GASCalc™ *Update Notes*

The following briefly describes the changes incorporated in the associated update. Each subsequent update contains all of the changes included in the previous revisions.

Version	Revision	Date	Description
6.1	36	04/19/2023	Redirected help document path to a new server.
6.1	35	03/29/2023	Revised to handle new B3PE server configuration.
			Various maintenance revisions.
6.1	26	06/09/22	Added Horizontal Directional Drilling calculation.
			Resolved issue calculating compressibility using the AGA 8 1992 Gross 1 method.
			Updated GASCalc API.
6.1	24	04/08/22	Added Flow Rate Change Factor calculation to Interchangeability screen.
6.1	23	03/29/22	Updated GASCalc API.
		03/17/22	Added Physical Volume calculation method to the Container Volume screen.
		03/04/22	Replaced calculation method for Pipe Permeation.
		03/01/22	Fixed a bug calculating diameter values with attached fittings on the Pipe Flow screen.
6.1	22	02/23/22	Fixed bug with Fixed Pressure Measurement Factor calculation not using entered Base Pressure value.
			Fixed bug with "failed" calculation for working monitor configuration on Regulator & Monitor System screen.
6.1	20	12/08/21	Fixed bug with copying Regulator Property Tables to the Windows Clipboard.
			Fixed bug with Base Conditions values not being read correctly for the Station MatchMaker calculation.
6.1	19	11/04/21	Fixed bug with selecting "None" for gas properties file when not calculating a compressibility factor.
			Fixed bug with saved entered diameter values not displaying when opening certain screens.

Version	Revision	Date	Description
		11/02/21	Now includes GASCalc API, which handles certain calculations for compressibility, thermodynamic properties, and atmospheric pressure.
			New EFV Values and Interchangeability screens.
			New calculation table feature was added.
			The "Additional Actions" feature was added to all calculation screens.
			Updated Thermodynamic Properties screen to allow calculation of individual properties using existing gas properties files or entered gas compositions.
			Various bug fixes and enhancements.
6.1	15	07/07/21	New Pipe Lowering screen supports API 1117 - Recommended Practice for Movement in In-Service Pipelines calculation method.
			New "Additional Actions" feature was added to the Pipe Lowering screen.
			Added View Update Notes item to the Help menu.
			Edited pipe material lists to include a "Not Specified" item to calculate the required pipe inside diameter value without selecting a pipe Size/Type Code (Pipe Flow and Service Line Sizing screens).
			Edited Tap/Connection Type, Excess Flow Valve Type, and Riser/Termination Type lists on the Service Line Sizing screen to include a "None" item to indicate that the component should be ignored in the calculation - replaces "blank" item.
			Removed compressibility method reference from the print document for the Reynolds Number screen - compressibility is not used in the calculation.
			Fixed a bug with the Property Table Editor screen where pressing the Enter key while editing a cell would cause the program to crash if the next column was hidden.
			Fixed a bug with printing Property Tables with more than one page of records - records from the first page were being repeated.
			Fixed a bug with Base Conditions values not being read correctly for the maximum regulator capacity calculation used by the Regulator & Relief Valve System screens (single and 2 Stage).
			Fixed a bug with Base Conditions values not being read correctly for the Theoretic (Adiabatic) and Theoretic (Polytropic) calculation methods on the Compressor screen.

Version	Revision	Date	Description
			Fixed a bug with the Blowdown Time screen that allowed the calculated Final Pressure to be less than zero (0).
6.1	14	06/28/21	Updated Contact Information item under the Help menu to allow B3PE contact information to be viewed when using GASCalc offline.

Fixed a bug with decimals displayed on the Data Selection screen.

Fixed a bug with wall thickness data fields not saving correctly.

Fixed a bug with incorrect values being reported for the Volume Of Initial Content In Pipe Segment and Required Inert Slug Volume on the Pipe Purging & Clearing screen.

Fixed a bug with Base Conditions values not being read correctly when a gas properties file is assigned on certain screens - Gas Loss From Damage, Hydrate Formation, Line Heater Values, and Regulator & Monitor System. This only occurs when the Apply button is clicked on the Base Conditions screen. |
| 6.1 | 13 | 05/13/21 | Updated license management to assign random identification to Users.

Added option to disable automatic updates - available by request when building setup file.

Fixed a bug with printing entered atmospheric pressures on the Pipe Flow screen. |
| 6.1 | 12 | 04/13/21 | Fixed a bug in Pipe Fill Time and Pipe Vent Time calculations for short time durations. |
| | | 04/08/21 | Updated license management and online update routines to use HTTPS.

Fixed a bug with date formatting in the online update routine.

Fixed a bug with Property Table Editor column display and printing.

Updated area units handling for relief valves.

Removed the Number Of Vents data item from Pipe Purging & Clearing screen (not being used in calculation). |
| 6.1 | 11 | 03/02/21 | Fixed a bug with area units for relief valves. |
| 6.1 | 10 | 02/17/21 | Fixed a bug with Plastic Pipe Institute - Roadway, Method B calculation method for External Loading. |
| 6.1 | 09 | 01/19/21 | New HTTP license management and update routines replace previous FTP-based routines (Version 6.1).

New Property Table update routine. |

Version	Revision	Date	Description
			Updated routine for saving screen size and location.
			Fixed a bug with lock/unlock on Property Table Editor screen.
			Added "i" button to Base Conditions screen to display composition data for selected gas properties file.
			Updated Other Limiting Conditions list on MAOP/MOP screen.
			Updated layouts for several screens.
			Updated Base Conditions handling to store values in entered units - previous versions converted entered values to GASCalc default units before saving.
			Fixed a bug with Regulator & Monitor System screen - regulator Size/Type Codes are now saved to calculation/initialization files to avoid errors due to Property Table changes.
			Updated cubic metres to cubic feet conversion.
			Added AGCO (Anderson Greenwood) relief valve equation.
6.0	05	09/30/20	Added option to override adjustment factor on MAOP/MOP screen.
			Added Renouard - LP pipe flow equation.
			Added support for AGA 8 2017 compressibility, thermodynamic properties, and speed of sound calculation methods.
			Added support for ISO 6976 2016 compressibility and heating value calculation methods.
			Fixed a bug with the AGA NX19 and GERG 88 compressibility calculation methods.
			File update routine now creates backup .exe files and sends old backups to Recycle Bin.
6.0	04	08/12/20	Changed conversion factor for BTU to Joules.
			Fixed a bug with date handling for MAOP/MOP screen.
			Added support for viewing and editing Property Tables from older versions using the Property Table Editor screen.
			Updated routine for reading data from gas properties files.
			Updated Steel Pipe Design screen - added US DOT Alternative Design Factor method and item for US DOT 192.105(b) to Location Exceptions.

Version	Revision	Date	Description
6.0	03	07/16/20	Added US DOT July 2020, Alternative MAOP, and Reconfirmation methods to MAOP/MOP screen. Updated functionality for ASME and CSA methods.
			Added more status messages to the Welcome screen.
			File check routine for Help documents now uses HTTP.
			Fixed a bug in the startup file update routine.
6.0	01	05/28/20	Added support for CSA standards.
			Updated MAOP screen.
			Resolved issue with license handling for remote desktop Users.
			Fixed bug with Piping Components screen tabs being disabled.
6.0	00	05/01/20	Released Version 6.0.