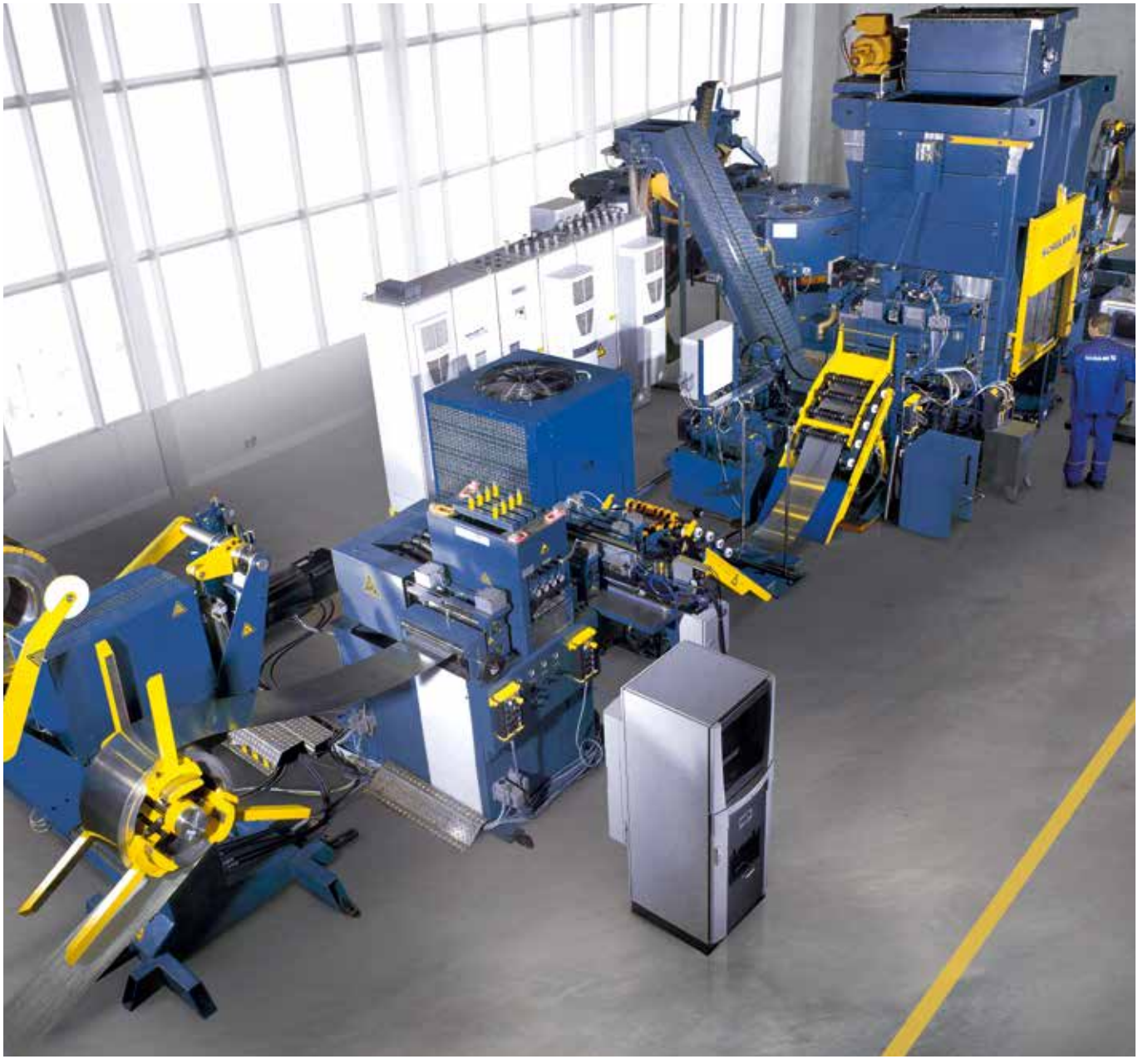
FORMING THE FUTURE

LINES FOR THE MANUFACTURE OF COIN BLANKS

SCHULER
Member of the ANDRITZ GROUP

THE BLANKMASTER SAK.
THE CUSTOMIZABLE BLANKING LINE.



