

Sonneborn

Customer Success Story

AutoCAD P&ID

AutoCAD P&ID has given us significant time savings with its built-in intelligence and automation. In particular, I like the way the system manipulates pipelines. It cuts them automatically if they cross and allows you to move them while staying attached to equipment. Also, you can drop a valve onto a line and the line will automatically recognize the direction of flow.

—Howard Zoutkamp  
Project Engineer  
Sonneborn, Inc.

# Significant time savings.

With AutoCAD® P&ID software and just one day of training, Sonneborn reduces time required to produce P&IDs by 25%.



## Project Summary

Sonneborn is a global leader in the refining and manufacture of high-purity specialty hydrocarbons. From its headquarters in the appropriately named Petrolia (in Pennsylvania) and sites across Europe, Sonneborn supplies products as diverse as compressor lubricants, medical salves, and food-grade waxes. At one of Sonneborn's impressive refinery complexes just outside Amsterdam, a small design and project management team continues the company's culture of development and openness to advanced technology by recently adopting Autodesk's first entry into the Plant market—AutoCAD® P&ID 2008. Sonneborn was among the first wave of companies to purchase AutoCAD P&ID in Northern Europe, and they are seeing the benefits of the upgrade early on.

Like many other industrial plants in the 1990s, Sonneborn used AutoCAD® as its core design tool to cover roles from engineering drawings to minor on-site civil engineering work, but predominantly, as you might expect for a refinery complex, AutoCAD was the tool used to create P&ID drawings.

The standard technique was to use symbol blocks created in AutoCAD, along with AutoLISP routines and the available icons and pull down menus, and then to place those blocks in the drawings. These symbol blocks were linked to a maintenance and

documentation database through a basic text file created alongside each drawing. There were acknowledged flaws to this method: for example, there was no way to check duplicate instrumentation information or tag removal. However, using AutoCAD was a huge improvement over the previous hand-drawn method, especially because it allowed departments to share centrally held drawings electronically. So Sonneborn managed and developed the system as each new version of AutoCAD was released. They continued working under this system until 2002.

## The Challenge

At this stage, Sonneborn's design team realized it was in need of something more than a generalized CAD tool. Howard Zoutkamp, one of the company's project engineers, was closely involved in the development of the existing AutoCAD-based design system, and was in pursuit of something more suitable. According to Zoutkamp, "We were searching for an application that was much more P&ID specific for about four years. We investigated a range of the products on the market—Autoplant, Cadpipe and others—but always decided that because they were so different from AutoCAD, the training needed, and the downturn in productivity, coupled with the cost of buying entirely new software, was just too great. So we waited."

Autodesk®

# Easy to learn and implement, showing savings almost immediately.

The search continued until early in 2008, when Sonneborn realized it needed to do something about the issue. One option was to upgrade its seven seats of AutoCAD. Sonneborn already had contact with Aceri, the European distributor for AutoCAD P&ID. As Zoutkamp recalls, “They knew that we were looking for market-specific software, so when Autodesk announced AutoCAD P&ID was about to be launched, Aceri notified us. For us it was great news.”

## The Solution

After Sonneborn evaluated AutoCAD P&ID 2008, it purchased four licences of AutoCAD P&ID and three of AutoCAD Electrical (for its instrumentation team). The first two days of the three-day training course focused on the move from AutoCAD 2002 to AutoCAD 2008, with the final day dedicated to P&ID functionality. Customization training is planned to ensure that Sonneborn can create company-specific tool palettes and define their own symbol codes—which will further accelerate the design process.

As Zoutkamp anticipated, AutoCAD P&ID 2008 was easy to learn and implement, showing savings almost immediately. “The way AutoCAD P&ID works has given us a significant time savings. In particular, I like the way the system manipulates pipelines. It cuts them automatically if they cross, allows you to move them and still be attached to equipment. Also, you can drop a valve onto a line, and the line will automatically recognize the direction of flow.”

He highlights the Data Manager for particular praise.

“There is a high level of repeated information on a P&ID drawing, and the capabilities in the Data Manager of AutoCAD P&ID have been a great help in speed and accuracy.”

Looking across his desk at one of his typical drawings he points out that “This would have taken around two days in AutoCAD. With AutoCAD P&ID [it only took] a day and a half, and we are not at full proficiency yet!”

## Wider Savings

The benefits go wider than simple time-savings. Zoutkamp believes the company will eventually see savings of up to 40 percent across the design team, in terms of overall drawing time taken. This means that potential recruitment issues that would have arisen as the team reached capacity using AutoCAD have now been staved off. Additionally, when recruitment is needed, because the team now knows that AutoCAD P&ID is easy to learn, they will be more confident in taking on AutoCAD users and training them, rather than possibly restricting the recruitment pool. “It was more difficult to learn the changes between AutoCAD 2002 and 2008,” says Zoutkamp, “so we are now on the subscription program, and will not fall so far behind again”

The implementation has been so smooth that Sonneborn has felt able to go ahead with a decision to move away from using their existing ANSI/ISA symbols onto ISO symbol sets—both of which are addressed in AutoCAD P&ID. There are approximately 200 P&ID drawings relating to the Amsterdam site, and these will gradually be migrated as projects arise and are documented in process and instrumentation diagrams. It’s here that Zoutkamp expects the outside contractors they use for project work to see—first hand—the value in AutoCAD P&ID. He predicts that they will want to make similar changes to their own design systems, but he points out, “We know how quick it is to use AutoCAD P&ID, so we know how much less it takes to produce the drawings. We will be expecting reduced quotes!”

## The Result

Clearly, after only a few months of exposure to AutoCAD P&ID, Zoutkamp and his team are fans of a P&ID design tool that they anticipate will offer increased benefits the more they delve into it. He’s blunt in his appraisal so far—“Autodesk has produced a very user-friendly piece of software. When it’s this much fun to use, you’re motivated to get the best from it.”

To learn more about AutoCAD P&ID, visit [www.autodesk.com/autocadpid](http://www.autodesk.com/autocadpid)

To learn more about Autodesk Plant Solutions, visit [www.autodesk.com/plant](http://www.autodesk.com/plant)



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