

## ShipConstructor2004 Feature List

Victoria, 14 November 2003

For almost 15 years, ARL has been dedicated to continually improving **ShipConstructor** to help our clients save time and money by improving their productivity and efficiency.

**ShipConstructor2004** comes with numerous small and large improvements, even with two completely new modules: HVAC and Penetrations. Below, you will find a short list of the most important new features in **ShipConstructor2004**.

### NEW Optional Modules

#### New: HVAC – Heating, Ventilation, Air Conditioning

##### HVAC Module

Fully integrated with the established Structure, Pipe and Outfit 3D product modelling modules, HVAC will aid your team in the complex task of ensuring that all systems work smoothly together in the typically restricted space available in ship hulls.

- **On-the-fly** - HVAC ducts are defined on-the-fly.
- **Logical Connections** - As with Pipe, HVAC items are logically connected and can be dynamically altered with all connected items adjusting intelligently.
- **Interference Checking** - HVAC is fully supported by Interference Checking, making costly rework a thing of the past.

#### New: Penetrations

##### Penetrations Module

Penetrations lets the user easily implement spec driven piping penetrations in structure that are associated with their sizes.

- **Sleeves, Collars, and Doubler Plates** – Adds sleeves, collars, and doubler plates to penetrations through structure for pipe.
- **Unique ID** – User defined unique ID's for all penetrations
- **Integrated Penetration Approval System** – provides a full approval mechanism starting with the proposal of placing a penetration, through sign-off by the specialist, to the final implementation. In order to safeguard the process, the Penetrations module comes with numerous control functions such as:
  - **User Permissions** – Each user working on a project receives permissions assigned by the project manager, preventing users from working on the product model outside their expertise.

- **Standardization** – Penetrations are defined in the catalog, assigned to pipe sizes and grouped into specs.
- **Approval Process** – The process is database controlled and enforces all parties to do their job at specific times. A revision log is generated automatically.
- **Revision History** – Penetrations may be changed after approval, which starts the approval process over again.

### New & Improved Functions in Existing Modules

#### Structure, Structural Detailing & Production Information

##### Structure Module

- **Fully Functional Corrugated Bulkheads** – Added fully functional corrugated bulkheads for use in topsides and accommodation spaces onboard ships and rigs; Supports both: standard and custom corrugation types.
- **Intelligent Marking Lines** – Intelligent marking lines have been added to improve functionality. It is now even easier to arrange and change markings.
- **Improved Quality Control Measurements** – The quality control matrix now has labels and arrows to point to selected points, thus taking the guesswork out of taking quality control measurements.
- **Center Thrown Plates** - Added ability to throw to both sides of the molded line, giving you the desired ability to place the center keel mold line on centerline.

#### Build Strategy

##### BuildStrategy Module

- **Non-Spoiled Items** – Ability to add individual “no-spool” and un-spoiled items to the build strategy hierarchy, making it easier for users to verify that all pipe and HVAC parts are properly completed before assembly.

#### Data Management & Reporting

##### Manager Module

- **Customizable Reporting Functionality** – Features task oriented views of PWBS and SWBS report data; better meets the requirements of individual project and/or client needs.
- **“View Only” Permission** – Permission is now required to modify the raw data.
- **Insulation Library** – Features definition of insulation types and materials for use in the HVAC module.
- **Corrugated Plate Stock Definition** – New to the Stock Library is the ability to define corrugated plate stocks for use in creating corrugated bulkheads.

- **Improved Penetration Reports** – Along with the new Penetrations module come greatly improved penetration reports.

### ShipConstructor Administrator

- **Improved Security** – Allows support for named instances of SQL server and non-blank SQL System Administrator passwords during install; Uses built in SQL server security for enterprise level security for your ShipConstructor data.
- **Multiple Database Update** – Updates multiple databases at the same time.
- **Enhanced User Flexibility** – Ability to remove users from a project and transfer their revision history to another user.

### Pipe & Equipment

#### Pipe Module

- **Bent Pipes** – Modeling of bent Pipe has been improved to accommodate various pipe benders and clamp lengths; bent pipes can now easily output data to a variety of pipe bending machines.
- **Additional Functionality for Accessory Packages** – Accessory packages are now Spec driven
- **Extended Pipe Catalog** – Three way valves are now part of the Pipe Catalog. New permissions allow users to view/check the Pipe Catalog.
- **Improved Functionality for Valve Operators** – Valve operators can now set handle orientation.
- **Improved Spool Manager** – The new spool manager now helps to track modeling changes.
- **Improved Output for Spool Drawings** – The new spool drawings now locate dimensions and orthographic symbols and make it easy to create orthographic spools; The handling of slope pipes has also been improved.
- **Import Pipe Stock Items from an Excel Flat File** – No need to rebuild the databases from scratch. Information can easily be imported from other systems and/or suppliers' spreadsheets.

#### Outfit Module

- **Spec Driven Pipe Connections** – Reduces errors by adding Spec driven pipe connections to Outfit items.
- **Collaboration between Pipe and Outfit Module** – collaboration between Pipe and Outfit Module has been substantially improved.
- **Connected Drawings** – Outfit drawings can now connect to pipe drawings using remote pipe connections, which means that outfits used by multiple systems or disciplines are now in one common place.

### Nesting

#### ManualNest Module

- **Soft Collisions** – The nest collision check now reports the actual gap for soft collisions.

#### AutomaticNest Module

- **Improved Nesting Ability** – ShipConstructor now uses an improved algorithm for re-nesting nest plates, thus improving material usage.

#### ProfileNest Module

- **Automatic Nesting** – Automatically nests thousands of profile parts in seconds.
- **Tracking Tools** – Includes tracking tools that show whether a nest is issued, cut or recalled.
- **Nest Revision Tracking** – Errors will be reduced through automated nest revision tracking and reporting.
- **Integrated Remnant Tracking** – Yards can now optimize their stock usage with integrated remnant tracking.

### NC Processing

#### NC-Pyros & Bevel Module

- **Inside and Outside Leads** – Lead-ins and lead-outs are now separated into inside leads settings and outside leads settings.
- **Support for Bystronic Controllers**

### All Modules:

- **AutoCAD2004 Support**
- **Redesigned Navigator:**
  - Simpler to use and more unit based functionality, accounts for the new modules.
  - All drawings are now template based to ensure that standards are maintained.
  - An improved registration procedure allows faster switching between units.
  - Users are able to see who has which drawings open.
  - Users can customize which modules they want to have access to.
- **Lock Codes** – Easier to maintain and configure.
- **Simplified Access to Drawings** – Access to the ever increasing number of drawings in large projects is simplified.

### For further information, please contact:

**Mr. Rolf G. Oetter, President, Ext. 100, or  
Mr. Eric Dionne, Project Manager, Ext 130.**