

# GASWorkS™ 9.0

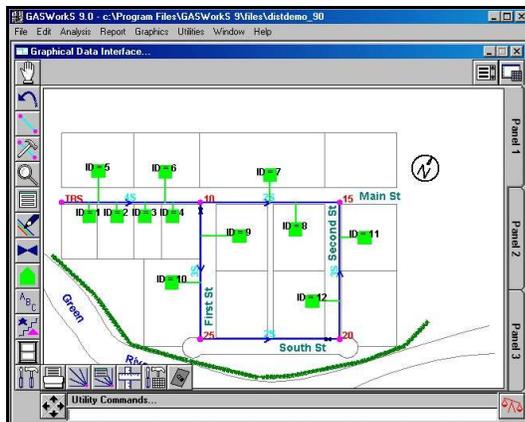
## Highlights



Version 9.0 of GASWorkS is a continued evolution of our popular network modeling software. Compared to previous versions, it contains many features which have been added to increase speed and efficiency of use, expand its set of graphical commands and features, increase its support for customer data items, expand its application in terms of special analytical routines, and much more. A sampling of the many new features are highlighted below...

### Graphic Data Interface

The graphic data interface was enhanced by the addition of many new commands and features. Listed here in no particular order, the new features include: One click access to the pipe, node, and customer data. Multi-segment service lines. Support for User graphic lines and symbols. Automatic assignment of supply main on customer entry. Automated insertion and addition of regulator, compressor, and valve elements. Enhanced command list. Plot preview. Plot to User specified scale. Enhanced arc handling. Additional symbol and line types. Improved flow arrow handling - style, size and display selection. Automated header tap on lateral pipe entry. Double the number of customer edit and entry commands. Calculation of pressure drop between graphically selected points. Automated calculation of efficiency based on calibration values. Calculation of item statistics for graphically selected data features.



Extract, copy, and move pipe, node, and customer features based on a graphically identified selection set. Match hydraulic and graphic properties. Multi-segment measurement tool. Specify service line tap location. Support of branch customers. Save and retrieve graphical views. Multiple previous and next zooms. Trace and update data values along the trace route. Set hydraulic symbols independent of pipe length. Save display to Windows Clipboard. Calculate XY's from latitude and longitude. Automatically set text display limit.



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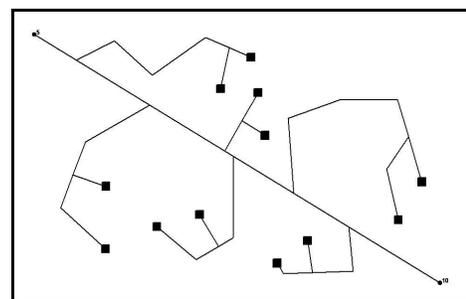
Entry of pipe by length and User drawn angle. Display pipe length during manual graphic entry. Automatically reset colors - useful after traces and queries. Automatically find and delete zero length pipes - useful for data imported from CAD & GIS sources. Pipe color and linetype can be set using values contained in the pipe properties table, based on size and type values. Overall improvement of display speed.

Improved background handling including: Support for "blocks" in DXF backgrounds. Ability to set scale and origin shift when attaching a DXF background. Turn display of individual background image off without unattaching the image.

### Database

The most noticeable change to existing Users will be how the data files are managed. Good or bad - GASWorkS now uses the open, edit, save management scheme for handling its data files. Other data management changes include:

**Customers** - A Link ID was added to enhance sharing of data with other applications. A unit count item was added to allow a single customer feature to more easily represent multiple physical customers. Support is now provided for "branch" customers. This allows one customer to "feed" from another customer. Multi-segment service lines are now supported. For our UK customers, individual diversity handling is now supported.



Multi-Segment & Branch Customers

**Pipes** - A Link ID was added to enhance sharing of data with other applications. Facility Type, and Material Specification (for sizing) fields have been added. Fittings (valves, elbows and tees) can be attached directly to a pipe segment. The equivalent length is automatically computed and used during calculation.

