Trains are a great way to get around, but to keep passengers happy they have to keep moving. While a lot of maintenance is handled at night and on weekends, sometimes work simply must be done during the day, creating lots of challenges. KAISER AG’s innovative S22™ rail excavator is smart, silent, and compact, with a very small swing radius. And it’s helping keep Swiss railroads “on track.”

**Keeping projects and traffic flowing**

“Coordinating projects in Switzerland can be a headache for railroad maintenance contractors. The space between parallel tracks is often very narrow, leaving little room to operate equipment without disrupting traffic. When you’re using an excavator, for example, its back swings out over the neighboring track,” René Geiger, head of engineering excavators, describes. “The Swiss regulations are very strict: When a train approaches on the other track, work must be stopped and all equipment returned to its starting position. This means downtime and inconvenience for the operator.”

KAISER AG designed the S22™ to address this challenging situation. With a limited swing radius of 1.57 meters (5 feet 1 inch), it can stay in its working position when trains pass on the next track. So the operator can resume work without repositioning. “The time, effort, and cost savings add up,” says Geiger.

Yet the S22™ doesn’t trade off performance: Measuring 8 meters (26 feet) long (with boom folded) and 2.6 meters (8.4 feet) wide, it boasts a digging depth of 4.8 meters (15.7 feet), and can drive on- and off-track. It can be fitted with dozens of attachments, while a ROTOline hydraulic system applies just the right pressure (between 20 and 350 bar).

**The right engine for the job**

To drive this unique excavator and its hydraulic system, Kaiser selected the 116-kW (155-hp) PowerTech PSS 4.5L Final Tier 4/Stage IV engine. Geiger explains: “A compact machine needs a compact engine. What’s more, emissions standards in Switzerland are among the strictest in Europe. The John Deere engine was the obvious choice because of its size, Stage IV emission certification, and diesel particulate filter (DPF).”

Local John Deere engine distributor Hamilton AG, in Kloten, Switzerland, supported KAISER throughout the development of the machine and made sure the configuration of the engine was perfect, helping bring the S22™ to market quickly.

**Innovations that change the industry**

KAISER started as a small workshop over 100 years ago and has kept that personalized touch — even as its team has grown to over 400 people. “Our machines are not sold by the thousands; we tailor them to our customers’ unique needs.”

The company’s innovations continue to set new standards. In 1986, it introduced the very first self-propelled walking excavator on the market. And in 2013 and 2014, its S12 Allroad and S10 mobile excavators won concept and design awards from trend expert Red Dot and from Bauma, the world’s leading construction industry trade fair.

Already, KAISER’s sales distributor for Switzerland, MBA AG, has sold more S22™ machines than expected and without the customers even seeing the machine at work. “That is pretty unusual in the industry, but it does show KAISER’s and MBA’s strong relationships and our customers’ confidence in our expertise,” concludes Geiger.

Distributor: Hamilton AG in Kloten, Switzerland; www.hamilton-ag.ch