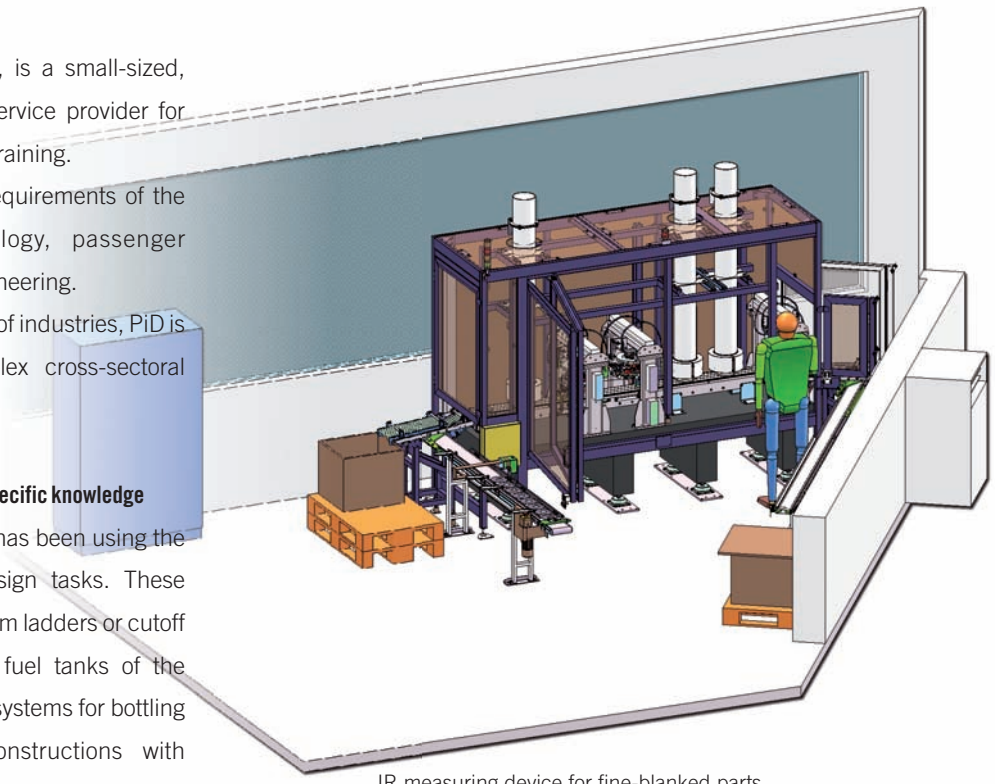
Cross-sectoral working in custom machine building

Flexible 3-D modelling for complex projects

No matter in what industry you work - the ultimate key to success is an efficient 3-D design engineering process providing a high degree of planning safety while reducing cycle times. Complex projects therefore require a CAD software that allows its users to work across industries and supports the appropriate industry-specific automatisms.

The PiD AG in Zug, Switzerland, is a small-sized, highly professional and flexible service provider for Consulting, Engineering and CAD training.
PiD is equally familiar with the requirements of the food industry, micro technology, passenger transportation, or mechanical engineering.
As its customers are from all kinds of industries, PiD is regularly confronted with complex cross-sectoral projects.