**Node** - Separate control for application of the Design Factor and status for base and external loads. Support for long node names - up to 40 characters.

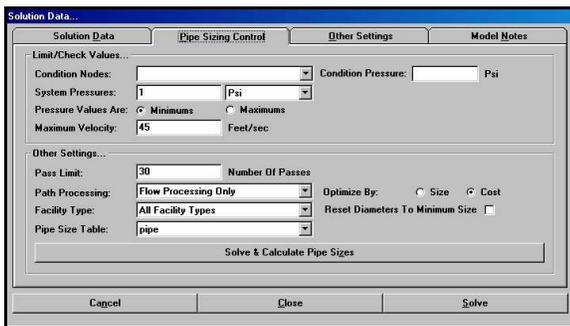
**Property Tables** - The various property tables (pipe, valve, regulator, compressor, well, fitting) are accessed using an improved spreadsheet style interface. Ability to save and retrieve specific tables. Ability to indicate which items to include in the drop data lists. Ability to setup color and linetype specifications for individual pipe sizes and types. More easily specify which pipe sizes to include during pipe sizing (optimization).

**File Handling** - GASWorkS 7.0 files are automatically imported on open. Graphic preview of model before open. Implementation of open, edit, save style file handling. Improved design allows us to more easily and quickly incorporate revisions and custom features.

## Analytics

**Capacity** - Support for increased model capacity - the solution, reports, and graphical display have been tested and verified with models up to 250,000 nodes in size.

**Optimization** - A more robust pipe sizing routine now produces more accurate and consistent optimal pipe size sets. Ability to set limit pressures at multiple condition nodes. A maximum velocity limit may be imposed. The pipe table to use for new size selection can be specified independent of the model pipe table. Material type can be specified for sizing consideration.



**Flow Equations**- Support for several additional pipe flow equations was added, including additional versions of the AGA partially and fully turbulent equation, and the high and low pressure versions of the IMC (Polyflo) equations.



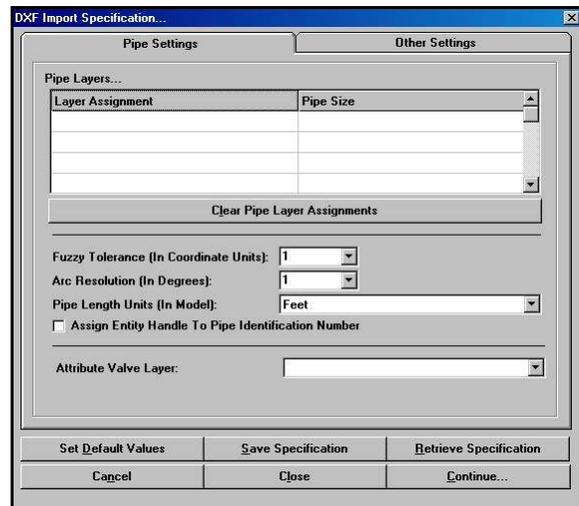
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**Diversity** - For Users of the IGE diversity calculations, heating/construction type and annual usage can now be set for each individual customer. Calculation in "looped" systems is now supported.

## Other

**Mass Update** - Expanded item support including assignment and query of graphical properties. The ability to save and retrieve query specifications was added.

**DXF Import** - Now allows assignment of multiple pipe layers. Specification of arc resolution. Specification of length and coordinate units, and origin shift - allowing automatic scale and shift during import. Import of pipe, valve, customer, and User text features has been incorporated into a single routine. The ability to save and retrieve an import specification was added.



An automated node reduction routine was added. This routine is especially useful when working with CAD and GIS data that needs a bit of massaging/cleanup after importing.

**Reports** - Enhanced in report editing. Enhanced query routine allows a query specification to be saved and retrieved. Allows extraction of a sub-model by query. Improved print handling especially for wide reports. Inclusion of Customer model and attribute data.

## Ask Us

If you have questions about the features found in the new GASWorkS, please contact us...