Impulse 11 Prominant New Features

Datacor customers who have a subscrption or a previous Support, Upgrade, Maintenance (SUM) agreement will automatically upgrade to the most recent version at no extra cost.

impulse
a datacor product

Impulse 11	Impulse 10	Impulse 9
A Parametric Study is a powerful new tool to evaluate how different parameter combinations affect the design of a system.	The Workspace Layers toolset significantly enhances model building by allowing centralized updates to pipe and junction size, color, display text, visibility, and more.	Visually analyze alternatives with Multi-Scenario Graphing, comparing profile graphs from multiple scenarios on a single plot.
Use a Design Alert or an Event to stop a model run, keeping the output. The output will be maintained just as if the run was stopped at an ending time.	The new Valve Window clearly distinguishes between different data sources—User Specified, Characteristic, or Handbook—making it easier to evaluate available options.	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.
Pipes can start out dry and be filled over time or the other way around with Pipe Filling and Draining.	Utilize any image as a junction icon, simply by right-clicking on the Toolbox icon.	Use the new online Help System for centralized documentation and examples from your browser.
Force Set Export 700% Faster!	New four-component slurry model for the SSL module, developed by leading industry experts, captures complex slurry regimes more accurately.	Streamline your setup from the new Analysis Setup menu, a user-friendly workflow condensing multiple model-wide specification windows into 1.
Automatic and Specified Time Step Sectioning Modes will automatically select a section count that meets the specified variance - no interaction with the sectioning panel necessary.	The Design Alert Manager has been reorganized to improve the process of creating and applying user-defined alerts.	Convert Shear Rheometer data for Power Law and Bingham Plastic viscosity models with a helpful visual guide.
Improved Reciprocating Pump allows selection from single/double acting, multiple cylinder arrangements, crankshaft phase offset, and estimated or user specified valve timing.	Draw on the isometric grid without forcing any particular pipe routing with Isometric Freeform drawing mode.	Apply the Herschel-Bulkley viscosity model for shear thinning or thickening fluids with a yield stress.
New Natural Frequency Evaluation and Steady State Pulsation modes provide a more clear and flexible workflow in Pulsation Frequency Analysis (PFA).	New Annotation shapes and a line tool allow more flexible markup such as revision numbers or change requests.	Warnings, errors and Design Alerts shown in the Output are now color coded and organized in a prioritized list for quick review.

Significant New Features

- Pipe Filling and Draining - Pipes can start out dry and be filled over time or the other way around. This is a great tool to analyze sprinkler systems or other piping which starts out dry.
- Use a Design Alert or an Event to stop a model run, keeping the output. Traditionally a run is stopped at a certain time. Now you can define a Design Alert or an Event to stop the run if either occurs. The output will be maintained just as if the run was stopped at an ending time.
- Parametric Study - A powerful new tool to perform parametric studies.

- Graph Annotations - Ability to add graphs to the Workspace which will update after the scenario is run.
- Automatic and Specified Time Step Sectioning Modes - Automatic sectioning will automatically select a section count that meets the specified variance - no interaction with the sectioning panel necessary. For advanced users, a time step can be specified directly which can help strategically sacrifice accuracy for shorter run times.
- Pulsation Frequency Analysis (PFA) Workflow Improvements - Natural Frequency Evaluation and Steady State Pulsation modes to provide a more clear and flexible workflow.

Notable Features

- Improved Reciprocating Pump - Allows selection from single/double acting, multiple cylinder arrangements, crankshaft phase offset, and estimated or user specified valve timing
- Design Alert Layer - Show Design Alert status on the Workspace.
- Scenario Comparison Layer - Compare Scenarios as a graphical representation on the Workspace
- PFA Force Amplitude vs. Frequency Graph - Ability to create a Force vs Frequency graph (or "shaking force") for selected Force Sets in the PFA Add-on Module
- Improved PCF Importing - Better control on how the elements of a PCF file will be imported to the Workspace
  - Welded junction - now imported with a Zero-Length Connector
  - Pipe lengths units - Can be changed in the import preview
  - Pipe materials - Can be defined in the import tool
  - Multiple PCF files - Can now be imported together
- Global Junction Morph - Morph multiple junctions at once

General Layer Improvements

- Consolidate Label and Object visibility controls
- Vary pipe thickness based on diameter
- Ability to create layer from current Output Control settings
- Easily select annotations to include/exclude in specific scenarios
- Quickly create Layer Folders
- Save and Load your layer definitions in files to standardize how your company presents models
- Slurry Parameters on Color Map Layer - Report the slurry results directly on a Workspace Layer

Library Improvements

- Save Libraries in custom locations other than the Local User Library
- New IPS and DIPS HDPE Piping Material Libraries from ASTM F714

Output Grid Improvements

- Selection Calculations - Count, Numeric Count, Max, Min, Sum, and Mean will be displayed for selected cell

General UI Improvements

- Exclamation mark indicates missing data in the Analysis Set-up and Property Menus
- Display XTS Time Step in Solution Progress Window
- Faster loading / more responsive Workspace *- 90% faster*!

General Modeling Additions and Improvements

- Password Protection for Read-Only Files or Scenarios
- Clarified Detailed Tee Behavior with new auto-sync option
- Allow Specification of Backup File Directory
- Expanded the ability to import PNGs as background images
- NFPA Report can now be Copy/Pasted to Excel

Miscellaneous

- Improved Valve Characteristic percentage increments to whole numbers
- Improved monetary conversion example in the costing window
- Expanded the ability to import PNGs as background images
- Modified Wavespeed in Output