



SMARTPLANT® SPOOLGEN®

FAST AND ACCURATE SPOOL AND ERECTION ISOMETRICS

Intergraph® SmartPlant® Spoolgen® is a proven, industrial-strength application that enables the creation of piping isometric drawings for fabrication and erection from the design created during the detail engineering phase of projects. You can add additional information – such as the location of field welds – and create new drawings and reports from the same source as the original drawings. SmartPlant Spoolgen is built on ISOGEN®, the industry-standard software for automated piping isometric generation that has been deployed successfully on all sizes of plant engineering projects in every region of the world.

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.
- Errors during pipe erection.
- 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 (ISOGEN input files created in the EPC's design system). 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, avoiding expensive rework and saving time and associated cost.

ADD FABRICATION AND ERECTION INFORMATION TO ISOMETRICS

Using simple functionality, piping fabricators can add fabrication and erection 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 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 and by EPCs generating fabrication drawings. Extensive global project use has identified quantifiable savings in terms of labor hours, manufacturing costs, project schedules, rework, and erection 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 (including Intergraph SmartPlant 3D, PDS®, and CADWorx®; AVEVA PDMS; and Bentley AutoPLANT and PlantSpace). This ensures that whatever system an EPC uses, SmartPlant Spoolgen can deliver the isometric drawings required for fabrication and erection.

CREATE ELECTRONIC PIPES FROM PAPER DOCUMENTS

When you purchase a license of SmartPlant Spoolgen, you also receive a license of SmartPlant Isometrics, a simple Microsoft® Windows®-based application used to create new piping isometrics. 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. This means the same workflow can be used for both hardcopy and electronic projects.

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 site, SmartPlant Isometrics enables the quick updating of the original as-designed piping data to as-built status based on information received from the site. 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 (IDF/PCF) 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 Materials, 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 erection information to piping isometrics from plant design systems.
- Generates all necessary isometric drawings and material 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

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

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 to make processes and infrastructure better, safer and smarter. The company'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, operation and data management of plants, ships and offshore

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