Blankmaster SAK – a line for the manufacture of coin blanks.

Mass manufacturing. Schuler developed the fully-automated Blankmaster SAK blanking lines especially for the manufacture of coin blanks and other high-volume stamping products. Thanks to their modular design, each line can be easily configured to meet customer-specific requirements. Even the core component of the line, the press, can be customized to suit specific needs. The press can be supplied with capacities of up to 4,000 kN. Such high stamping forces not only allow reliable processing of very wide coil strip but also of extremely hard materials, such as nickel alloys and stainless steel. The line concept and numerous design details ensure cost-effective operation and utmost part quality.

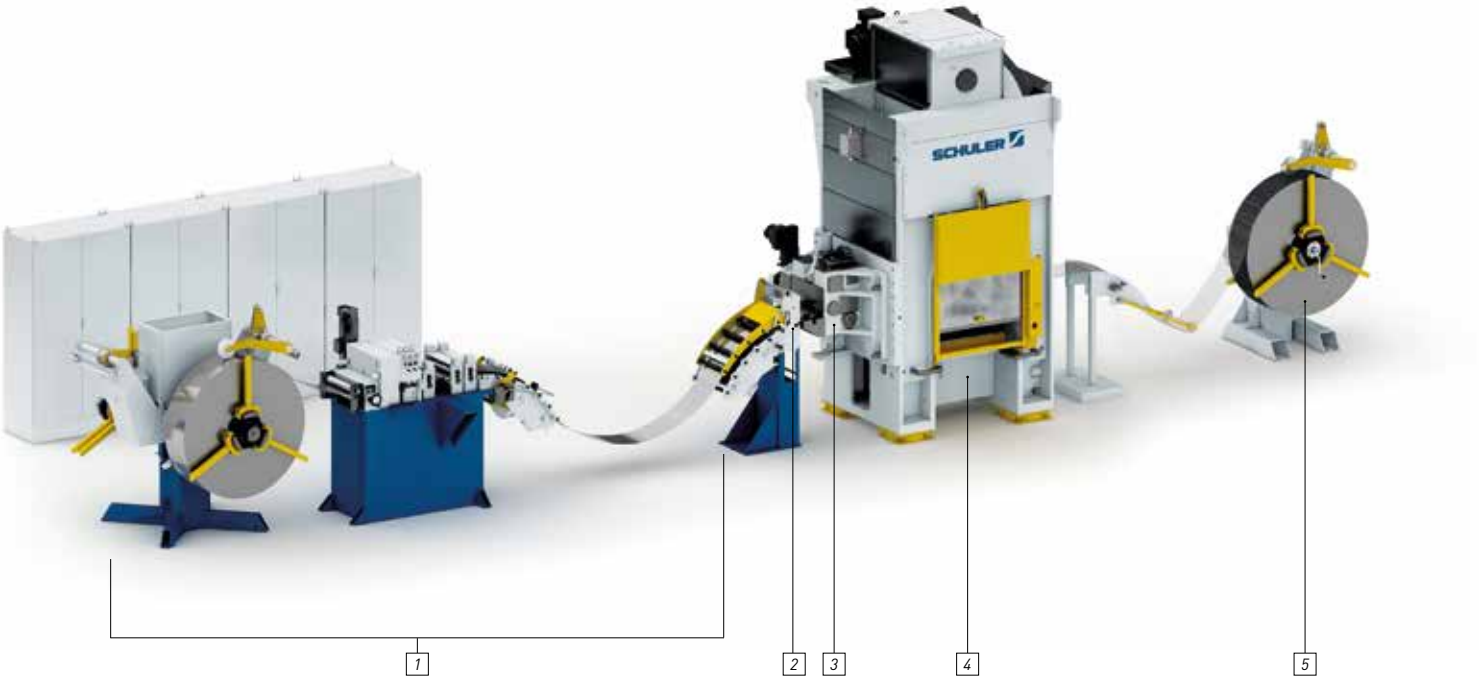
Coin blanks.

