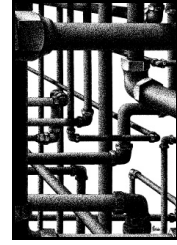


# GASCalc™ & GASWorkS™ Training Class



**Title:** Introduction To GASCalc 5.0 & GASWorkS 9.0

**Level:** Basic/Beginner

**Industry Sector:** Any Gas Piping Systems

**Duration:** Approximately 2.5 days

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This course is intended for the new or occasional User of the GASCalc and GASWorkS software. The course combines topics contained in the individual basic courses for each product including the calculations and routines found in the GASCalc software, and an introduction to network behavior, network modeling, and the use of the latest version of the GASWorkS software, with an emphasis on working with natural gas distribution style systems. A variety of system styles - distribution, transmission, gathering, and plant piping - will be used during the course.

## **GASWorkS**

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The GASWorkS portion of the course consists of both classroom and extensive hands-on training, allowing the student to gain an understanding of both the concepts and functional operation of performing network analysis and using the GASWorkS software. Topics to be covered will include:

- A review of modeling basics, terminology, and methods.
- A review of the functionality and features found in the latest version of the software.
- Students will work through several examples including development of models of a variety of distribution, transmission, gathering, and plant piping systems.
- Model calibration and verification.
- Reporting, printing, and plotting.
- Use of background images.
- The use of the import and export routines.
- Working with the isolation valve and tracing features.
- Using the pipe sizing features.
- Student suggested topics and example models.



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## **GASCalc**

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The GASCalc portion of the course consists of both classroom and extensive hands-on training, allowing the student to gain an understanding of both the concepts and functional operation of performing calculations using the GASCalc software. Topics to be covered will include:

- An introductory review of applicable functions and features found in the latest version of the software.
- Students will work through several calculation examples including:
  - Gas Properties
  - Atmospheric Pressure
  - Pressure Factors
  - Pipe Sizing
  - Steel & Plastic Pipe Design Formula
  - Hoop Stress
  - Blowdown Time
  - External Loading
  - Thermal Expansion
  - Regulator Station Overpressure Protection - Monitors & Relief Valves
  - Meter Sizing
  - Service Line Sizing
  - Gas Loss From Damage
  - Unit/Energy Conversions
- Working with the various property tables.
- Student suggested topics and example models.

Attendees should have a good understanding of using Windows based software applications. Although general system design and operation topics will be discussed during the course, the course itself is not intended to provide detailed training in these topics. The attendee should have a basic understanding of the operation and design of natural gas piping systems.

Students are encouraged to bring example models/problems. A portion of the class time will be set aside for working with student examples and specific topics of interest.

