



Practical test at 85 meters high: **The Bosch X-Lock system saves valuable time in the Stuttgart-Ulm rail construction project**

March 21, 2019
PI 10897 PT MS

“Soon, high-speed trains will rush across this valley in just seven seconds. When we have completed the 500-meter bridge, it will be a pioneering piece of engineering,” explains Manfred May, Construction Manager at Max Bögl Group, while looking across the Filstal valley to the Steinbühl tunnel. He is standing 85 meters above the ground, on the third section of the Filstalbrücke, a bridge which is under construction. Seven further sections of the bridge still have to be built before the reinforced-concrete structure touches the other side – and then a second supporting structure will follow. “The Filstalbrücke consists of two single track bridges, running in parallel across the valley and are 30 meters apart of one another. This separation is determined by the tunnels,” the Construction Manager explains. He goes on to clarify what makes this section of the Stuttgart-Ulm rail project so unique: “The forces that act on the bridge with its delicate, Y-shaped pillars due the high-speed rail traffic, the route running from tunnel to tunnel, with tunnel entrances which are supported by the bridge, and, last but not least, the height – all of these things present daily challenges.” The bridge across the Filstal valley is the third-tallest rail bridge in Germany at close to 85 meters high. In order to complete the demanding construction project, the bridge-building specialists from the company group “Max Bögl and Porr” have joined forces to create the Arge EÜ Filstal working group. Manfred May talks about the special technology used on-site: “We work with a movable scaffolding construction which wraps the current section of the build from above. When concreting is complete, the steel construction is released at the bottom and moved forward. In this way the bridge extends out and across the valley.”

Finding solutions to keep on track

“We’re currently working on the reinforcement,” says Foreman Martin Mayer, who is on site with the Max Bögl team. He has just discussed today’s assignment and established the tasks with Construction Manager Manfred May: 160 tons of reinforcement bars need to be laid as quickly as possible so that the concrete can be poured. “The reinforcement work is very tricky. If the positions are not correct, the iron has to be shortened with angle grinders. The team needs to keep tools and accessories ready to complete this task. If anything is missing, it is a very long

way from up here, all the way down to the tool depot. And that costs us time. We are always looking for solutions to keep us on schedule,” the foreman explains further, reaching for a cutting disc for the Bosch cordless angle grinder [GWX 18V-10 SC Professional with X-Lock mount](#) – which he is using for the first time today.

A quick change without keys to save time

“When you are using angle grinders, you are always searching for the key. You know it is around here somewhere. That takes valuable time when the disc jams and the clamping nut gets stuck. It takes a lot of effort to loosen it again, or you reach for a hammer,” Martin Mayer describes how he is usually racing against time. That is a thing of the past with the X-Lock system: “The new system is quick. You can change discs in a few seconds without the need for a key.” Getting started is just a click away for Martin Mayer with the GWX 18V-10 SC Professional: Position the wheel in the X-Lock mount, click it in – done! If the disc needs changing, simply unlock it using the lever and it can be removed right away. “I don’t even need to take off my gloves.” The foreman is obviously pleased about that. The X-Lock angle grinder also has a decisive advantage regarding occupational health and safety. “The disc comes to a complete stop within one second, when you release the button. This brake function considerably reduces the risk of injury.”

Diverse and flexible to overcome every challenge

With a total of 12 small angle grinders – eight corded models, from 900 to 1,900 watts, and four 18 volt cordless models – and more than 130 accessories, the X-Lock accessory change system is extremely versatile. For metal processing, for example, Martin Mayer can choose from a broad selection of cutting, roughing, fiber, SCM and flap discs, as well as cup and round brushes. When switching to the X-Lock system, there is no need for duplicate stock: “The new discs also fit on our old angle grinders. That is a big advantage because you can upgrade without having to buy everything brand new,” says Martin Mayer. It is now almost the end of the shift, and the Construction Manager comes by again to review the progress. The foreman puts the angle grinder back in its L-Boxx, looks out across the valley at the distance they still have to cover. “Every construction project is unique and you are always proud when you have been involved right from the start. When passengers are speeding across this bridge in seven seconds in the high-speed ICE train, popping suddenly out into the light from the dark of the tunnel before they speed straight into the next one, they will only be able to guess the challenges we have had to overcome to provide them this route.” As a bridge builder, Martin Mayer enjoys the thrill of being up here on this project. “When you finally see the end product, you know how much you have achieved. You can proudly tell your children one day: That was my construction site.”

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