



# Design Flow Solutions

## FEATURES

*From the Developers of  
the Award Winning  
Crane Companion  
and DesigNet*

- ▲ Complete hydraulic analysis of complex piping systems including up to 9000 branches and 1000 tees. Network branches can consist of any combination of pipe, fittings, and valves, with virtually no limit on the number or type of components.
- ▲ DesigNet solves networks using the Darcy-Weisbach formula together with Bernoulli's theorem for liquids and the differential form of Bernoulli's theorem together with numerical integration techniques for gases.
- ▲ Considers sonic flow and heat transfer limitations for gases. Graphical interface allows the user to build a complete network showing all flow paths.
- ▲ Includes piping dimensional specifications for standard carbon and stainless steel piping.
- ▲ Freedom to use desired units for any inputs or for display of calculated results.
- ▲ Flow rates can be specified using mass flow rate, volumetric flow rate (actual or standard), or velocity.
- ▲ Automatically determines flow direction for each flow path in the network.
- ▲ Provides detailed warnings to ensure accurate system modeling.
- ▲ Allows use of positive displacement or centrifugal pumps. Utilities create pump data files using head versus flow data specified by the user.
- ▲ Allows rapid lineup changes (valves open and shut, pumps turned on or off) and automatic recalculation of system values.
- ▲ Includes a variety of printed reports ranging from summary to detailed.

## VERSION 4 IMPROVEMENTS

### **New Solution Method and Performance Improvements**

- New Solution Method allows for much quicker solutions of problems.
- Improved local area network performance, and shorter solution times for LAN users.

### **Hardware Improvements**

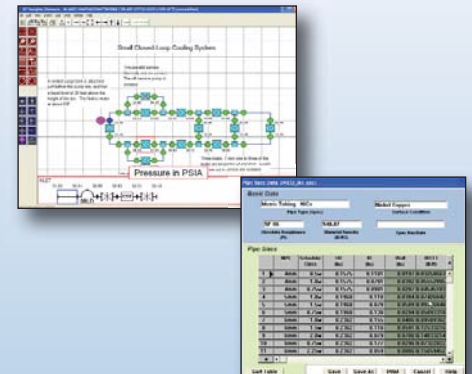
- Control Valves - valves to maintain a user-specified flow rate.
- Pressure regulators - to maintain a user-specified pressure (at valve inlet or outlet).
- Bill of Materials Reports - provides a listing of all components.

### **Improved User Interface**

- Main program and utilities are now 32 bit programs supporting long file names.
- On-line Tutorial to provide guidance on program use.
- P&ID Format - shows component level detail of valves and fittings.
- Integrated Utilities - tightly integrated utilities allow the user to readily view, create, or modify data files.

### **Improved Gas Calculations**

- Solves components with elevation and size changes more quickly.
- Option to solve gas problems incompressibly.



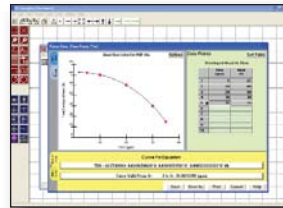
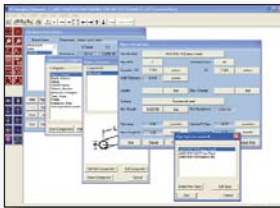
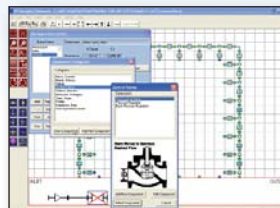
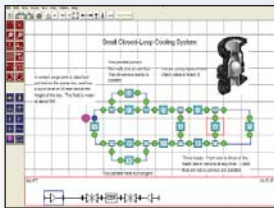
## ALSO AVAILABLE

### Data Libraries

The DF Solutions Data Libraries include more than 650 data files greatly expanding the available data. The data covered by the libraries includes piping dimensional data, fluid data (density and viscosity), material properties for piping materials, component flow resistance data and unit conversions.

## WORKING DEMO VERSION OF DESIGNET

Visit ABZ's website at [www.abzinc.com](http://www.abzinc.com) and click on the menu item "Demo Download" for a fully functioning version of Designet.



**A comprehensive user-friendly tool for solving fluid flow problems from the Designers of the Award Winning Crane Companion.\***



#### The Vaaler Award

A biannual award for significant advancement in process engineering



#### CSE Reader's Choice Award

An award based on responses from engineers and honoring outstanding engineering products and software



#### Plant Services Magazine

An award for viable and proven solutions to customer problems



#### Codies

An award honoring outstanding software products



#### Waterworld

An award honoring the top products from 1997



#### Plant Engineering

An award for practical and functional products for plant engineering

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## DESIGN FLOW SOLUTIONS

Design Flow Solutions provides the engineer with a comprehensive tool to solve fluid flow problems. Since 1992 when ABZ first developed the award winning Crane Companion®, ABZ has continuously improved the computational methods for solving fluid flow problems. ABZ continues that tradition with Design Flow Solutions. Design Flow Solutions is a must for the engineering professional who needs fast reliable reference information or solutions to fluid flow problems. DF DesignNet, ABZ's network analysis program, is the most powerful, comprehensive and cost effective program available.

## QUOTES FROM ENGINEERS USING DESIGNET

"I reviewed in detail competing products and found Designet the easiest program to use. The interface is simple and straightforward. As a result, my company is purchasing Designet."

- Rockwell

"Out of all the fluid flow programs on the market, DFS is the easiest to use and the best."

- Schindler Associates

"Very user friendly, quick and easy to use. No complicated workarounds."

- BP Chemical

"I love the program."

- Clark Refining

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