



Siemens PLM Software

# Industry Insights

Speed up food processing equipment design with Solid Edge

Industrial food processing equipment (IFPE) manufacturers face pressure to improve the speed and efficiency of their product design and engineering so they can reduce delivery time and increase profit margins. Solid Edge® software from Siemens PLM Software enables them to do just that by streamlining the design of new equipment so they can meet market pressures, including:

- Changing consumer food habits and a growing population demanding more processed food is driving higher demand for IFPE equipment. This requires manufacturers to design more custom machines and is an opportunity for them to grow their business
- Rising and unstable costs of raw materials and energy. These unknowns lead to inaccurate cost estimates and are a threat to the margin on individual projects and on overall profitability
- Rising consumer awareness and attitudes surrounding food safety are increasing litigation risks. IFPE companies need to

apply strong corporate governance and ensure that the equipment they deliver meets all relevant industry standards

- Meeting food manufacturers' demands for equipment that results in lower labor costs and an improved work environment for their employees. To support this, equipment manufacturers need to improve the operating costs and ergonomic characteristics of the equipment they design and manufacture
- The trend toward more food product parity together with a growing awareness of the environmental impact of food packaging. This is driving food manufacturers to demand packaging with more customer appeal while maximizing recyclability. This is an opportunity to offer innovative equipment that maximizes consumer convenience and appeal, while minimizing the environmental impact of packaging
- The drive for a better return on capital and the desire to reduce their carbon footprint is driving producers to purchase more remanufactured equipment. This is

#### The Solid Edge advantage:

- Meet increasing demand for equipment with shorter product development times
- Control material costs by using embedded simulation tools to optimize component design
- Meet compliance standards with electronic workflow processes and signoffs
- Easily access requirements documents
- Minimize end-user labor costs with ergonomic design
- Diminish end-user utilities costs with efficient equipment design
- Support innovative packaging design with powerful, flexible 3D design tools
- Improve customer service by tracking as-maintained configurations

[www.siemens.com/solidedge](http://www.siemens.com/solidedge)

## Solution focus

**Solid Edge** for 3D part and assembly design using synchronous technology accelerates equipment design, speeds revisions and improves the re-use of previous designs

**Solid Edge Simulation** for digital validation of critical components reduces the need to create physical prototypes, lowers material and testing costs and improves reliability

**Solid Edge Manufacturing** for definition of accurate machining, fabrication and assembly processes improves overall manufacturing efficiency

**Solid Edge Design Management** improves the overall efficiency of equipment design projects and ensures that accurate product data, specifications and requirements documents are available to all

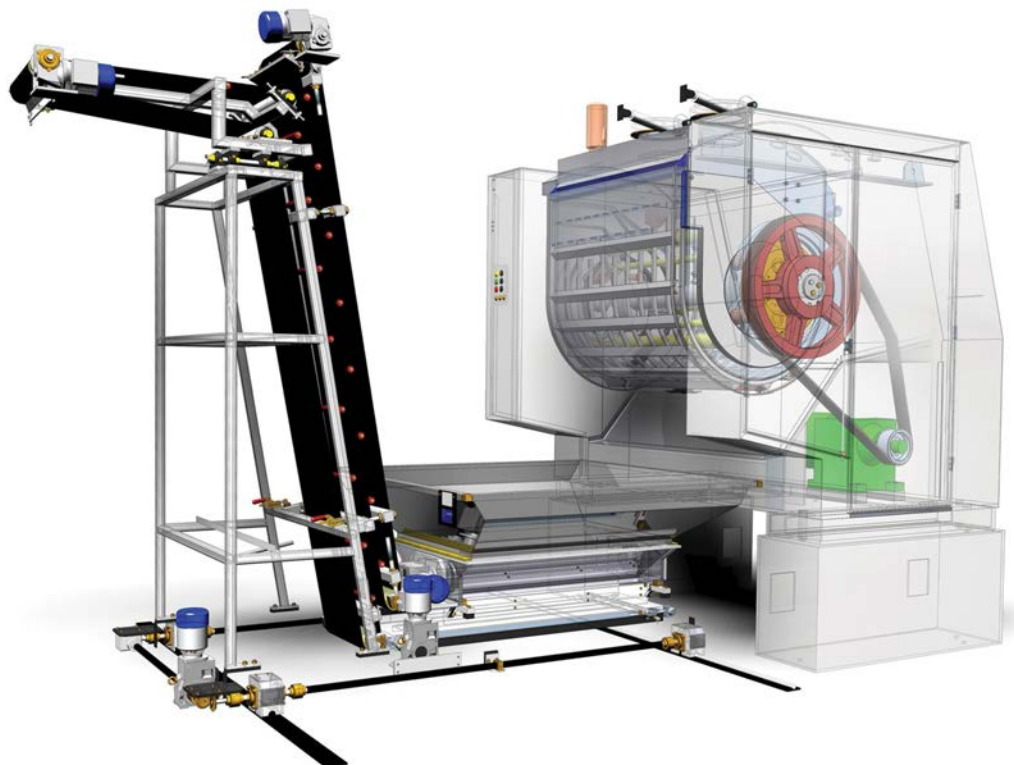
an opportunity for equipment manufacturers to extend their machine refurbishment business

- Facing increasing pressure to reduce the environmental impact of running their equipment. Energy is a major cost for food producers. The IFPE industry is responding with new technologies that reduce power consumption

### Solutions for equipment development and manufacturing

Solid Edge software accelerates food processing equipment design. With Solid Edge, manufacturers react faster to business pressures enabling them to increase market share and profitability by:

- Designing custom equipment faster using product configuration tools that facilitate the re-use of existing components and subassemblies
- Controlling rising material and energy costs by optimizing equipment design using 3D part and assembly modeling. Solid Edge enables users to optimize all aspects of equipment design from frame structures and sheet metal housings to electrical cable routing, and facilitates the use of integrated simulation tools to save on material costs
- Ensuring compliance with industry regulations by enabling the implementation of electronic workflows for design changes and release to manufacturing, and making customer requirement documents and industry regulations easily accessible
- Delivering ergonomically designed equipment by modeling the complete machine in 3D and validating that access for daily operation, cleaning and maintenance meets the highest industry standards
- Downloading 3D models of catalog components from extensive cloud-based supplier libraries to minimize manufacturing costs and maximize fit and function
- Improving packaging by creating 3D models of both packaging and equipment and validating how they interact, as well as creating high-quality rendered images to support sales and marketing
- Keeping track of as-delivered and as-maintained configurations to improve after-sales service and accelerate redesign of existing equipment
- Reducing running costs of equipment by kinematic analysis of moving parts to improve operation efficiency and specify the correct size for motors and actuators



### Realizing important benefits

Designers and engineers using Solid Edge with synchronous technology achieve significant benefits, including:

- Cutting equipment design time by 50 percent
- Replacing physical prototypes with virtual prototypes
- Increasing capacity for new product development by 30 percent
- Reducing manufacturing time by 20 percent
- Cutting manufacturing costs by 20 percent
- Reducing errors and part interferences in manufacturing

For more information on this offering, see [www.siemens.com/plm/solidedge/machinery](http://www.siemens.com/plm/solidedge/machinery)

### About Siemens PLM Software

Siemens PLM Software, a business unit of the Siemens Industry Automation Division, is a leading global provider of product lifecycle management (PLM) software and services with nine million licensed seats and 77,000 customers worldwide. For more information on Siemens PLM Software products and services, see [www.siemens.com/plm](http://www.siemens.com/plm).