FORMING THE FUTURE

BLANKING LINES

SCHULER
Member of the ANDRITZ GROUP

BLANKING LINES FROM SCHULER.
CUSTOMIZED SOLUTIONS FOR YOUR PRODUCTION.

PERFORMANCE ALONG THE LINE.

Blanking lines from Schuler offer the complete manufacturing process – from coil to the blank stack – all from a single source. They employ cutting-edge safety and control concepts. The modular construction method allows Schuler to offer solutions that specifically meet the customer's needs. All line components have a proven track record of performance in the plant. They are precisely interfaced with one another to guarantee the highest levels of uptime and reliability. Extensions can easily be retrofitted for the processing of aluminum and high-strength steels. And wherever Schuler equipment is in use around the world – our services are available.

Maximum output with ServoDirect presses. In addition to conventional presses (mechanical or hydraulic), lines for manufacturing shaped blanks are now increasingly being equipped with servo presses. Thanks to Schuler's ServoDirect Technology, the motion curves of the press can be individually adapted to various blanking dies. This results in significant increases in both output and die service life. Moreover, lines featuring this technology are designed to process a wide variety of materials, such as aluminum or high-strength steels. Even surface-sensitive materials can be processed safely at the highest production rates.

Blanking line with press.

All upstream and downstream automation components, such as the roll feed with servo direct drive or flexible Stop to Drop stacking device, support the press performance and ensure highly dynamic blank production. The high degree of automation ensures quick product changes and smooth operation of the entire process.

Blanking line with cut-to-length shears.

Blanking line with laser cell.

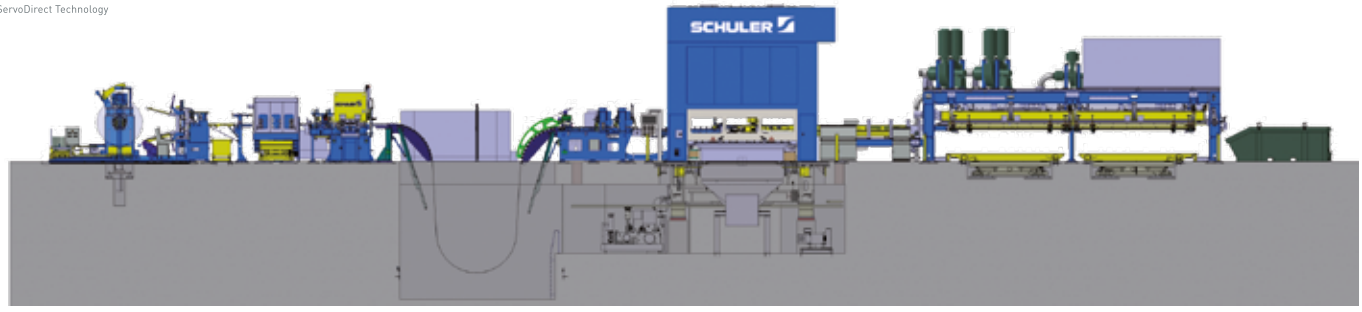
Blanking with cut-to-length shears – the solution for simple shapes. For the production of rectangular, trapezoidal or curved blanks, Schuler offers blanking lines equipped with cut-to-length shears. If the manufacturing process is limited to simple shapes, then cut-to-length shears represent the ideal solution – both in terms of purchase price and performance. The shears can be optionally equipped for automated tool changeovers.

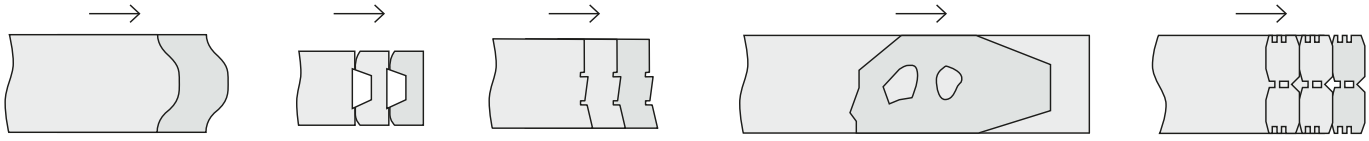
Laser blanking: Flexible and space saving. Laser blanking lines are also particularly well suited to production processes with frequent product changes, as no dies are used in laser cutting. Therefore, there are no investment costs at all for dies, die maintenance or die storage.

