

INSIGHT ENGINEERING SYSTEMS PVT. LTD.

ACCELERATING INDUSTRIAL CLEANING SYSTEM
DEVELOPMENT WITH SOLIDWORKS PROFESSIONAL



By moving to SOLIDWORKS Professional 3D software, Insight Engineering Systems has accelerated design, improved quality, and boosted throughput of its industrial cleaning, electroplating, and material handling systems.



Insight Engineering Systems Pvt. Ltd.

Challenge:

Improve the handling of large assembly designs to meet market demands for faster development of more complex industrial cleaning, electroplating, and material handling automation machinery.

Solution:

Implement SOLIDWORKS Professional design software.

Benefits:

- Shortened design cycles by 30 to 40 percent
- Grew annual project turnover by 20 percent
- Increased throughput by 20 percent
- Improved design accuracy and reduced design errors

Founded in 1997 by a group of engineers with extensive experience and expertise in the development of industrial cleaning, electroplating, and material handling systems, Insight Engineering Systems Pvt. Ltd. has grown to become a leading manufacturer of world-class special-purpose cleaning and surface treatment machines. The company's systems are used by multinational corporations with applications ranging from a chocolate mold cleaning machine for Cadbury to a trichloroethylene cleaning system for capacitor can cleaning for the ABB Group.

Insight Engineering Systems is committed to meeting its customer's quality requirements and using environmentally friendly cleaning solvents. The machinery manufacturer specializes in the development of customized, automated cleaning machines and has innovated chrome-electroplating systems that produce less effluent discharge.

Until 2013, Insight Engineering Systems utilized AutoCAD® 2D design tools to develop its machinery. However, as the complexity of the firm's machine designs increased, the effort required to produce detailed manufacturing and assembly drawings in 2D became onerous and communication with customers became difficult, according to Senior Design Engineer Ganesan Balamurugan.

"Our machines require the development of large assemblies, which became increasingly time-consuming to do in 2D," Balamurugan explains. "We decided to move to a 3D development platform to improve our handling of large assemblies, develop machine designs more quickly and accurately, and boost throughput."

After evaluating 3D design solutions, Insight Engineering Systems chose to transition from 2D tools to SOLIDWORKS® Professional 3D development software. The company selected SOLIDWORKS because it's easy to use and provides industry-leading large assembly design capabilities.

"We needed a 3D design solution that allowed us to more thoroughly visualize large assembly designs, so we could eliminate the part collision and interference issues that added costly delays and rework to production," Balamurugan points out. "With SOLIDWORKS design visualization, dynamic motion, and interference checking capabilities, we found the optimal solution for resolving our design and assembly challenges.

"When we recommended moving to a 3D platform, management wanted to know how it would benefit the company, so we proposed using SOLIDWORKS on the development of a machine for an electroplating and treatment line," Balamurugan recalls. "The success of that project convinced management to fully invest in the SOLIDWORKS 3D solution."

"By saving time, improving accuracy, and eliminating design errors, we can take on more projects in the same amount of time. The ability to work more accurately and efficiently benefits both our internal operations and overall business trajectory. With SOLIDWORKS, design, production, and assembly go more smoothly, and the higher level of quality that we produce leads to greater customer satisfaction and business growth."

— Ganesan Balamurugan, Senior Design Engineer

FASTER DESIGN, GREATER ACCURACY

Since upgrading from 2D design to SOLIDWORKS Professional 3D product development software, Insight Engineering Systems has shortened its design cycles by 30 to 40 percent while simultaneously improving large assembly accuracy and reducing production and assembly rework. "With SOLIDWORKS software, we can create complete 3D machine designs in less time while avoiding the many retrofits and workarounds that were a fact of life using AutoCAD," Balamurugan stresses.

"We've realized productivity benefits at every phase of our process: from initial proposal and concept development through detailed design, production, and assembly," Balamurugan continues. "Using SOLIDWORKS Professional software helps us improve our handling of large assemblies at every step along the way."

INCREASED THROUGHPUT SUPPORTS GROWTH

The industrial cleaning and electroplating machine manufacturer has leveraged the productivity gains afforded by SOLIDWORKS Professional software to increase its development throughput by 20 percent. With the ability to handle more projects in the same amount of time, Insight Engineering Systems has seen its annual project turnover grow by 20 percent.

“By saving time, improving accuracy, and eliminating design errors, we can take on more projects in the same amount of time,” Balamurugan says. “The ability to work more accurately and efficiently benefits both our internal operations and overall business trajectory. With SOLIDWORKS, design, production, and assembly go more smoothly, and the higher level of quality that we produce leads to greater customer satisfaction and business growth.”

IMPROVING SALES WITH EDRAWINGS

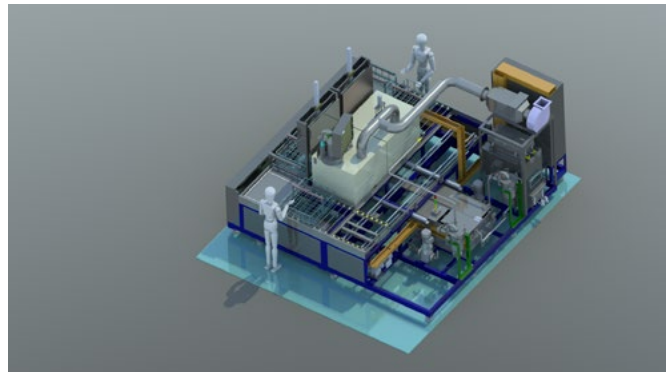
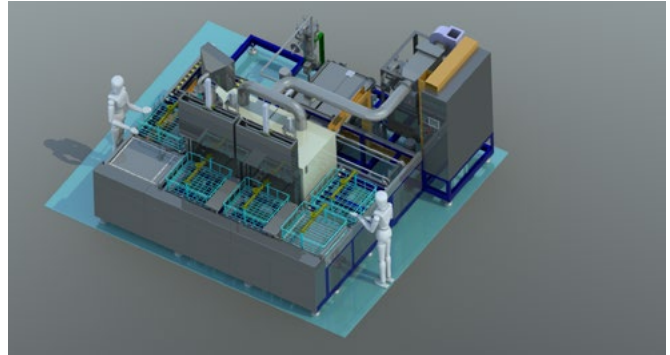
In addition to streamlining and accelerating machine development, SOLIDWORKS Professional software is helping Insight Engineering Systems improve its sales and marketing function. The software has helped the company enhance the quality of its proposals because communication is clearer and more effective in 3D. For example, Insight Engineering Systems sales representative utilize SOLIDWORKS eDrawings® files to supplement and support machine proposals.

“Since moving to SOLIDWORKS 3D, eDrawings have become very useful to our sales team for communication,” Balamurugan says. “Our proposals are not only more clear and detailed, they are also better received by prospects. In short, the move to the SOLIDWORKS 3D solution has helped us operate and grow our business more effectively.”

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Using SOLIDWORKS Professional has improved visualization of Insight Engineering Systems' special-purpose cleaning and surface treatment machines, enabling the company to energize its sales effort and stimulate business growth.

Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the 3DEXPERIENCE® Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 190,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.



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