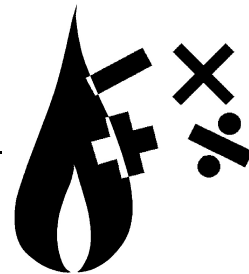# GASCalc™ API

Description

The GASCalc™ software is complimented by an Application Programming Interface (API), which allows programmatic access to selected calculation routines and methods found in the software. The API allows the GASCalc routines to be embedded in third-party or custom applications to create powerful solutions to serious calculation challenges.

Modules & Functions

The API is licensed on a module basis. The individual modules allow access to specific calculation methods and routines. The available modules are described in the following table:

Module	Function Description	Methods/Options
Compressibility	Provides access to the compressibility factor and density calculations.	• AGA NX19 • AGA 8 - 1985 • AGA 8 - 1992 • AGA 8 - 2017 • AGA 8 - 2017 - GERG 2008 • GERG 88 • GPA 2172-09 • GPSA • ISO 6979 - 2016
Gas Loss	Provides access to the various routines associated with gas loss from a damaged pipe section.	
Gas Properties	Provides access to various gas property calculations, including Heating Value, Ideal and Real Specific Gravity, Ratio of Specific Heat, Dynamic/Absolute Viscosity, and Speed of Sound (non-AGA10) calculations.	*Heating Value* • AGA 8 - 1992 • GPA 2172-86 • GPA 2172-09 • GPSA • ISO 6976 - 2016
		Thermodynamic Properties • AGA 8 - 2017 • AGA 8 - 2017 - GERG 2008 • AGA 10 - 2003
Meter	Provides access to various measurement-related calculations, including diaphragm, rotary, turbine, pulse, orifice, and vcone meter values, and various volume calculations.	*Orifice* • AGA 3 - 1985 • AGA 3 - 1992 • AGA 3 - 2013 • ISO - 5167
		Cone • McCrometer
Pipe Flow	Provides access to various calculations associated with flow through a pipe segment, including pipe flow and pressure drop, equivalent length, and velocity calculations. All GASCalc-supported pipe flow equations are accessible.	• Numerous Industry Equations

Module	Function Description	Methods/Options
Regulator & Relief Valve	Provides access to various pressure and flow calculations for regulator and relief valve devices. Supports a variety of makes, models, and industry standards.	• API 520 • ASME BPV • ISA S75.1 • Numerous Industry Equations
Sonic	Provides access to all speed of sound calculations.	• AGA 8 - 2017 • AGA 8 - 2017 - GERG 2008 • AGA 10 - 2003 • GPA
Support	Provides access to various support calculations, including dimensional unit conversions, temperature conversions, atmospheric pressure, and average pressure calculations.	• AGA - Measurement • Handbook of Chemistry & Physics • ISHM • NOAA - 1976

API Interface Methods

Access to the API is provided through several types of dynamic link library (DLL) interfaces, through a standard "c" type dynamic link library, and as a 32-bit or 64-bit resource that can be used by the .Net framework.

Pricing

The API is provided on a subscription basis. One subscription provides a license to use the API for the length of the subscription period (one year). It is licensed and priced on a per module, per server basis. Discounts are available for multiple modules, multiple subscriptions, and complete package purchases. The individual module costs are listed in the following table:

Module	Initial Cost	Notes
Compressibility	$3500	• <u>Requires</u> the Gas Properties module, which is included at no additional charge.
Gas Loss	$2500	• <u>Requires</u> the Pipe Flow module.
Gas Properties	$1500	• Included with the Compressibility module at no additional charge.
Meter	$3000	
Pipe Flow	$2500	
Regulator & Relief Valves	$2500	
Sonic	$1500	• <u>Requires</u> the Compressibility module.
Support	$500	• Included with the Compressibility, Meter, and Pipe Flow modules at no additional charge.

• All costs are USD.
• The Initial Cost represents the subscription activation fee. A subscription renewal fee in the amount of 25% of the total activation fee will be due on the annual anniversary of the original purchase.
• Listed prices are subject to change without notice.

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