



Interview

# From switches to systems.

Interview with project developer  
Christian Pokrandt, engineer

*Christian Pokrandt has worked for the company for years and knows the company's processes like no other. He works together with his colleagues directly with customers towards implementing operating designs.*

**Mr. Pokrandt, how would you describe development at Griessbach GmbH in a few words?**

*Briefly, our company covers the whole development process from manufacturing switches to supplying entire HMI systems. This has not always been a straight path by any means. It's taken us bouts of production transformation and innovation to get where we are today.*

**I'm sure you've seen some interesting developments over the years. Could you name one example that you found particularly memorable?**

*One of my most lasting impressions was definitely the difficult restructuring phase.*

» *These were turbulent times.* «

*The early 1990s saw our company, then VEB Kompaktbauelemente Luckenwalde, at a crossroads. These were turbulent times with potential investors inspecting our workshops at Luckenwalde. At the time, we were manufacturing switches on commission for a leading electronics company. We'd already been manufacturing switches, contacts and terminal connectors for years even then; we had staff experienced in the disciplines necessary for switch manufacturing from injection moulding and stamping to toolmaking. We came into business with Richard Griessbach Feinmechanik GmbH, who supplied the necessary small turned parts for terminal*

*connectors and switches. Our good business relationship finally culminated in us merging into the Griessbach group in 1993.*

**How did you bridge the gap from switches to systems?**

*We already satisfied the technical requirements for assembling electronic units and had worked on developing keyboards for a time in the 1980s, so the transition from switch to keyboard to HMI system was a logical path to take. Our first customers manufactured printing presses, plastics processing machines and laboratory centrifuges. These are still regular customers, but we have since attracted major companies in construction and agricultural engineering as well as rail vehicles and mechanical engineering.*

» *Development of the Griessbach illuminated pushbutton* «

*The Griessbach illuminated pushbutton that we developed in 1999 took us a great step forward. Our aim was to optimise costs and improve illumination options for our customers. This ushered in new opportunities in product development. Our room for manoeuvre in mechanical and electrical properties widened. We can now adjust actuation force, pushbutton travel and a broad variety of illumination options to customer specification in operating design.*



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**That means you work with customers on new solutions and then implement them straight off the bat?**

*Absolutely. Like the original illuminated pushbutton, many of our new developments come directly from customer requirements. We often find ourselves redesigning a layout according to customer specification at the conference table after presenting it to a customer.*

» *Disciplines and knowhow in-house.* «

*Ideas often develop in the customer meeting that we can solve quickly and easily as we already have the necessary specialists and knowhow in-house. We implement these ideas for customers to gain competitive advantage on the market, but we also continue developing on our own Griessbach solutions.*

**How do you manage to stay competitive?**

*We continuously work on the detail for cost-optimised production. Apart from technical implementation, solutions need to be cost-effective. We create new solutions for new challenges. This entails, for example, cutting the number of LEDs and designing small diffuser panels for installation in keycaps to keep the light distribution as even as it was before. This solution saves material and therefore also production costs, and we have included it in all our HMI systems.*

*We also keep almost the whole development and manufacturing chain in-house as this allows us to provide complete custom solutions to specification even in small production runs. This ranges from PCB assembly to front panel manufacturing and cabling to membrane printing and final assembly as well as hardware and software development. We also use state-of-the-art manufacturing technology to optimise production costs.*

**Are there any other factors that play a role?**

*Ability to innovate is another important point. We always strive to develop new solutions to help enhance our customers' own market position. We have managed to develop a Hall switch design that is safe from external field interference. We've already implemented this solution with minimum effort and without the usual protective measures against external magnetic fields, such as shielding or 3D sensor equipment against influences.*

» *New solutions to help optimise our customers' own market position* «

*This technology is especially beneficial in HMI systems to be installed in vehicles used for construction, agriculture, shop floor and handling – environments constantly exposing them to external field interference. The benefits of our sensor design are obvious – protection from external field interference without complex additional shielding. Switching solutions can also be designed for redundancy with minimum effort while also keeping the number of Hall switch cycles high given the corresponding mechanical setup. It always comes down to the application at hand. For example, we have developed a design that will support switches integrated into enclosed operation panels for use in HMI systems on construction equipment. This eliminates the risk of ingress over the lifetime of the equipment. We haven't begun to exhaust the variety of potential applications.*

*Don't hesitate to ask us about our technologies and opportunities!*

**Griessbach GmbH**

Im Biotechnologiepark · 14943 Luckenwalde  
Tel. +49 (0) 3371 62620 · Fax +49 (0) 3371 62629 7  
www.griessbach-luckenwalde.de

**griessbach** 