THE BENEFITS

- Perfectly adaptable to customer-specific requirements thanks to modular design
- High production rates and efficiency
- Quick changeovers by means of various die change aids
- Simple control interface and operator guidance
- Reliable processing of even extremely hard materials
- Compatible with progressive dies

THE BLANKMASTER SAK SYSTEM.
OVERVIEW OF LINE COMPONENTS.

The line can be individually configured with a variety of equipment. The various component options enable customers to adapt the line to their specific requirements.



LEGEND

1 Coil line
2 Thickness measuring unit
3 Precision feeding unit
4 Blankmaster press
5 Upcoiler

Coil line. The coil line consists of a double-sided decoiler with two snubber rollers, a straightener, and a coil loop control with ultrasound sensor.

Thickness measuring unit. Out-of-tolerance coil strip thickness is detected and transmitted to the press control system.

Feeding systems. Different types of conveyors can be used for the removal of coil scrap and transport of good parts for downstream processing (for example, continuous drying ovens, coin rimming machine).

Precision feeding unit. The line can be equipped with a variety of feed options. Feed accuracy is ± 0.05 mm.

Blankmaster high-speed press. The heart of the press line has a nominal capacity of up to 4,000 kN and numerous sophisticated features for cost-effective operation, high production rates and manufacturing reliability.

Scrap removal:

- Separate scrap shear
  Cuts the scrap web in accordance with a pre-selected stroking rate. This way the scrap is cut into defined lengths and then stacked.
- Scrap chopper on the press slide
  A scrap chopper actuated by the press slide separates the scrap web after each press stroke and produces scissels which can be easily removed by conveyors.
- Scrap web recoiler
  The scrap is upcoiled and available for further material handling.

Line control. Software for ease of operation with process visualization. Supports the operator during die change, set-up and maintenance.

Coil lubrication unit. Depending on coil material and die steel, various systems are available for the lubrication of the upper and lower sides of the strip.

Surface treatment. A number of solutions are available for the drying and deburring of stamped parts.

THE BLANKMASTER HIGH-SPEED BLANKING PRESS.
THE HEART OF THE PRESS LINE.

The Blankmaster's rigid press frame ensures low deflection and permits press forces of up to 4,000 kN. The dynamic counterbalance guarantees especially smooth and quiet operation. The press can therefore be installed directly on the plant floor with vibration dampening elements.

Low-vibration drive. The main motor is protected from stamping-related vibration with the use of vibration dampening elements. The drive is transmitted by means of a flexible clutch. The belt pulley runs in separate bearings, thus preventing strain on the motor bearings by belt tension.

Precision slide guiding. 8-way pretensioned roller guiding ensures precise slide movement. In turn, this ensures extremely long die service lives.

Quick die change. Roller rails in front of the bolster plate and rollers that can be raised and lowered in the bolster plate ensure that dies can be quickly and reliably moved in and out of the press. Hydraulic clamping elements provide reliable locking of the dies on the press bed and on the slide.

Fast-action braking. In the event of a fault or malfunction, the fast-acting hydraulic clutch and brake system brings the slide to a stop within one revolution of the crankshaft.

Line control. The line control with visualization and process monitoring is simple to operate and supports operator personnel during production, set-up, die change, and maintenance. If faults cannot be compensated by the control system, the operator is provided with suggestions for clearing or correcting any faults.

Combination bearing system. For a high degree of rigidity and minimal punch penetration depth, the crankshaft runs in roller bearings. In order to dampen the vibration, the connecting rod is equipped with bronze bushings. This unique combination makes a significant contribution toward achieving minimal clearance and longer die service life.

