

INNOVATION MADE IN SWITZERLAND

FB one: a press in a class of its own

With the development of the “FB one” fineblanking press, Feintool has achieved a quantum leap – an environmentally optimized high-tech press featuring numerous functional details that are all designed to perfectly harmonize with one another in the interest of conserving resources. The FB one works efficiently and precisely, is powerful, versatile, and flexible while still operating profitably. It represents a new class of fineblanking performance – designed with the market in mind.

Cutting more efficiently with less energy – this is how you can sum up the advantages of FB one in a nutshell. In 2019, Feintool developed this new hydraulic press generation for fineblanking metallic parts ready for assembly with a multitude of complex innovations and released it for comprehensive field testing. It was clear from the very beginning of this process that energy efficiency and other environmental aspects were key issues for the future. The technological and simultaneously sustainable masterpiece has now been available on the market since end of 2019. Feintool developed this high-precision press – with four patents pending – over a period of several years, creating a production system that stands out in four areas at once: energy consumption, control, performance, and adaptability to different environments, referred to as “production layouts” (see p. 17).

The FB one’s environmental performance is extremely impressive. Andreas Walther, head of product development in the presses and systems department and, in this capacity, also responsible for the development of FB one, explains: “A key improvement offered by FB one is the hydraulic direct drive. On the one hand, this drive, called FeinDrive, makes higher cycle times and stroke rates possible, resulting in higher productivity. On the other hand, it allows us to reduce energy consumption by 30 percent and oil consumption by 50 percent. That’s huge.” For comparison, today’s presses require 2 000 to 3 000 liters of hydraulic oil to operate, while the FB one uses 600 to 800 liters of oil. And since the oil ages more slowly, the intervals between oil changes are longer – **another thing that speaks for the FB one.**

When it comes to sustainability in mechanical engineering, Feintool is affected in two ways. On the one hand, the company manufactures tools that operate as efficiently as possible and are therefore environmentally friendly. On the other hand, Feintool is itself a user of presses and is there-

fore all too familiar with the needs of customers who want to save energy and disposal costs in production.

Andreas Walther explains: “For the FB one, we compared all our existing presses, pulled out the best features of each, and developed them further.” Because conserving resources was an important issue, a great deal of time and energy was spent working on the hydraulic concept. The result is impressive, with lower energy consumption and higher performance – “Swiss designed.” Energy is also saved during waste separation. Feintool carefully audited its suppliers and components and complied with all environmental standards, including RoHS (Restriction of Hazardous Substances in Electrical and Electronic Equipment) and the REACH guidelines for chemicals (REACH stands for Registration, Evaluation, Authorization, and Restriction of Chemicals).

Apart from the environmental aspect, the FB one is considerably easier to operate than previous models and opens up completely new options in tool making. And the new press line also does justice to the rapid pace of digitization in mechanical engineering, because the FB one can be integrated into digital production processes and transforms them into a production system compatible with Industry 4.0 – but with lower energy consumption.

Last but not least, customers can expect to receive outstanding service – Feintool is not only available around the world at any time of day or night via its hotline, but can also use built-in sensors to continuously monitor the technical condition of the fineblanking presses and prevent unplanned downtime.



THE BENEFITS OF THE FB ONE AT A GLANCE

1

Energy and environment

- ▶ Up to 30 percent less energy consumption
- ▶ Up to 50 percent less oil consumption
- ▶ Oil ages more slowly and doesn’t need to be changed as frequently
- ▶ Energy-saving waste separation – optimally adapted to the strip skeleton

2

Ergonomics and connectivity

- ▶ An open system in every respect
- ▶ Compatible with Industry 4.0
- ▶ Intuitive control system
- ▶ FEINmonitoring always keeps an eye on the condition of the press
- ▶ Audit trail means all process settings are traceable
- ▶ Compatible with existing tools
- ▶ Optimal accessibility
- ▶ Simplified strip threading

3

Performance

- ▶ Higher number of strokes
- ▶ Higher repeat accuracy
- ▶ Improved process reliability
- ▶ Increased stiffness of the press mechanism
- ▶ Enlarged hydraulic working area
- ▶ More robust design
- ▶ Longer service life of tools and presses

4

Flexibility

- ▶ Modular design creates adaptability
- ▶ Press concept on two levels saves space
- ▶ A foundation pit is no longer necessary
- ▶ Greater possibilities in production design
- ▶ Compatible with existing tools