FORMING THE FUTURE



AUTOMATION BY SCHULER -PERFOMANCE ALONG THE LINE



AUTOMATION BY SCHULER. PERFOMANCE ALONG THE LINE.

We design automation solutions according to practical needs and, as a system supplier, offer complete equipment from one source.

AUTOMATICALLY MORE KNOW-HOW. WELCOME TO SCHULER.

As the technological leader in forming technology, Schuler supplies systems, tools and dies, process know-how and services to the entire metalworking industry. Our customers include automotive manufacturers and suppliers as well as companies from the domestic appliances, forging, energy and electrical industries.

Innovative and reliable production automation solutions by Schuler convince manufacturers from all areas of forming technology every day, for example:

- Sheet metal forming with stand-alone presses or press lines
- Blank production
- · Cold, semi-hot and hot forging
- Press hardening
- Hydroforming
- Electric motor lamination production
- Tube and can production
- Fiber-reinforced plastics processing with hydraulic press systems

On-site world-wide. Schuler is present in more than 40 countries. This enables us to be available to our customers world-wide with our service, sales and production units.



Servo press line with Schuler blankloader, Crossbar Feeder automation and End-of-Line system.

Safeguarding a competitive edge. Schuler provides new ideas in the development of innovative and future-oriented products again and again. This gives our customers an advantage in international competition with efficiency, productivity and preparation for the future.



www.schulergroup.com/ automation

AUTOMATICALLY MORE PROCESS RELIABILITY. ALWAYS IN MOTION WITH AUTOMATION.

Automation solutions by Schuler meet the increasing requirements for flexibility and workpiece quality while also increasing output capacity.



Blanking and forming system with Schuler coil feed line in long space version.

Safe and flexible. Whether for general stamping operations or in an automotive press shop, economic success relies upon production reliability, high availability and flexibility. Automation by Schuler provides the foundation for this.

Individual and efficient: Schuler implements the automation concepts tailored to your needs for stand-alone presses, press lines and blanking lines depending on the spectrum of parts, the output capacity and the space requirements. Schuler's system solutions excel by their high economic efficiency and reliable production processes.



Blankloader of a Schuler servo press line with optical centering station. Press 1 is loaded by a Crossbar Feeder.

We automate hydraulic and mechanical stand-alone presses with powerful equipment that has proven its efficiency world-wide in practical operation, e.g. coil feed lines in short or long versions, roll feed units, blank loaders and modular electronic three-axis transfer systems.

Innovative and reliable: In addition to conventional solutions, our innovative crossbar automation technology opens up new options for the automation of modern hydraulic and mechanical press lines. Also, when it comes to modernizing existing press and automation systems, we offer field proven solutions for efficient production of superior quality parts.

AUTOMATICALLY MORE FLEXIBILITY. AUTOMATION FOR SINGLE PRESS SYSTEMS.

The integrated press and automation control offers the operator a complete overview of the production process at a glance.



Coil feed line and blankloader in combination.

Mechanical and hydraulic transfer presses and progressive die presses are fed from a coil feed line or a blankloader – depending on the spectrum of parts and the production process. In either case, you can rely on Schuler automation equipment. It integrates the press, automation equipment and die and excels by its precision and process reliability. With Schuler automation components, you can also benefit from increased output capacity for highstrength steel or aluminum processing.

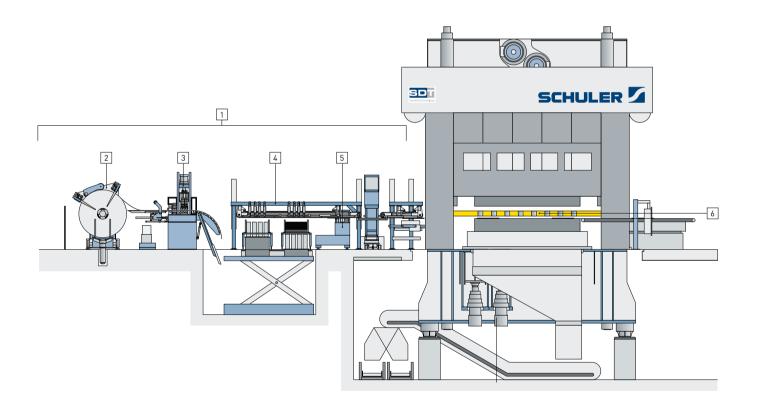


Modular electronic three-axis transfer.

For automation of single press systems with high process reliability, Schuler offers a complete product spectrum:

- · Coil feed lines in short or long space versions
- Roll feed units
- Blankloaders
- Modular electronic three-axis transfer systems
- Finished part stackers

SERVO PRESS WITH COIL FEED LINE, BLANKLOADER AND THREE-AXIS TRANSFER SYSTEM



LEGEND

- 1 Coil feed line and blank loader in combination
- 2 Decoiler
- 3 Straightener

- 4 Blank loader
- 5 Roll feed unit
- 6 Modular electronic three-axis transfer

AUTOMATICALLY MORE PRODUCTIVITY. AUTOMATION FOR PRESS LINES.

For the modernization of existing press lines, we offer tried and tested automation solutions for highly reliable production of top quality parts.



Crossbar robot.

As a system supplier for forming technology, Schuler integrates the specific automation solution into hydraulic, mechanical and servo press lines – from the blank to the finished part – depending on the spectrum of parts, the output capacity and the space requirements. Press interlinking can be implemented with conventional robot solutions or with the innovative Crossbar automation systems developed by Schuler. Regardless of which solution is used, the transfer of the work pieces is performed without intermediate storage, with high production reliability and at high speed – directly from one die to the next.



