

# case study

## The Challenge

As a leader in the medical and industrial equipment market, KeyMed realised it needed to move to an integrated 3D CAD package that would allow it to increase productivity of its diagnostic endoscopy systems and continue to meet market demand.

## The Solution

KeyMed was drawn to SolidWorks because of its superior modelling capabilities but soon realised there were many other benefits. "We make a lot of sheet metal components and SolidWorks has a very good sheet metal facility. It also allows us to do complicated models for plastic moulding. With more and more companies using SolidWorks, we are able to send native files to external suppliers, which can be used for setting up machine tools or creating mould tools."

Medical design technology specialist KeyMed has standardised on SolidWorks 3D design software to streamline the product development cycle of its life-saving endoscopy equipment.

## SolidWorks 3D speeds time to market for KeyMed

UK-based KeyMed, a subsidiary of Olympus Optical Corporation, provides ancillary equipment for Olympus's range of endoscopy systems used for diagnostic examination and surgical procedures. Its product range includes workstations, cleaning equipment, sterilisation cases and vacuum pumps.

As a leader in the medical and industrial equipment market, KeyMed realised it needed to move to an integrated 3D CAD package that would allow it to increase productivity and continue to meet market demand. Medical research and development manager, Ian Hallett, is responsible for all of the medical products that come out of KeyMed. His team comprises 13 design engineers and two technicians. They have been using SolidWorks 3D design software for seven years.

The move to 3D came out of a need to grow KeyMed's design ability as Hallett explained: "Our products are complex in terms of shapes and mouldings and our previous

CAD software, CADD5, was not flexible enough to model all the surfaces. The industrial team was using Solid Edge but the medical team felt that SolidWorks was a better product with superior modelling capabilities. In the end we swapped out the Solid Edge seats and we now have 30 seats of SolidWorks."

### Cure-all solution

Hallett was originally drawn to SolidWorks because of its 3D design capability but soon realised there were many other benefits. "We make a lot of sheet metal components and SolidWorks has a very good sheet metal facility. It also allows us to do complicated models for plastic moulding, which again we do a lot of. The other advantage is that more and more companies are using SolidWorks so we are able to send native files to external suppliers, which can be used for setting up machine tools or creating mould tools. They take our model and use it to lay out cutting parts for the CNC machines."

Internally KeyMed has expanded its use of SolidWorks beyond the engineering group. "One of the things we wanted to do was integrate our CAD system with other departments within KeyMed," explained Hallett. "The technical publications group is responsible for writing the instruction manuals that accompany our products. Before SolidWorks they would have to wait until we had finished a product before they could begin work on the manuals



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Ian Hallett,  
medical research and  
development manager,  
KeyMed

thus delaying the product. These days they use CAD images and can start writing the manuals from a very early stage in the design process."

The company has also installed SolidWorks in its manufacturing facility where it is used for setting up production lines. "SolidWorks give the manufacturing team a head start as well," said Hallett. "They are able to pull CAD models into their electronic method sheets which they can now update very quickly. It's all about time to market. That is why we have spread SolidWorks across the company."

### Seeing is believing

Another department that is benefiting from 3D data is sales and marketing. "We render the CAD models and import them into Photoshop to create powerful visuals so that customers can get an idea of what the final product will look like which is very useful from the sales and marketing point of view," explained Hallett. "We often put rendered CAD images into our brochures which really helps when we're preparing for a product launch. SolidWorks has been pushed out to every area we can think of."

KeyMed also saves time by uses SolidWorks's eDrawings to email designs to its parent company in Japan, replacing meetings that can add months to the product development cycle; and by using COSMOSWorks for finite element analysis to calculate how products will perform under shock and loading vibrations.

### Cosmetic surgery

The medical device technology market is highly competitive and there is a pressure to apply high standards of design and styling. "The equipment we sell is in a relatively low volume market but our customers still expect to have the nice



finish, nice mouldings and all the outward signs of quality," commented Hallett. "Part of that is because of the Olympus brand name, which is the Rolls Royce of the endoscopy world. It's seen as the number product on the market and SolidWorks guarantees that we achieve the right appearance."

### Good prognosis

When asked if he could do his job without SolidWorks, Hallett laughed: "I wouldn't want to. There is incredible power in being able to show somebody the whole assembly on screen and in fact, if the CAD files are mated correctly you can actually manipulate everything and show people how a product will move. This is something we couldn't have done before SolidWorks."

SolidWorks has greatly increased KeyMed's productivity, shortening the product design process, and reducing design errors.

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