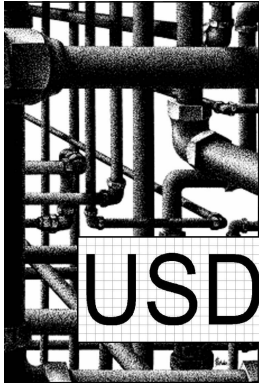


# GASWorkS™



## US Design Module      Product Description

The US Design Module (USD M) is an optional set of features to the GASWorkS software. The included features were developed to closely support the system design requirements and practices of US natural gas distribution industry. The USD M includes various common US specific design methods and practices, and features and routines which have been requested by past and current Users of GASWorkS.

The optional features associated with the USD M include...

### USD M Features

**Dimensional Units Conversion Utility** - Allows a quantity in a specified dimensional unit (for example length in metres) to be converted to an equivalent value in another selected dimensional unit (for example feet).

**Fuel/Energy Type Comparison & Conversion Utility** - Allows a quantity in a specified fuel/energy type (for example KW electricity) to be converted to an equivalent value in another selected fuel/energy type (for example Mcf of natural gas).

**Pipe Segment Calculator** - Allows calculation of various hydraulic values associated with flow in a single pipe segment including pressure drop, maximum flow rate, minimum pipe size, maximum length, velocity, and more.

**Pipe Property Table** - Special handling of the allow calculation and sizing group items is provided in the pipe properties table and pipe sizing routines.

**Pipe Attributes** - A custom linked pipe attribute file is provided to allow specialized handling of attributes along a pipe/main feature. A special type of pipe vertex, known as a Pipe Attribute Marker, is provided to allow segregating a pipe feature into multiple segments. Each segment can possess unique attribute values. Special commands are provided to allow manipulation and management of the attribute markers.

**Customer Attributes** - A custom linked customer attribute file is provided to allow specialized handling of attributes along a customer service line and associated with a customer. A special type of service vertex, known as a Customer Attribute Marker, is provided to allow segregating a service line into multiple segments. Each segment can possess unique attribute values. Special commands are provided to allow manipulation of the attribute markers.

**Custom Fittings** - A set of specialized fittings are provided for use with the service sizing routines. This feature allows a fitting to be specified by type (for example a 90 degree elbow), as opposed to a specific size and type (for example 2P 90 degree elbow). The sizing routine selects the appropriate size and associated equivalent length value depending on the required service size.

**Connections & Terminations** - Similar to the custom fittings, connections and terminations can be specified as a type (for example "Tapping Tee" or "Riser & Valve"). The appropriate size and associated equivalent length value, depending on the required service size, will be used during the sizing routine.



## USDM Features

**Service Line Calculation** - A set of special features, attributes, commands, and calculation routines are provided which support the calculation of the service line size, based on specified load data, configuration, and sizing criteria. The routine supports calculation of "composite" (dual sized) services.

**Special Graphic Display Features** - Attribute segment numbers and a change in size symbol for composite services can be displayed in the Graphic Data Interface.

**Bill Of Material List** - A routine is included to create a generic Bill Of Material list for the associated project. The lists includes User specified fittings, connections, and terminations - and automatically generated fittings, etc. The list can be viewed in GASWorkS or in any third party application that supports the ".csv" file format.

Special DXF conversion routines that let the User select individual lines from a DXF background and convert them to pipes in GASWorkS, including the ability to offset the resulting pipe from the original locations.

Special graphics commands including a command to allow disjointed pipe ends to be automatically snapped together with a single command.

**Title Block Handling** - Special routines are provided to allow the User to define and include a title block on plotted output from the Graphic Data Interface.

**Attribute List Editor** - An editor is provided for creating and revising the contents of the various attribute data lists used by the pipe and customer attribute data files.

Some Users may be familiar with the GASBase application that once was a part of the GASWorkS software. The USDM duplicates many of the features of that application and compliments those legacy features with many new commands and routines.

The USDM is an optional set of features for the GASWorkS software. The module compliments the standard features of the GASWorkS software and requires the installation of the GASWorkS software to be functional. The cost of the module is in addition to the cost of the GASWorkS software. The cost of the USDM is **\$495** per license - one license per User.

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