Automatic die and tooling change.

Interlinking within automated press lines is achieved according to the process requirements by:

- Robots
- Crossbar robots
- Crossbar feeder

The Schuler product spectrum is complemented by:

- · Blankloaders with optical centering station
- Blank washers
- Tooling and die change systems
- · Finished part stackers

LEGEND

- 1 Destacking by robots
- 2 Optical centering station
- 3 Crossbar robot

- 4 Exit conveyor
- 5 Automatic die and tooling change





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HYDRAULIC PRESS LINE WITH CROSSBAR ROBOT AUTOMATION

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AUTOMATICALLY MORE OUTPUT. BLANKING SYSTEMS WITH CUTTING DIES OR LASER.

Schuler blanking lines provide the complete process chain – from the coil to the blank stack. Everything from a single source.



Blanking line with servo press.

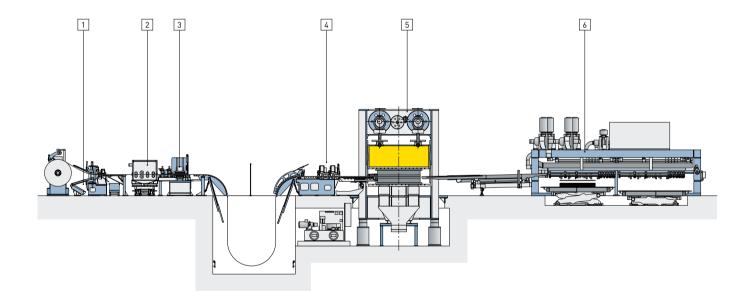
MAXIMUM PRODUCTIVITY WITH SERVODIRECT PRESSES

In addition to the use of conventional presses (mechanical or hydraulic), lines for manufacturing shaped blanks are preferably equipped with servo presses nowadays. Schuler ServoDirect Technology makes it possible to adjust the motion sequences of the press specifically to each blanking die. This increases the output capacity and the service life of the dies significantly. The equipment can be designed for processing very different materials, such as aluminum or high-strength steel. It enables you to process materials with sensitive surfaces smoothly at high stroke rates.

All upstream and downstream automation components such as the Schuler Power Feed roll feed unit with direct servo motor drive, or the flexible Stop to Drop stacker, support the high press performance and powerful dynamic characteristics found in blanking operations. A high level of automation ensures quick production changes and a smooth production process.

BLANKING LINE WITH SERVODIRECT TECHNOLOGY





LEGEND

- 1 Coil infeed
- 2 Blank washer
- 3 Straightening roll cassette

- 4 Roll feed unit
- 5 Blanking press with ServoDirect Technology

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6 Stop to Drop blank stacker



Blanking line with cross-cut shear.

SCHULER SCHULE

Blanking line with laser cell.

BLANKING WITH CROSS-CUT SHEAR – THE SOLUTION FOR STRAIGHTFORWARD BLANK SHAPES

Schuler offers blanking lines equipped with cross-cut shears for manufacturing blanks with a rectangular, parallelogram or curved shape. If the manufacturing process is restricted to straightforward blank shapes, then cross-cut shears represent the ideal solution – both with regard to purchase costs and their productivity. Optionally, the shears can be equipped with an automatic die change.

LASER CUTTING: FLEXIBLE PRODUCTION, COMPACT LINE DESIGN

Blanking lines with lasers are particularly suitable for production sequences with frequent product changes as well, because no tooling is used for laser cutting. This means there is no need whatsoever to invest in dies, die maintenance and die warehousing. The compact design of the line means it can be used even when limited space is available and in halls with low overhead heights. With their innovative DynamicFlow Technology, they offer the most flexible possible production conditions with comparatively low investment costs. The laser cutting line processes an extremely wide range of materials such as aluminum or high-strength steels, and guarantees high productivity even with skin panels that have sensitive surfaces.



THE SERVICE IN METAL FORMING TECHNOLOGY

Quick help with your system
24/7 Hotline & Remote Support



Service centers worldwide Field Service



Quick and easy
Spare Parts Service

For Schuler or third-party presses
Smart Modernization Solutions



<u>ې</u> - Remain flexible at all times in production **More than 400 Used Presses**

Increase efficiency with digital solutions
Digital Solutions

Achieve your financial and ecological goals Eco-Form Package & Energy Monitor



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Service – Made for you stands for service that is precisely tailored to your needs. Regardless of what type of press or system you work with. Fast. Competent. Reliable.

ABOUT THE SCHULER GROUP - WWW.SCHULERGROUP.COM

Schuler offers customized cutting-edge technology in all areas of forming – from the networked press to press shop planning. In addition to presses, our products include automation, dies, process know-how and service for the entire metalworking industry. Within the Metris platform by ANDRITZ, Schuler brings together digital solutions for networking forming technology and develops them continuously to further improve line productivity and availability. For battery production in gigafactories, Schuler provides equipment and services in the process steps of cell assembly and formation. Our customers include automotive manufacturers and suppliers, as well as companies in the forging, household appliance and electrical industries. Presses from the Schuler Group mint coins for more than 180 countries. Founded in 1839 at our headquarters in Göppingen, Germany, Schuler has approx. 5,000 employees at production sites in Europe, China and the Americas, as well as service companies in more than 40 countries. The company is part of the international technology group ANDRITZ.

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