

GILBERT GILKES & GORDON LTD

CASE STUDY

Gilbert Gilkes & Gordon Ltd is the UK's longest-standing independent pump specialist. Recent investment in 3D imaging software has further strengthened the company's operations. Andrew Conner, Senior Design Engineer for their successful Engine Cooling Pump division, explains, "We have combined our extensive pump knowledge with SolidWorks latest 3D computer-aided design software, and this is ensuring that the most competitive pump solutions are available quickly to service our growing OEM customer base."

Gilbert Gilkes & Gordon Ltd has been using 3D modelling for some time to help visualisation of their pumps, but still need 2D drawings for manufacturing their often small-to-medium batch sizes for customers. The design team found they needed to combine their 3D software program Pro Engineer with 2D AutoCAD to achieve the required manufacturing drawings from models. Conner confirms, "We wished to simplify our drafting procedures and find a single software package to meet our needs and save time and money."

After several months of trials with live projects they concluded that SolidWorks best met their requirements, by virtue not only of its excellent 3D modelling capabilities, but also its ability to easily and quickly produce 2D manufacturing drawings. Conner continues, "We have only been using SolidWorks for nine months, but with the support provided by NT CAD/CAM the results are already tremendous: in particular, the time taken from pump concept to delivery has been reduced by 50%."

One of the preliminary tasks for SolidWorks is to help the design team take an initial pump selection and evaluate potential fit into an often restrictive space envelope for the customer's new engine. With the aid of 3D modelling the pump casing and interfaces can be designed to suit each customer and the 3D images can then be used for presentation purposes. Conner says, "The visual clarity of the product enables the customer to understand our proposal and strengthens confidence in the product fit, resulting in further orders for the sales team."

SolidWorks Cosmos Express enables the company to test the strength of new impeller and pressure-casing designs in-house. Conner adds, "This programme has eliminated lengthy spreadsheets and calculations. The finalised 3D model can be sent to patternmakers, which means discussion and generation of the pattern is easier and the design detail is maintained."

The production of 2D drawings for manufacture is now far more efficient and 3D images can also be included on the drawing. Conner says, "It's an excellent aid to the machinist and, again, is all part of working more efficiently. Another benefit is that all prototype assemblies are now right-first-time, eliminating costly rework."

Conner summarises by highlighting the advantage of having NT CAD/CAM's Knutsford office nearby: "Training was carried out in groups to ensure continued design office service to our customers. Additionally, NT CAD/CAM's personnel have been key in helping us to develop our systems capabilities. We currently have three SolidWorks Office floating seats and soon we will initiate a Cosmos upgrade and a new PDM System. Support has been readily available and their knowledge is benefiting us enormously."