NEWS RELEASE

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MAJOR UPDATE TO PPI

PLASTIC PIPE DESIGN CALCULATOR ANNOUNCED

Association's Version 3.0 Adds
Pipe Sizes, Fluids, and Static Water Column Pressure Function

IRVING, Texas - Dec. 6, 2022 - The Plastics Pipe Institute, Inc. (PPI) has announced a major update to its Building & Construction Division's Plastic Pipe Design Calculator, a free software tool for the design of plastic pressure pipe and tubing systems using CPVC, HDPE, PEX, PE-RT, PP-R and PP-RCT. The calculator is intended to be used for applications such as plumbing, water service, fire protection, hydronic piping (liquids), radiant heating & cooling, snow and ice melting, geothermal ground loops, district heating, chilled water, and turf conditioning. PPI is the major trade association representing the plastic pipe industry.

The latest updates in Version 3.0 of the calculator include the addition of more than 50 new pipe sizes, methanol as a fluid choice for geothermal designs, sodium chloride and calcium chloride brine solutions as fluid choices for chilled water, and the new Static Water Column Pressure function.

This new function is the sixth tool available in the calculator and will help designers to estimate the pressure inside piping at the bottom of a geothermal borehole or at the bottom of a multi-story plumbing, fire protection, or hydronic system.

According to Lance MacNevin, P. Eng., director of engineering for PPI's Building & Construction Division, "This online tool simplifies and makes it faster to design systems and was launched in 2015 with five main functions to select and size the right type of pipe for various

applications. Those were pressure/head loss; pipe weight/volume; thermal expansion and contraction; hydraulic shock; and expansion arm/loop design. With the addition of the sixth function, Static Water Column Pressure, the calculator helps designers to determine a potentially overlooked aspect of piping design – the internal pipe pressure that is created by the column of fluid in a tall vertical pipe. With water at 73°F, this pressure is 4.3 psi for every 10 feet of elevation, but other fluids have different densities, and the temperature of the fluid also changes its pressure. This new function allows the user to select the fluid, the temperature, and the elevation of the water column."

Added MacNevin, "Every pipe material has a maximum pressure rating at various temperatures, so this new function will help designers to prevent exposing pipes to excessive pressure caused by the static water column. Another recent addition to the calculator was methanol as a fluid choice, for geothermal ground loops which use that as an antifreeze, and brine solutions for chilled water systems using that fluid type."

The calculator allows the user to select either IP/US or Metric/SI working units, as well as multiple fluids. Fluid temperatures and mix ratios are chosen by the user. Results can be viewed, printed, or emailed.

According to PPI President David Fink, "The BCD Calculator is part of a series of online tools that PPI has published as a service to the industry. These recent updates add to its value as an important resource for designers of commercial plumbing, mechanical, and geothermal systems.".

The BCD Calculator can be found on PPI's website at https://plasticpipe.org/building-construction/bcd-calculator.html or at http://www.plasticpipecalculator.com.

Additional information about Building & Construction Division materials and tools can be found online at https://plasticpipe.org/buildingconstruction .

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Photos follow…

PPI PLASTIC PIPE DESIGN CALCULATOR

PlasticPipeCalculator.com

Available free on PPI's website, the BCD Calculator is a software tool that aids in designing plastic pressure pipe and tubing systems using the materials CPVC, HDPE, PEX, PE-RT, PP-R and PP-RCT. It can assist designers for applications such as plumbing, water service, fire protection, hydronic piping, radiant heating & cooling, snow & ice melting, geothermal ground loops, district heating, and turf conditioning.

About PPI:

The Plastics Pipe Institute, Inc. (PPI) is the major North American trade association representing the plastic pipe industry and is dedicated to promoting plastic as the materials of choice for pipe and conduit applications. PPI is the premier technical, engineering and industry knowledge resource publishing data for use in the development and design of plastic pipe and conduit systems. Additionally, PPI collaborates with industry organizations that set standards for manufacturing practices and installation methods.