Thanks to its compact design, the line can also be used in restricted spaces and low-height production facilities. With its innovative DynamicFlow Technology, it offers highly flexible manufacturing conditions at comparatively low costs. Laser blanking lines can process a wide variety of materials – such as aluminum and high-strength steels – and ensure a high degree of productivity even for surface-sensitive outer panels.

OUR BLANKING SOLUTIONS.
BLANKING LINE WITH PRESS.

SDT
ServoDirect Technology





Blank shapes when using a press with swiveling tools (stroke rate max. 105 min^{-1}).

PERFORMANCE OF BLANKING LINE WITH SERVO PRESS

Figures based on stacking unit version.

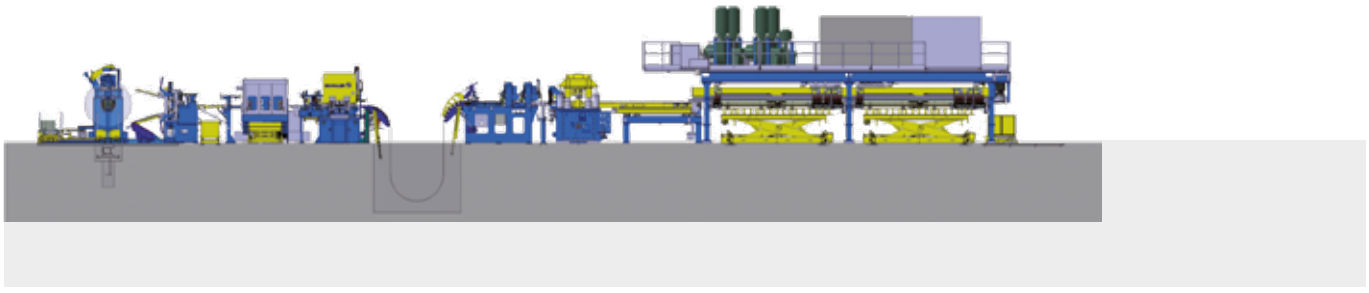
S2D
Stop to Drop Technology

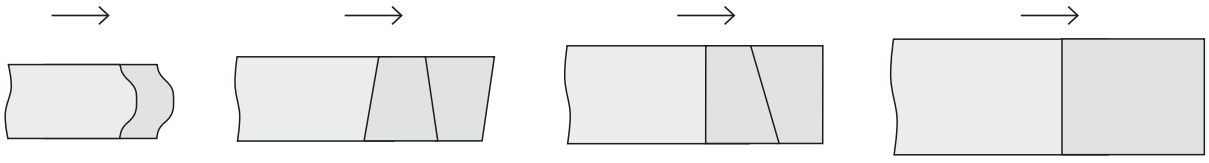
Feed length [mm]	300	500	750	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500
Servo press basic version [spm]	75	73	66	61	51	43	38	31	28	27	24
Servo press with higher level of automation [spm]	93	82	73	67	51	43	38	31	28	27	24

THE ADVANTAGES

- Ideal for the production of shaped blanks
- High output rates
- High level of automation
- Gentle on the die thanks to ServoDirect Technology
- Proven technology

OUR BLANKING SOLUTIONS.
BLANKING LINE WITH CUT-TO-LENGTH SHEAR.





Blank shapes when using a cut-to-length shear (stroke rate max. 120 min^{-1}).

PERFORMANCE OF BLANKING LINE WITH 4-COLUMN CUT-TO-LENGTH SHEARS

Figures based on stacking unit version.

S2D Stop to Drop Technology

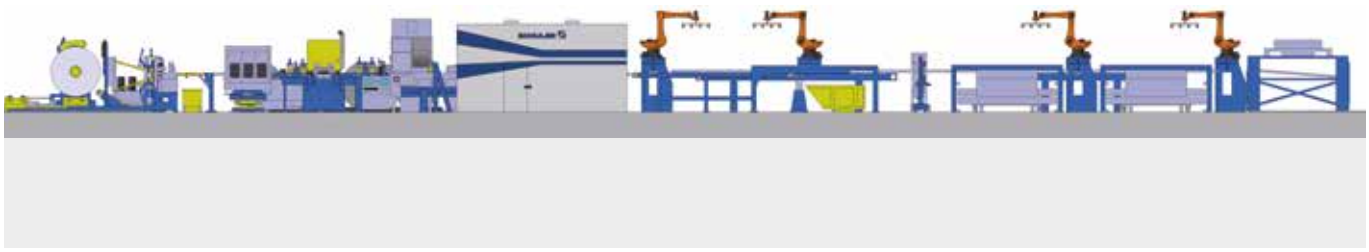
Feed length [mm]	300	500	750	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500
Cut-to-length shears [spm]	108	90	77	68	51	43	38	31	28	27	24

