CATHARINA DAUM

A reliable choice

Schrag Kantprofile GmbH spent 20 years using two TRUMPF machines that proved to be a reliable choice even under the relentless conditions of three-shift production. But the time had come for something new. Incorporating the new EHT VarioPress 400 with a bending length of nine meters and an EHT VarioCut with a cutting length of eight meters certainly wasn't easy, but there's no doubt it was worth the effort!

The three-day period from May 18 to 20, 2016 was inevitably going to be stressful for Ingo Kleinau, who heads up the Schrag plant in Seevetal-Meckelfeld. His task was to dismantle two long-serving EHT machines to make space for two new arrivals from TRUMPF – an EHT VarioPress 400 press brake and an EHT VarioCut guillotine shear. The problem was that the whole process of dismantling and installing these huge nine- and eight-meter machines would have to take place in just about the toughest spot imaginable, at the other end of the narrow, 65-meter-long production hall. Kleinau and his colleagues had no other option other than to roll up their sleeves and clear everything out of the way. "We knew how hard it was going to be, so that's why we opted to replace both machines at the same time," says Kleinau. For three days the site echoed with the sound of trucks coming and going, but finally the new machines were in place.

» **A machine with a bending lenght of nine meters using an eight-meter base – not everyone can do that.**

It makes sense that the machinery the company uses also needs to provide that same degree of flexibility. "The bent profiles we produce are generally eight meters long, but we wanted to give ourselves some leeway," says Kleinau. That's why the new EHT VarioPress 400, which was tailored to Schrag's requirements, has a bending length of nine meters instead of the eight meters offered by its predecessor. "We've worked with our partner EHT – now known as TRUMPF Werkzeugmaschinen Teningen – for a long time, and they managed to give us nine meters while still using an eight-meter base! We were very impressed. Not everyone can do that," says Kleinau.

Ingo Kleinau, plant manager at Schrag's Seevetal-Meckelfeld facility, sees the incorporation of EHT into the TRUMPF Group as a positive step. Picture: Dirk Egelkamp

Typical order volumes at Schrag range from a single item up to batches weighing 20 tons. As well as top-quality, most customers also require very short turnaround times. The VarioPress 400 at Schrag has a higher-power motor and an additional height-adjustable axis that allows users to bend Z profiles. Picture: Dirk Egelkamp

The ToolShuttle tool magazine connected to the VarioPress makes jobs easier and faster. The ToolShuttle contains the two bending dies that cover 99 percent of the bending jobs performed at Schrag. Picture: Dirk Egelkamp

The machine's control system has a high-resolution, 17-inch color flat panel display with built-in touchscreen. This enables users to load 2D and 3D programs as well as 3D simulations. "The new control system is a bit like using a smartphone or tablet, so it appeals to our young machine operators," says Ingo Kleinau. Picture: Dirk Egelkamp

A scrap cutting system connected to the EHT VarioCut slices up scrap into small pieces. Picture: Dirk Egelkamp

One new feature the press brake offers is the T8000T control system. With its high-resolution, 17-inch color flat panel display and built-in touchscreen, this system allows machine operators to load 2D and 3D programs as well as 3D simulations. "It's a bit like using a smartphone or tablet, so it appeals to our young machine operators," says Kleinau. The layout and operating concept are very different from the previous control system, however. "It didn't take us long to get the hang of 2D programming. We're still experimenting with 3D programming, but I think all the operators on all three shifts will be familiar with the controls in a few weeks' time," says Kleinau.

One highlight of the 400-ton press brake that everyone appreciates is the flexible tool system. "A key requirement for industrial buildings is that you don't want water on the outer shell to drip onto a cut edge. Otherwise you get corrosion infiltrating the metal," Kleinau explains. That's why Schrag folds the edges over, which requires at least two different lower tool slots. They bend the sheet 45 degrees, fold it, bend it another 45 degrees and fold it again. And even then it still requires another 90-degree bend to produce a corner angle. "It simply wouldn't work without lower tool displacement. That's why it's standard on all our machines," says Kleinau.

Who

SCHRAG Kantprofile GmbH, Seevetal-Meckelfeld plant. Founded 1987. 30 employees. SCHRAG Kantprofile GmbH is headquartered in Hilchenbach, Germany. SCHRAG Kantprofile GmbH is part of the SCHRAG Group which currently employs around 450 people at 16 locations.

