GASCalc™ 4.0

GASCalc™ 4.0 is a Windows™ based suite of calculation tools for the natural gas professional. Routines are provided for calculating numerous parameters associated with the design and operation of natural gas gathering, transmission, distribution, plant, or fuel piping systems. Its robust set of routines include...

GAS PROPERTY VALUES

Atmospheric Pressure - Calculate the atmospheric pressure for a given elevation or an elevation based on a pressure value. Automatically or individually calculated.

Compressibility - Calculates compressibility and density of a gas composition at User specified pressure and temperature conditions. Supports the AGA 8, AGA NX19, and GPSA methods. Automatically or individually calculated.

Properties - Calculates heating value, specific gravity, specific ratio, and viscosity for a User specified gas composition. Supports the GPSA and GPA 2172 heating value methods.

METER VALUES

Pressure Factor - Calculates required adjustment factor for gas measured at non-base conditions.

Orifice Flow - Calculates values associated with measurement by an orifice meter. Includes calculation of orifice diameter, pressure differential, and flow values. Supports the AGA3-1985 & 1992, and ISO 5167 methods.

PIPE VALUES

Bending Stress - Calculates values associated with a pipe span. Supports pinned and fixed end conditions.

Blowdown Time - Estimates the time required to vent a line to the atmosphere.

Buoyancy - Calculates buoyancy and weight requirements for wet environment crossings.

Pipe Flow - Calculates various values associated with flow through a pipe segment. Allows calculation of diameter, length, flow rate, roughness, pressure drop, and downstream temperature. Allows fittings to be attached. Supports the AGA (three versions), Colebrook, Cox, Darcy-Weisbach, IGE3 low and medium, IGT-Improved, IMC high and low, Mueller high and low, Oliphant, Panhandle A and B, Pole LP, Spitzglass high and low, and the Weymouth flow equations.

External Loading - Calculates stress values associated with roadway or railway crossings. Supports the GPTC and API 1102 methods.

Hoop Stress - Calculates hoop stress and SMYS comparison for User specified conditions.

Plastic Pipe Design Formula - Calculates design values in accordance with ASME B31.8.

Steel Pipe Design Formula - Calculates design values in accordance with ASME B31.8.

Thermal Expansion - Calculates stress and change in length values associated with the temperature change of a pipe segment.

VALVES & FITTINGS

Fitting Values - Calculates sizing values associated with flow through a line fitting (elbow, tee, or valve) using equivalent length values.

Model Selection - The regulator, relief valve, and valve routines providing a feature for selecting models that match User specified flow and pressure conditions.

Regulator Values - Calculates sizing values associated with flow through a regulator.

Regulator & Monitor System - Calculates sizing, flow, and pressure values associated with flow through a regulator and monitor pressure control station.

Regulator & Relief Valve System - Calculates sizing, flow, and pressure values associated with flow through a regulator and relief valve pressure control station.

Relief Valve Values - Calculates sizing values associated with flow through a relief valve.

Relief Valve & Piping System - Calculates sizing, flow, and pressure values associated with flow through a relief valve system.

Valve Values - Calculates sizing values associated with flow through a line valve.

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Applications - Allows external applications to be executed directly from the main menu.	**Dimensional Units** - Supports standard US, metric, and diverse unit systems. Includes a wide range of industry related units.	**Energy Conversions** - Calculates energy equivalent of User specified energy unit. Supports 30 different energy types.

Gas Loss - Estimates the volume of gas lost from a punctured or severed line.	**Unit Conversions** - Calculates dimensional equivalent of User specified value. Supports over 115 different dimensional units.
Online Help - An extensive online help system containing numerous example calculations compliments the nearly 400 page Users manual. Also displays explanatory "tooltips" to aid the User in negotiating and using the software.	**Properties Editor** - An extensive editor is provided for modifying the fitting, pipe, valve, regulator, and relief valve property lists which support the various calculation routines. The User can add, delete, and modify the models contained in the various property tables to meet their individual specific requirements.

AGA 3 Orifice Metering Of Natural Gas And Other Hydrocarbon Fluids, **AGA 8** Compressibility Factors of Natural Gas and Other Hydrocarbon Gases, **AGA GPTC** Guide For Gas Transmission and Distribution Piping Systems, **AGA NX19** Manual For Determination of Supercompressibility Factors For Natural Gas, **API 520** Sizing Selection and Installation of Pressure-Relieving Devices in Refineries, **API 1102** Steel Pipelines Crossing Railroads and Highways, **ASME B31.8** Gas Transmission And Distribution Piping Systems, **GPA 2172** Calculation of Gross Heating Value (etc) for Natural Gas Mixtures from Compositional Analysis, **IGE/TD/3** Recommendations On Transmission And Distribution Practice, ICC **International Mechanical Code** (fuel pipe sizing), **ISA S75.01** Flow Equations for Sizing Control Valves, **ISO 5167** Measurement of fluid flows by means of pressure differential devices.

GASCalc™ provides intuitive and easy to understand and use data screens for interacting with the various calculation methods. It supports a wide variety of dimensional units, allowing use with US, English, or Metric measurement systems. Pipe sizes may be selected from a pipe properties list that can be customized by the User. The software operates on any desk top or portable computer running Windows™ 95 or newer. Recommend 800x600 SVGA monitor, mouse, and 6 MBytes of free hard disk space. Requires a CD drive for installation.

Product	Price
Demonstration - Full featured, time limited version of the software	*Free* **- No Charge**
Upgrade - From single User version of GWCalc/GASCalc 1.X or newer	**$65.00**
Single User License - New purchase of single User version	**$195.00**
Enterprise License - New purchased of unlimited User version. Includes 10 copies of software and manuals, along with an agreement granting permission to make additional copies.	**$1,495.00**
Concurrent User Network License - Concurrent User network version. Price is per concurrent User.	**$195.00**
Unlimited Network License - Unlimited number of Users on a single network. Includes 10 copies of software and manuals, along with an agreement granting permission to make additional copies.	**$1,495.00**
Payment due within thirty days from invoice/shipping date. Acceptable methods of payment are credit/debit card, check, money order, or fund transfer. If you are using a purchase order, please include a copy with this order form. International orders require pre-payment prior to shipment. All payments must be in US Dollars.	**International Customers Add 15% (minimum) For Shipping**

If you have questions about the software or would like to place an order, please feel free to contact our regional representative