



Racks and enclosures from the Bosch Rexroth aluminum profile modular system

Online configuration as a competitive advantage

Since 2007, Bosch Rexroth has been offering its extensive range of assembly technology products via a project planning platform based on the P'X Industry Solution in order to achieve shorter delivery times and higher customer satisfaction. The advantages have been extended even further with a web configurator also developed by Perspectix. A dual strategy that massively reduces the effort for suppliers thanks to the same product logic and database.

In addition to hydraulics, electric drive and control and gear technology, Bosch Rexroth also offers its customers linear and assembly technology, including software and interfaces to the Internet of Things. The Assembly Technology division creates intelligent, freely configurable production and transport systems that cover all areas of industrial assembly, from manual assembly to fully automated systems. With a comprehensive range of components from the four product groups Manual Production Systems, Transfer Technology, Chain Conveyor Systems and the Basic Mechanic Elements - an aluminum profile



Protective devices and enclosures quickly configured in the MTpro Online Designer

construction kit consisting of over 1,500 individual parts and more than 100 profile cross-sections - complete transfer and handling systems can be individually designed and implemented to meet specific applications. These products can be found in manufacturing processes in all industries, from food and packaging to medicine, pharmaceuticals and cosmetics, as well as in mechanical engineering, automotive or electrical and household appliances.

Differentiation from the competition

Because the products and services of various suppliers of assembly automation have become increasingly similar, Rexroth focused at an early stage on competitive advantages such as short delivery times or customer-oriented planning and project engineering, in addition to developing innovative, flexible systems. When it comes to speed and quality, the company sets a high bar - but is always working on further improvements. As early as the 1980s, for example, the company developed a product configurator based on a CAD system with functions for automated drawing creation, applications for design and technical calculations, and parts list and quotation costing. But sales staff continued to rely on designers for layout creation because of the CAD skills that were often required.

CAD-independent configuration

"For this reason, we wanted a new, CAD-independent

software for which no specific knowledge is required, but which nevertheless does not cause any friction losses towards the design," explains Dr. Joachim Brettschneider, project manager at Bosch Rexroth. In the P'X Industry Solution from Perspectix, an end-to-end Configure Price Quote (CPQ) solution for complex product systems, the missing building block for the new MTpro project planning platform was found. It comprises modules ranging from the CAD product catalog and automated parts list calculation and quotation generation to 3D visualized plant design and configuration in the MTpro Layout Designer.

The Perspectix solution enables intuitive planning and fine-tuning of entire plants from Rexroth's product range without any special CAD knowledge. All basic items are predefined with the real parameters and stored as three-dimensionally visualized components in a product knowledge base. At the click of a mouse, the user assembles the individual components according to the modular principle and adapts them conveniently. For error-free project planning, the P'X Industry Solution supports the user with a comprehensive set of rules that includes the complex shoring logic, all product dimensions and the necessary accessory information. Attractive 3D visualization, freely swiveling camera views and extremely detailed displays make it easier for even the inexperienced to find their way through the complexity of the plants.

About Bosch Rexroth

As a leading global supplier of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe motion in machines and plants of all types and sizes. The company bundles worldwide application experience in the market segments of mobile applications, plant engineering and construction, and factory automation. With intelligent components, customized system solutions as well as services, Bosch Rexroth creates the conditions for fully networkable applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology, and linear and assembly technology, including software and interfaces to the Internet of Things. With a presence in more than 80 countries, over 29,600 associates generated sales of around 5.2 billion euros in 2020.



Production line with a transfer system from Bosch Rexroth.

Equipment planning ten times faster

Since 2007, the end-to-end solution has been used from conception to design for the entire range of aluminum profile building blocks, manual production systems, and automated chain conveyor and transfer systems. Of the total of around 4000 components, about half can be configured to customer specifications. Several thousand users worldwide, in their own sales departments, at sales partners and customers, use the Layout Designer developed with Perspectix for this purpose. "Project planning time and effort have been reduced by about 90 percent," explains Martin Doelfs, Head of Engineering and Sales Transfersystems at Bosch Rexroth AG. "At the same time, customers automatically receive error-free and complete parts lists, which in the case of our systems can contain several hundred items plus accessories."

Digitization from design to assembly

Design also benefits from the solution. The combination of CAD libraries with Perspectix logic reduces the configuration of individual assemblies to what is absolutely necessary without restricting the variety

of product variants available. However, the close link to the MTpro CAD library also allows the data to be made available for export once the plant has been designed. Designers thus receive exact 3D CAD models for further processing. The self-explanatory and CAD-independent plant design by the technical sales department also relieves the designers and allows them to concentrate on the essential tasks.

The long way to the web

After more than ten years of successful, worldwide use of the Windows version, Bosch Rexroth wanted to take the step to online configuration on the World Wide Web. There were good reasons for this: Larger companies have strict restrictions on the installation of third-party software, which limits the use of MTpro by end customers. Lack of administrator rights and only sporadic use mean that outdated versions and data are often used. "A web configurator, on the other hand, provides up-to-date product data 24 hours a day, seven days a week," says Dr. Brettschneider. What could be more obvious than to win the previous provider for the new project as well? "We have

Weblinks

More information at
www.boschrexroth.com

Link Online configurator:
www.boschrexroth.de/mtpro



Production line planned with the MTpro Online Designer

had good experience with Perspectix in a trusting collaboration that we would like to continue,” says Dr. Brettschneider. “In doing so, we can continue to use the same CAD models, product knowledge and mapping logic developed over 13 years.”

Dual strategy with the P'X Web configurator

Thus, starting in 2018, the MTpro Online Designer was developed as a customized variant of the Perspectix web configurator, which additionally includes project management and an export option for the CAD files. In 2021, the new tool was initially rolled out and tested internally. Since 2022, the environment with the entire product range has been available to Bosch Rexroth's sales department, sales partners, and customers. The software supports the planning and design of assembly systems as well as the selection, configuration, design and ordering of Bosch Rexroth products. Users can access up-to-date product knowledge around the clock in the particularly user-friendly interface. “We save customers and partners installations and regular updates and can make new products available immediately after com-

pletion,” says Dr. Joachim Brettschneider. “As a further advantage, our sales department can immediately exchange plans with customers online. The improved collaboration shortens project lead times.” Now Bosch Rexroth uses both solutions in parallel and can, for example, edit project files either on premise or online. This is because both Perspectix solutions share the same database. This saves duplication of work when introducing new products, simplifies data maintenance and reduces internal effort by about half. “The addition of Online Designer to our project planning software safeguards our investment in Perspectix technology, facilitates and accelerates the introduction of new products, and expands our consulting capabilities,” concludes Dr. Brettschneider.

About Perspectix

Perspectix in Zurich implements sophisticated software solutions for technical sales and store planning. Since its foundation in 1996, the company has continuously developed into the leading technological solution provider for sales and project planning of products with many variants. Users of the P'X Industry Solution benefit from experience in complementary user industries: Engineering, plant engineering, electrical engineering, furnishing, store fitting, warehousing and logistics systems. The P'X Retail Solution provides users with a customized solution for store planning, product range design and store evaluation.