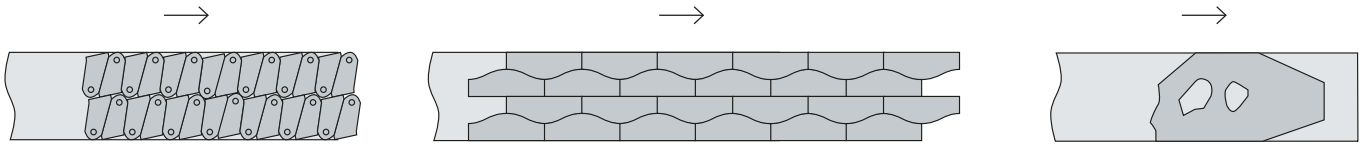
THE ADVANTAGES

- Ideal for the production of rectangular, trapezoidal or curved blanks
- Good value for the money
- High output rates
- High level of automation
- Proven technology

OUR BLANKING SOLUTIONS.
BLANKING LINE WITH LASER CELL.

DynamicFlow Technology





Blank shapes when using laser cutting heads.

PERFORMANCE OF BLANKING LINE WITH LASER

The performance of a laser line always depends on the coil thickness, blank contours and laser efficiency. We would be happy to calculate the possible output based on your product data.

THE ADVANTAGES

- Suitable for all blank shapes
- No costs for dies and die storage
- Fast product changes and thus high level of uptime
- Adjustment of blank contours after production launch
- Simultaneous production of varying blank shapes
- Reduced material costs
- High energy efficiency
- Reduced investment volume
- Space-spacing design

OUR BLANKING SOLUTIONS.
BLANKING PRESS, CUT-TO-LENGTH SHEARS.

BLANKING PRESS

- Up to 105 strokes per minute
- Choice of tonnage (6,300 – 12,500 kN)
- Servo drive with torque motors including energy storage or with conventional flywheel
- Servo drive: improved cycle times and reduced die wear due to die-specific optimization of slide movement
- Monoblock design or alternatively divided configuration
- One or two moving bolsters (“Front-Back”, “T-Track” or “L-Track”)

CUT-TO-LENGTH SHEARS

- Up to 110 strokes per minute
- Configured as 2-column or 4-column shears
- Swiveling rectangular blanking for rectangular, trapezoidal and parallelogram blanks
- Exchangeable blanking dies with short die change times
- Optional: curved/wave cut dies

OUR BLANKING SOLUTIONS.
LASER CELL.

LASER CELL

- Several laser blanking heads working in parallel
- Continuous coil transport
- No blanking dies required
- No restriction of blank design and optimization
- Simultaneous production of varying blanks
- Reduced scrap due to optimized blank nesting
- Quick product change

LINE COMPONENTS.
FRONT-OF-LINE.

COIL PROVISION P S L

- Lifting platform, loading cart or coil shuttle
- Number of provision places on cart can be selected individually
- Provision on V-prisms or support rollers
- Coil preparation in separate safety zone

DECOILER P S L

- Coil weights up to 35 metric tons per coil
- Coil widths up to 2,150 mm
- Outside diameters up to 2,000 mm
- Various inside diameters possible
- Single or double decoiler

Component/option for blanking line with press P, with cut-to-length shear S, with laser L

LINE COMPONENTS.
FRONT-OF-LINE.

THREADING UNIT WITH CROPPING SHEARS P S L

- Threading from above and optionally from below
- Separate dirt and clean rolls
- Automated covering of clean rolls

EDGE TRIMMING DEVICE P S L

- Trimming of strip edges up to 130 mm
- Automatic chopping of separated strip edges with scrap collection

Component/option for blanking line with press P, with cut-to-length shear S, with laser L