IR measuring device for fine-blanked parts

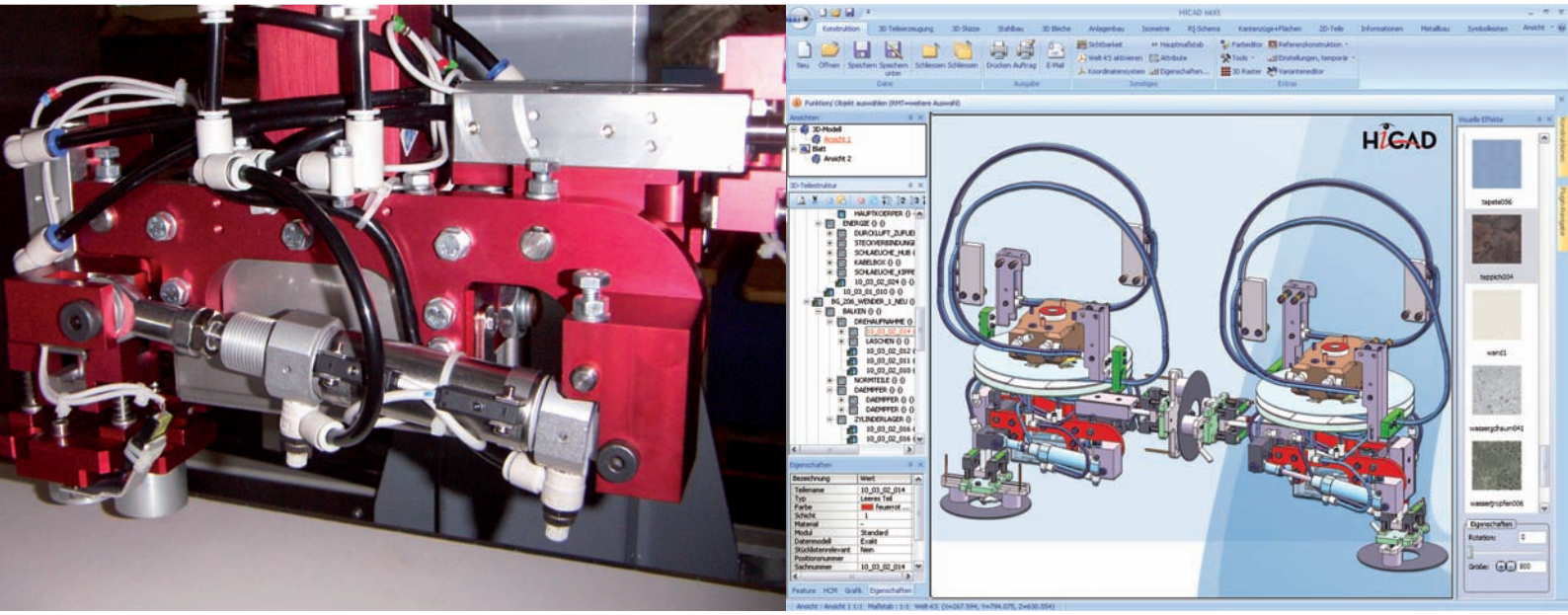
Mixed constructions require industry-specific knowledge

Since its foundation in 1997, PiD has been using the CAD software HiCAD for its design tasks. These include the production of aluminium ladders or cutoff machines for the processing of fuel tanks of the Ariane rockets, as well as feeding systems for bottling plant components or pipe constructions with foundation elements. All these different projects have one thing in common: They all require more than just the basic functions of a CAD system and demand a cross-sectoral approach. Silvio Manzoni, co-owner of PiD, explains: "As a flexible engineering office we are expected to meet the ever-changing requirements of our clients. Of course, we can only succeed if we possess the suitable software. For instance, we must be able to rapidly and efficiently fit beams, plates and standard parts in our mixed constructions. One of the greatest advantages offered by HiCAD is the possibility to perform such tasks without having to switch applications."

» IN BRIEF

PID AG

- Industry: Engineering Services
- Software: HiCAD
- Products: Custom machine building
- Location: Zug, Switzerland
- www.pid.ch



Detail: IR measuring device for fine-blanked parts

One concrete example from practice is the infrared measuring device displayed above. This device was designed to perform a dimensional 100%-check of fine-blanked parts for the automotive industry. The check was previously made visually, which could however not guarantee the high accuracy required by the Quality Management. It was therefore decided to integrate a measuring device into the existing production plant, which was a very demanding task, considering the narrowness of structures and interfering ground vibrations caused by vehicle access. The fine-blanked parts with a diameter of 60 - 140 mm and a thickness of 2-10 mm are passed at secondly intervals on a magnetic conveyor belt through three measuring stations. The problem of the ground vibrations was solved by mounting the entire measuring device onto a 2t granite table.

Extra flexibility through free modelling

Besides the industry-specific functionality enabling the creation of the entire model including boltings, beams, plates etc. in one file, it was another aspect that was decisive for a successful execution of the project: "Thanks to the possibility to work flexibly with free modelling and features we were enabled to compose and process the required different assemblies and purchased parts very quickly. Especially in the field of custom machine building and in close cooperation with partners, the free modelling approach is an absolutely essential element of the process." explains Silvio Mazoni.

Creative solutions from Switzerland, realised and implemented by software made in Germany - a textbook example of a successful cooperation!