KINDER DESIGN INC.
INNOVATING AN ADJUSTABLE STAND-UP DESK WITH SOLIDWORKS PREMIUM

Kinder Design not only relies on SOLIDWORKS design and analysis tools to provide efficient, cost-effective solutions to its clients, the product development consultancy also leveraged SOLIDWORKS software to develop its own innovative product: the Lift Top adjustable desktop table, which enables users to comfortably work in either a sitting or standing position.

LIFT TOP

EST. 2015

Challenge:
Leverage 3D design and simulation tools to efficiently and effectively support engineering services provided to clients as well as to drive innovative product development.

Solution:
Implement SOLIDWORKS Premium design and analysis software.

Benefits:
- Innovated Lift Top adjustable desk design
- Cut development time by 50 percent
- Reduced prototypes by 75 percent
- Automated the design process

Kinder Design Inc. is a leading design and engineering services consulting firm based near Toronto, Canada. Owner and Mechanical Designer Tim Chung founded the company following a decade-long career as a mechanical engineer, during which he developed heavy equipment and automated machinery. Today, Kinder Design provides mechanical design and engineering services for product development and manufacturing clients in a wide range of industries.

When Chung founded Kinder Design, he realized that choosing the right 3D design platform would be critically important to the success of the business. "During the early stage of my engineering career, I mainly used 2D design packages, such as AutoCAD® and CADKEY®," Chung explains. "Although I loved doing mechanical design, I also found working with 2D tools to be tedious and laborious, especially when generating and updating design views and building bills of materials [BOMs]."

"As a consulting engineer, I need to find ways to save time and automate the design process, such as generating BOMs automatically," Chung stresses. "With SOLIDWORKS® 3D design software, I am able to complete my work quickly and efficiently. SOLIDWORKS is also the most commonly used 3D package in the areas and industries for which I consult, so the decision to use SOLIDWORKS was easy to make."

Kinder Design standardized on SOLIDWORKS Premium design and analysis software because it's easy to use, provides advanced design visualization tools, and includes integrated finite element analysis (FEA) simulation capabilities. "I've found that whether I'm designing an assembly, playing around with different approaches, or running a simulation, it's easier and faster to do it in SOLIDWORKS," Chung says.

STAND OR SIT WITH LIFT TOP DESK
Kinder Design not only uses SOLIDWORKS to provide efficient, cost-effective solutions to its clients, the product development consultancy also utilizes SOLIDWORKS to develop its own innovative products. For example, the firm recently introduced the Lift Top adjustable desktop table, which enables users to comfortably work in either a sitting or standing position, and effortlessly move back and forth between standing and sitting.

"As a heavy CAD user, I've never really liked spending hours sitting down all day," Chung explains. "When medical studies began showing that sitting at a desk all day long isn't good for someone's health, I got the idea of creating an adjustable desktop table that you could pop up to stand or lower to sit without having to move the laptop or the documents on a desk, and the Lift Top was born."

"Using SOLIDWORKS Premium software, I was able to develop a lightweight, incredibly compact minitable that sits atop a desk," Chung continues. "I also invented an entirely new mechanism to support the huge range of motion required to easily raise the table up to the perfect height for standing. People's heights vary widely, so the Lift Top had to be highly adjustable and feature 19 different height adjustments to alter its positional height. I used SOLIDWORKS capabilities to a far greater extent on this project, and succeeded in creating an innovative, patent-pending design, which is probably the most difficult thing I've ever designed."

> "With SOLIDWORKS Premium, I can do most of the prototyping virtually, which allows me to make changes, try different approaches, and validate all of them in software, instead of building and testing costly prototypes."
>
> — Tim Chung, Owner and Mechanical Designer

REDUCING PROTOTYPES WITH SIMULATION
During development of the Lift Top, Chung needed to make the product as portable and lightweight as possible, so users could take it with them wherever they go. Unlike other stand-up desks, the Lift Top is small and light enough for users to carry to the coffee shop, home, or wherever they choose. To make the product as light as possible while maintaining strength, Chung took advantage of SOLIDWORKS Premium design simulation tools to optimize the design. He was able to cut the number of prototypes from 16 to 4 — a 75 percent reduction.

"With SOLIDWORKS Premium, I can do most of the prototyping virtually, which allows me to make changes, try different approaches, and validate all of them in software, instead of building and testing costly prototypes." Chung notes.

CUTTING DEVELOPMENT PROCESS IN HALF

Because Chung used SOLIDWORKS Premium software to develop the Lift Top adjustable desktop, he was able to automate the design process and reduce development time by 50 percent. "Built-in checks and automated capabilities—like interference checks and the hole-alignment feature—are what make SOLIDWORKS such a powerful tool," Chung says.

"Whether I'm using RealView to show visuals of a machine design or Simulation to validate the Lift Top design, SOLIDWORKS provides the tools that I need to develop products quickly and easily," Chung adds.

Focus on Kinder Design Inc.
VAR: CAD MicroSolutions, Etobicoke, ON, Canada
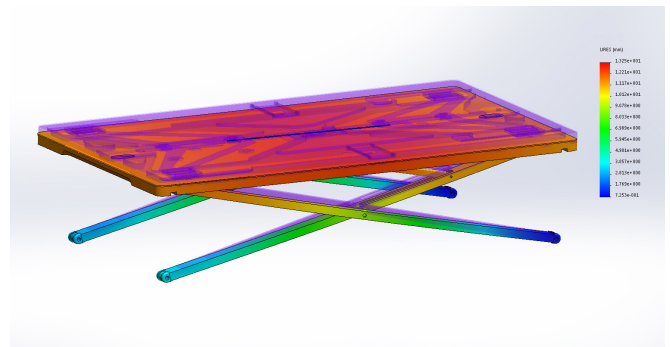
Headquarters: 6-2400 Dundas St. W. Suite 221
Mississauga, ON L5K 2R8
Canada
Phone: +1 416 825 8837

For more information
www.kinderdesign.ca

Using the design and simulation capabilities of SOLIDWORKS Premium software, Kinder Design optimized the Lift Top adjustable desktop table design, reducing prototyping cycles and cutting the development time in half in the process.

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

Dassault Systèmes, the **3D**EXPERIENCE® 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 210,000 customers of all sizes in all industries in more than 140 countries. For more information, visit **www.3ds.com**.

3DEXPERIENCE®

DASSAULT SYSTEMES | The **3D**EXPERIENCE® Company

Americas
Dassault Systèmes
175 Wyman Street
Waltham, Massachusetts
02451-1223
USA

Europe/Middle East/Africa
Dassault Systèmes
10, rue Marcel Dassault
CS 40501
78946 Vélizy-Villacoublay Cedex
France

Asia-Pacific
Dassault Systèmes K.K.
ThinkPark Tower
2-1-1 Osaki, Shinagawa-ku,
Tokyo 141-6020
Japan