THE BENEFITS

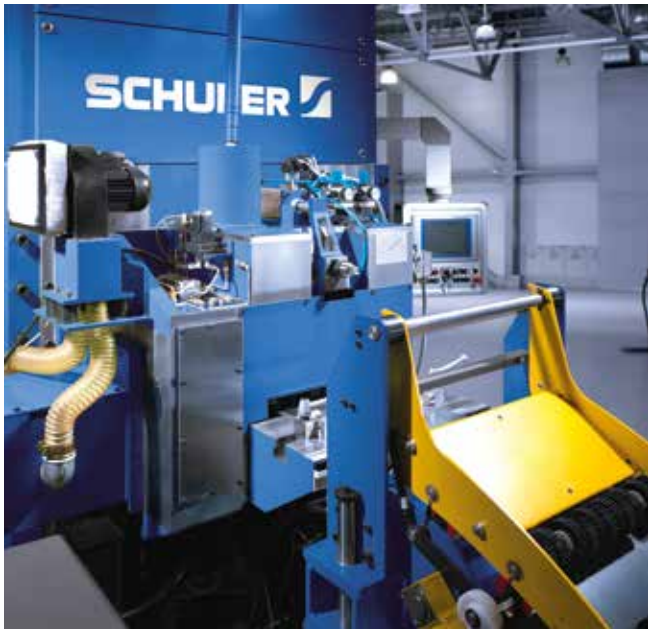
- Available in four press models with up to 4,000 kN rated capacity
- Long die service life thanks to precision guiding and the unique combination bearing system for the crankshaft
- Minimal deflection thanks to the rigid press frame
- Smooth, quiet running and ease of installation thanks to dynamic counterbalance
- Increased safety in the event of malfunction by means of fast-acting brake
- Increased service life for all auxiliary equipment thanks to protection from snap-through and vibration
- Quick die changeovers

AUTOMATIC COIL STRIP THICKNESS MEASUREMENT. NO CHANCE FOR FAULTY MATERIAL.

When processing coil strip, the correct material thickness cannot always be guaranteed. Blankmaster lines offer a number of possibilities for the removal of such out-of-tolerance material, depending on the selected feeding system.

1. MECHANICAL ROLL FEED

The faulty material is detected by the strip thickness measurement device and tracked to the die, where it is stamped into pieces and shunted onto a separate conveyor for removal from the press.



2. ELECTRONIC ROLL FEED

The benefits:

- Faulty material is detected by the strip thickness monitor and, in stamping mode, advanced to a point just in front of the die.
- The press stops in top dead center, the roll feed advances the out-of-tolerance material through the die and directly to the recoiler on which it is rewound, or to the scrap shear with subsequent stacking.
- The line is only automatically shut down after a certain length of strip has failed to demonstrate the correct thickness.

SCHULER SERVICE – STATE-OF-THE-ART SERVICE FOR MORE PERFORMANCE

Schuler Service offers a tailored portfolio of services covering the entire life cycle of your equipment. Over 900 service employees worldwide provide expert support 24/7 in close cooperation with you – our partners. Our main priority is always to ensure the maximum productivity and safety of your production equipment in order to secure your company's continued success.

MORE INFORMATION

www.schulergroup.com/service_en

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Schuler is the world market leader in metal forming technology. The company supplies presses, automation solutions, dies, process know-how, and services for the entire metalworking industry and lightweight automotive design. Customers include automobile manufacturers and suppliers as well as companies from the forging, household appliances, packaging, energy, and electronics industries. Schuler is the leading supplier of minting presses and supplies system solutions for aerospace, rail transport, and large pipe manufacturing. Following the acquisition of toolmaker AWEBA and a majority stake in Chinese press manufacturing company Yadon, Schuler employs around 6,600 members of staff in 40 countries. The Austrian ANDRITZ Group holds a majority share in Schuler.

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