profile Graphs for Temperature Saturation and Temperature Superheat** - Graph saturation temperature and temperature above saturation (superheat).
- **Laminar Caution** - if junction flow is in a laminar range
- **POR/AOR in Compressor Summary**
- **Events Messages in New Format** - Now shown in a clean, collapsible format similar to Warnings.



## An add-on module to model dynamic system behavior

Model transient events such as tank pressurizing and blowdown, changes in valve position, and changes to compressor operating condition

Animate transient output to visualize how parameters change over time at a point or along a flow path