

SmartPlant® Spoolgen®



AUTOMATIC PIPING ISOMETRICS FOR FABRICATION AND CONSTRUCTION

Intergraph® SmartPlant® Spoolgen® is specifically designed for piping fabricators who need to add fabrication and construction information to design isometrics delivered by EPCs, generated from 3D models held in plant design systems. Fabricators can use SmartPlant Spoolgen to easily split complete pipeline isometric drawings into spool drawings, which are then used to fabricate pipe spools in the workshop. The system automatically generates all necessary drawings and reports.

SmartPlant Spoolgen provides a fast return on investment, is simple to use, and requires minimal training. It significantly reduces:

- Labor hours
- Fabrication costs
- Project schedules
- Rework
- Construction errors
- Waste

ELIMINATE ERRORS AND REWORK THROUGH DATA CONSISTENCY

Piping data is typically delivered from the engineering contractor to the pipe fabricator via IDF or PCF files. Using SmartPlant Spoolgen ensures total data consistency with the original design of the piping system. This accurate flow of electronic data significantly reduces the chances of piping data errors and the need for expensive and time-consuming rework, saving time and associated cost.

ADD FABRICATION AND CONSTRUCTION INFORMATION TO ISOMETRICS

Using simple functionality, piping fabricators can add fabrication and construction information to electronic pipeline data files (IDF or PCF) without the need for re-drafting or re-entry of material data. Spools are defined by the addition of field weld positions on the isometric

drawing on-screen. SmartPlant Spoolgen then automatically produces the required number of spool isometrics for pipe fabrication in the workshop. Erection isometrics for the complete pipe can also be produced, aiding on-site construction activities when the spools are finally erected in-situ.

PROVIDE A RAPID RETURN ON INVESTMENT

SmartPlant Spoolgen is widely used by the world's leading pipe fabricators. Extensive global project use has identified quantifiable savings in terms of labor hours, manufacturing costs, project schedules, rework, and construction errors. SmartPlant Spoolgen generates significant financial savings and provides a very quick return on investment.

INTEGRATE WITH ALL LEADING PLANT DESIGN SYSTEMS

Piping fabricators can use SmartPlant Spoolgen in conjunction with all leading 3D plant design systems. This ensures that whatever system an EPC uses, SmartPlant Spoolgen will be able to deliver the isometric drawings required for fabrication and construction.

CREATE ELECTRONIC PIPES FROM PAPER DOCUMENTS

When you purchase a license of SmartPlant Spoolgen, you also receive a license of SmartPlant Isometrics, formerly I-Sketch™. Piping specifications and materials catalogs from a variety of plant design systems can be converted automatically to SmartPlant Isometrics format, thus enabling piping isometrics available in paper copy only to be sketched and an electronic PCF produced. The PCF is then submitted to SmartPlant Spoolgen for automatic spool drawing production.

MODIFY AS-DESIGNED PIPES TO REFLECT AS-BUILT SITE CONDITIONS

During erection, when a piping spool does not fit and needs to be reworked to reflect the as-built conditions at the construction site, SmartPlant Isometrics enables the quick updating of the original as-designed piping data to as-built status based on information received from construction. The revised PCF data file produced by SmartPlant

Isometrics can then be submitted to SmartPlant Spoolgen to produce the spool sheet isometric required to fabricate either a completely new piping spool, or to make a modification to the existing spool piece.

VISUALIZE PIPING DATA IN 3D

Interactively display the contents of pipeline data files imported into SmartPlant Spoolgen as scaled 3D models. Any number of files can be visualized simultaneously to create a 3D model of the entire piping system.

INTERFACE PIPING DATA WITH DOWNSTREAM IT SYSTEMS

Interface SmartPlant Spoolgen-generated piping report data with almost any downstream IT system, such as material control, procurement, workshop and weld management systems, SmartPlant Reference Manager, Oracle, SAP®, Microsoft® Excel®- or Access®-based or other legacy systems.

PRODUCE PIPING SYSTEM ISOMETRICS

Merge several pipeline data files to create complete piping system isometrics, useful for pipe stress analysis, or to aid in the inspection, testing, and commissioning of installed piping systems.

KEY FEATURES

- Enables the addition of fabrication and construction information to piping isometrics (IDFs and PCFs)
- Generates all necessary isometric drawings and reports automatically
- Defines spools by the addition of field weld positions onscreen
- Enables you to add your own pipeline attribute data
- Enables the importing of piping data from leading plant design systems such as SmartPlant 3D and PDS®
- Delivers drawing output files in AutoCAD, MicroStation, or SmartSketch® format

- Allows engineers to use their own backing sheets
- Provides a range of dimensioning options – string, composite, overall, and to center or end of valves
- Supports optional output files, including material control, weld summary, spool information, cutting list, printed bill of materials, component traceability, bending control, drawing cross reference, and bulk material list
- Supports industry-standard drawing sizes that conform to ANSI, “A” series, or your custom size

SPECIAL VALUE-ADDED FEATURES

- Automatic elbow-to-bend conversion
- Additional materials output on the bill of materials
- Weights and center-of-gravity calculations
- Addition of pipe supports, including material and welding details
- Addition of detail sketches and information notes
- Definition of loose flanges and field-fit welds
- Automatic straight splitting
- Transposition of component codes and descriptions
- Bar-coding identification of drawing IDs
- Output of flat spool isometrics
- Alternative text allows your own text definitions to be output on the isometric, including multi-language support
- Output of your own component symbol shapes
- Option to read-in pipeline attributes and heat/non-destructive examination (NDE) data
- Revision management

ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph’s industry-specific software to organize vast amounts of data into understandable visual representations and actionable intelligence. Intergraph’s software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph

PP&M provides enterprise engineering software for the design, construction, and operation of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the defense and intelligence, public safety and security, government, transportation, photogrammetry, utilities, and communications industries.

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