What

Manufactures thin-walled bent profiles for interior and exterior components used in the construction of industrial and commercial buildings.

How

Various machines including an EHT VarioPress 400-09 with ToolShuttle and an EHT VarioCut 04-80

Bent profiles for building production halls

The company Schrag Kantprofile GmbH specializes in manufacturing bent profiles for constructing production halls and other industrial buildings. Schrag was founded in 1892 and is headquartered in the town of Hilchenbach in the German state of North Rhine-Westphalia. The company set up an additional plant in Seevetal-Meckelfeld in 1987. That's where Ingo Kleinau and his team serve a customer base primarily consisting of building contractors who submit orders with prepared lists of specific materials. "Industrial buildings have to be made from specific materials inside and out. It's mostly sheet steel with a metal coating – zinc and zinc alloys – plus an organic coating for materials used on the exterior," says Kleinau.

Flexibility is essential

Every order handled by the 30 employees is a custom order, so prefabricated parts are not something you'll find in the company's warehouse. Order volumes range from a single item up to batches weighing 20 tons. As well as top-quality, most customers also require very short turnaround times. Deadlines of between one and three days are the norm, so maximum flexibility is essential. "The order receipt and job preparation stages have to be really fast," says Kleinau. He recalls, with a smile, that "our managing director was once asked how much free capacity we had at the company. He said today we're doing overtime, tomorrow we have lots of work on our plate, but I don't even know yet what I'll be doing the day after that!"

Custom design

And that wasn't the only custom feature. The VarioPress 400 at Schrag also has a higher-power motor and an additional H-axis. "We can also bend Z profiles. But when you're dealing with a profile that has already been bent down one way, you need to adjust the support brackets before you can bend it again. You can either do that manually or by having the brackets positioned in a height-adjustable axis at the front. With the latter solution we can simply use the machine's control system to move the brackets down automatically, and that's obviously a major benefit," says Kleinau.

Another feature that makes work easier and faster is the tool magazine connected to the VarioPress. The ToolShuttle contains the two bending dies that cover 99 percent of the bending jobs performed at Schrag. As well as the standard folding die, this magazine also provides safe storage of the heavy "housing cover" which can quickly be moved into place. "The ToolShuttle not only makes it faster to switch between tools, but also offers an ergonomic solution for the people who work here," says Kleinau.

Impressive specifications

Perfectly tailored

The eight-meter EHT VarioCut 04-80 guillotine shear is the second new arrival at Schrag. It, too, was carefully tailored to the company's requirements. In this case, Kleinau was looking for high precision and gentle material handling. "Most of the sheets we cut are four millimeters thick. Many people would class that as thin sheet metal, but in our case you need guillotine shears which are capable of cutting something a full eight meters long. Even if a sheet is only 0.75 millimeters thick, you still need a really rigid, stable machine design, and TRUMPF's VarioCut fits the bill perfectly."

Treating the materials with care is also crucial. Ball rollers in the support brackets ensure gentle material handling, while a bracket support for extra-long sheets increases the available work area.

Valuable scrap

One novel feature which TRUMPF implemented specifically for Schrag is a cutting system connected to the EHT VarioCut that slices up scrap into small pieces. The eight-meter strips of scrap metal fall through the scrap chute onto a conveyor belt that transports them to the scrap shear. Once these long strips have been chopped up into more manageable pieces, they are automatically deposited in 1-by-1-meter containers. "That means my team no longer has the hassle of maneuvering long strips of scrap metal across the hall and through the door. And obviously we also get a higher price for shredded scrap than we did for long pieces of scrap," says Kleinau enthusiastically.

All in all, the 50-year-old branch manager is very happy with his new acquisitions. "We see it as a very positive step that EHT has become part of TRUMPF. Based on the machines we've had in the past, we know we can rely on getting good quality. And we've already seen that we get great after-sales service, too," he says. One example is the software updates that were required once the machine was already in service: TRUMPF made things easy by loading them onto the machine via a mobile remote access module. Kleinau did not opt for the teleservice option when he placed his order, but that can always be added later – and it will be a breeze compared to the three days it took to replace the machines!

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