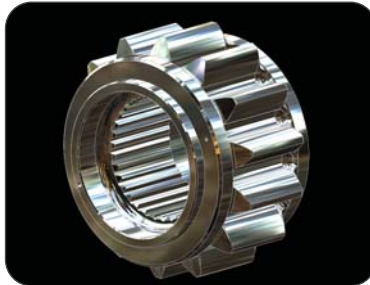
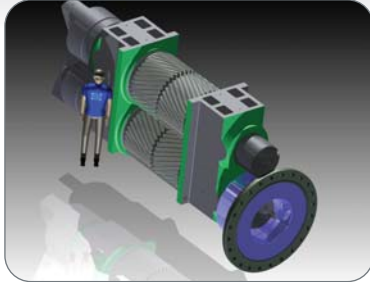




Standard Machine Implements Autodesk Inventor®



→ THE CUSTOMER

Standard Machine and its partner, Hamilton Gear, are located in Saskatoon, Saskatchewan, the heart of Canada's natural resources. Standard Machine has manufactured and repaired equipment in virtually every industry segment for the last 40 years. During that time, Standard Machine has earned the reputation for providing high quality manufactured products which offer long, trouble-free service life.

→ THE CHALLENGE

Standard Machine wanted the ability to produce designs that would be dynamically updated as project data changed, enabling accuracy and greater productivity for the machine shop.

→ DESIRED OUTCOME

Standard Machine began to focus on solutions that would improve their efficiencies. The main goal of the engineering group is to deliver more accurate and detailed engineering designs to the shop floor more quickly.

→ THE SOLUTION

Autodesk Inventor Series was the logical choice for the company's AutoCAD users to seamlessly progress into 3D modeling technology. It offered the best way to maintain the company's design data and legacy parts, as well as enhance their AutoCAD technical expertise. Standard Machine quickly recognized that Autodesk Inventor helped them to increase output and decrease errors. "Using three-dimensional models offer huge advances in error checking because Inventor aids in capturing the association of production parts to one another as well as displays how the parts interact," confirmed Len Zielinski, drafting supervisor.

→ ACTUAL RESULTS

Standard Machine uses Inventor to create high-quality, photo-realistic renderings and animations that improve communication with their customers. "Visualization is the number one advantage of using Inventor. Anyone within the organization can more clearly understand a concept from a picture; therefore, ideas are quickly and clearly conveyed. A picture says a thousand words and Inventor models aid in developing great ideas," added Len.

The Standard Machine drafting department uses the visual advantage of Inventor for designing complex gearing systems because finding design errors can have a significant impact on production. Another visual advantage is clearly seen when solid modeling is used to make jigs and fixtures. Standard Machine has modeled their production machines and used these models to aid in the design of tooling, and to confirm machining practices. "Because we are able to model our equipment we now can verify processes we normally wouldn't have attempted in the past," confirmed Len.

Before Inventor, it was difficult and took time for them to calculate the center of gravity, part weights, and the properties of parts; but with Inventor, it was done immediately. "There are a lot of features that we didn't have with conventional 2D software. Inventor gave us an unexpected benefit, allowing us to do something we were never able to do before," noted Len. They use the Inventor Model to streamline calculations with their Finite Element Design and Analysis Software. This allows them to optimize part strength and reduce material costs without compromising performance. "This has been a tremendous benefit since we can calculate multiple iterations in a matter of hours, saving time and materials on designs. In terms of that one benefit alone, I can't even imagine how long it would take us to perform those calculations manually. These capabilities allow more digital prototyping rather than building physical models. Design changes are made more efficiently using the 3D technology of Inventor. The Inventor software updates all associated drawings and assembly components automatically," concluded Len.