

Milbank Floors

Autodesk Manufacturing Solutions
Customer Success Story

Autodesk Intent™
AutoCAD®



“What impresses me most about our Autodesk manufacturing solution is its ability to capture the knowledge of a designer and put 95% of it into the program. This means training time goes down, errors are virtually eliminated, and we no longer have to manually check drawings for accuracy.”

David Costin
Group Design Manager
Milbank Floors

Building Foundation for Growth

Milbank Floors Doubles Production with Existing Staff using Autodesk Intent

Project Summary

Milbank Floors, a U.K. based manufacturer of high-quality, precast concrete products, is using a manufacturing solution based on Autodesk Intent™ and AutoCAD® to increase efficiencies, reduce errors, and dramatically boost production. The solution has reliably replaced error-prone manual processes that once cost the company thousands of pounds a week. With new efficiencies in its engineer-to-order (ETO) process, Milbank has easily expanded its production capacity, enabling the company to grow significantly over the past several years. Using its Autodesk manufacturing solution, Milbank has been able to:

- Double production capacity without increasing headcount
- Complete processes that once took nearly a day in just a few minutes
- Eliminate errors that previously cost several thousands of pounds a week
- Train new staff 85% faster
- Enhance revenue by over 35%

The Challenge: Speed ETO Process, Reduce Training

When Milbank set its sights on increasing capacity and growing operations, it knew that it had to update its ETO process. The company was performing many tasks manually—such as using a pen and paper to dimension the hollowcore units Milbank produces. These manual processes could lead to errors and required highly trained personnel to execute. “Our previous processes were very cumbersome and error-prone,” says David Costin, Group Design Manager for Milbank. “We needed to eradicate errors and institute a more seamless design process.”

Achieving growth without increasing its staff was also a high priority for Milbank—one that presented its own set of problems. “Few people know how to make hollowcore floor planks—and it’s rare that we ever have two planks that are identical. Each one has to be individually engineered for a specific job,” adds Costin. “We have to train all of our engineers from scratch. It took us six months to make newly hired engineers reasonably competent and eighteen months to make them good.”

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"In the last few years, we've doubled production twice. Our Autodesk manufacturing solution was pivotal in the first doubling, and greatly eased the second doubling. When we doubled production the first time, we didn't even need to increase our staff."

Jeremy Milbank
Technical Director
Milbank Floors

The Solution: Engineering Intelligence Streamlines Design, Reduces Errors

Milbank had almost given up hope of addressing its software challenges when Design Automation Systems (DAS), an Autodesk reseller, proposed an Autodesk Intent/AutoCAD-based solution. AutoCAD, the industry's standard CAD tool, provides the ease of learning and use that Milbank needs, while Autodesk Intent captures Milbank's expert engineering knowledge. DAS provided customization services as part of its solution specification, giving Milbank the exact solution it needed. By integrating engineering specifications, design intelligence, and rules upfront, the Autodesk manufacturing solution is easier for less trained personnel to use. "The Autodesk Intent/AutoCAD solution has enabled us to put our accumulated wisdom about what you can and cannot do in a design into the software," says Jeremy Milbank, Technical Director for Milbank. "As a result, designers with less training and experience are more productive."

With its Autodesk Intent/AutoCAD solution, Milbank is creating all drawings for its floors, producing delivery tickets, splitting orders into loads, and providing sequences for loading an installation. In addition, the company uses the solution to lay the mould out as well as output delivery labels, loading tickets, and mould plans. Bills of materials are automated and the factory floor gets the drawings it needs to manufacture quickly.

Rather than manually drawing every single element on a plank—such as the marks for service pipes and columns—Milbank's engineers create a single drawing, push a button, and get individual, easy-to-read drawings of all elements. "A complete drawing set used to take three-quarters of a day and another two to three hours to add the dimensions," says Costin. "Now, it takes minutes."

Another major goal for Milbank was reducing errors. "Every week, we would have at least two or three errors that would cost a few thousand

pounds," says Costin. "We had to employ several people to check drawings. Each one was checked three times before it hit the manufacturing floor. Even so, we'd still get errors." Now, AutoCAD makes the measuring process fully accurate, while Autodesk Intent prevents mistaken calculations. Explains Costin, "Before, we'd have to write manual calculations for each plank, and each job might have fifty different planks in it. Now, all the engineering is written into the Autodesk Intent software, so the units we're designing aren't just rectangles on the screen, they are engineering elements. The software will tell you if a drawing will fail."

The Result: Doubling Capacity with Existing Staff

By decreasing training time, reducing errors, and streamlining the ETO process, Milbank has been able to grow faster than it thought possible. "In the last few years, we've doubled production twice," says Milbank. "Our Autodesk manufacturing solution was pivotal in the first doubling, and greatly eased the second doubling. When we doubled production the first time, we didn't even need to increase our staff." When Milbank does add engineers now, it takes just three to four months to train them, rather than the eighteen months it once took—a reduction of 85%. Since implementing Autodesk Intent with AutoCAD, Milbank's revenue has also increased 35%.

Concludes Costin, "What impresses me most about our Autodesk manufacturing solution is its ability to capture the knowledge of a designer and put 95% of it into the program. This means training time goes down, errors are virtually eliminated, and we no longer have to manually check drawings for accuracy. Our engineer-to-order cycle has been dramatically reduced since we started using Autodesk Intent with AutoCAD."

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