



CASE STUDY

BARTEC simplifies isometric drawing and boosts engineering agility with Forte Isometrics

Key facts:

Company: BARTEC

Website:
bartec.com

Industry: Manufacturing

Octave products used:
Forte Isometrics
(*Integrat Smart Isometrics*)

Key benefits:

- Faster generation of accurate isometric drawings and reduction of time-consuming and error-prone manual processes
- Automation capabilities that help the team work faster, with greater accuracy and keep up with changes and revisions, with particular importance on large projects
- Improved response to customer demands, including the ability to handle the most common input and output formats

BARTEC is a global leader in safety solutions for hazardous areas, delivering a comprehensive range of explosion-proof equipment and systems. Within its Electrical Heat Tracing (EHT) business unit, engineers work with complex piping information from EPC clients across industries. The team regularly receives piping component files (PCF) and must transform them into precise drawings and material lists for trace heating design.

"Our customers are EPC companies who provide us with PCF files for plant piping. We use that data to design heat tracing systems and select components," explains Pavel Shynkevich, Lead Engineer at BARTEC's EHT business unit. The data includes pipe lengths, inline components and connection points.

Previously, this work involved manual estimation from static drawings, such as PDFs or DWG files. That method was time-consuming, error-prone and incompatible with customers' growing use of automated file formats. As clients and suppliers began working directly with PCF inputs, BARTEC saw both an opportunity and a need to adapt.

Identifying goals

After exploring other solutions, the team found that Forte Isometrics was the right fit for their requirements. "It gives us the essentials: generating accurate isometric drawings and extracting the right data from PCF¹ and IDF² files, such as the quantity of components, total pipe length, number of valves and other related information," Pavel Shynkevich says.

The team was also drawn to Forte Isometrics' flexibility in configuration, which includes the embedded Isogen engine for producing accurate, industry-standard piping isometrics with broad market recognition. Isogen's I-Configure tool enables users to customize drawing templates, while the reporting function facilitates the clear extraction of key metrics, such as pipe lengths and component counts.

Realizing results

Although other reporting tools are still used in parallel, Forte Isometrics has become the mainstay for drawing production: "It's simple, reliable and flexible, which is what we need," Pavel Shynkevich notes.

Today, BARTEC runs Forte Isometrics across three locations: Germany, India and the US. The tool helps different teams handle client files more consistently and respond faster to changes. "With its automation capabilities, we can regenerate a drawing easily if there are revisions, which saves us time."

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Pavel Shynkevich
Lead Engineer,
Electrical Heat Tracing
business unit,
BARTEC



The team also appreciates the value of Octave's support services. During training and regular maintenance interactions, Octave has provided scripts, file preprocessing help and practical guidance. "They take time to explain the issue and suggest solutions. I'm satisfied with their support."

Moving forward

Today, BARTEC is considering equipping additional engineers with Forte Isometric licenses over time, depending on customer demand and project size.

In major tenders, BARTEC now highlights its ability to process PCF data using trusted Octave tools, a capability that enhances its credibility and competitiveness. With solid training, dependable maintenance support and a clear fit for real project needs, Forte Isometrics has helped BARTEC modernize how it works with client data, without overcomplicating the task.

1. A legacy format generated by or for isometric drawing engines and used by piping designers, checkers and fabrication teams.

2. A legacy file format, typically created by 3D plant design systems and used by piping designers and engineers to pass model data to analysis, fabrication or detailing tools.

About Octave

Octave provides enterprise software that helps organizations design, build, operate and protect critical industrial and infrastructure assets. Octave supports decisions across the full asset lifecycle where performance, safety and reliability matter and failure is not an option. Octave connects engineering, operational and safety workflows, enabling customers to convert complex operational data into decisions that improve performance, resilience and incident response across real-world environments. Octave has more than 7,000 employees in 45 countries. Learn more at octave.com and follow us on [LinkedIn](https://www.linkedin.com/company/octave)