WASHER UNIT P S L

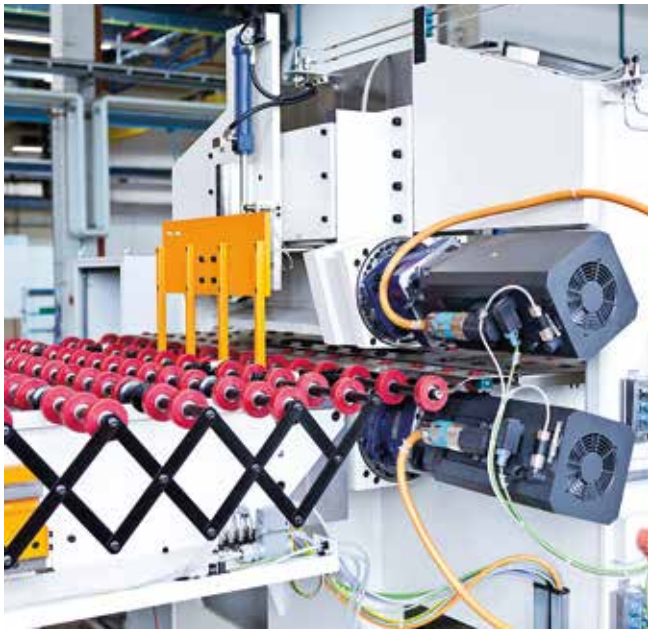
- Modular construction
- Easy access to components
- Specialized filter concepts
- 3- or 4-roller pair concept
- Can be used with various washing fluids
- Can be raised or moved out for aluminum processing
- Alternative vacuum cleaning (suction cup bar)

LEVELER P S L

- Strip thickness from 0.5 to 4.0 mm
- Six-high block leveling cassette
- Up to 21 leveling rollers
- Automated adjustment of support rollers
- Movable intermediate rollers to raise blank quality and leveler service life
- Last leveling roller independently adjustable
- Manual or automated cassette changeovers
- Draw-in rollers for steel and aluminum
- FEM-calculated construction for superior stability
- Cleaning device

Component/option for blanking line with press P, with cut-to-length shear S, with laser L

LINE COMPONENTS.
FRONT OF LINE | END OF LINE.



SERVO ROLL FEED P S

- High speed and acceleration thanks to servo direct drive
- Combination of feed for steel and feed for aluminum
- Motorized strip side guiding with off-center adjustment
- Measuring wheel
- Quick lifting
- Weld seam recognition (optical and/or inductive)

CLEANING DEVICE P S L

- Brush cleaning for blanks
- Alternative: Washer unit for lubricated blanks

Component/option for blanking line with press P, with cut-to-length shear S, with laser L

LINE COMPONENTS.
END-OF-LINE.

STACKING UNIT P S L

- Operating modes: Fly to Drop, Stop to Drop
- For steel and/or aluminum blanks
- Blank lengths up to 5,000 mm
- Maximum of two stacking stations and place for four stacks
- Advanced air technology for aluminum blanks with high energy savings
- Telescoping conveyors individually adjustable in width and length
- Freely programmable system of stops – adjustments can be stored for every die set
- Side stacking concepts

ROBOTS L

- Stacking of single parts or several different parts simultaneously
- Part orientation during stacking
- Number of robots and stacking nests can be selected
- Number of stacking places can be selected individually
- Ejection of individual blanks for quality control

Component/option for blanking line with press P, with cut-to-length shear S, with laser L

USED BY CUSTOMERS AROUND THE WORLD.
BLANKING LINES FROM SCHULER.

Car manufacturers and their suppliers around the world depend on Schuler know-how. Schuler has so far delivered well over one hundred blanking lines worldwide.

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.

With over 175 years of experience and expertise, we can guarantee the best possible support for the operation of your machines – and not only those supplied by Schuler, but by all other manufacturers. Whatever the situation, Schuler Service has the right solution for your specific needs.

MORE INFORMATION

www.schulergroup.com/service_en

ABOUT THE SCHULER GROUP – WWW.SCHULERGROUP.COM

Schuler offers customized first-rate technology in all areas of forming – from the networked press to press shop planning. In addition to press, our product includes automation and software solutions, dies, process know-how and service for the entire metalworking industry. Our customers include automotive manufacturers and suppliers, as well as companies in the forging, household appliance and electronics industries. Presses from the Schuler Group mint coins for more than 180 countries. When it comes to the digital transformation of the forming technology, we support our customers worldwide as a supplier of innovative system solutions. Founded in 1839 with headquarters in Göppingen, Germany, Schuler AG has about 6,600 employees at production sites in Europe, China and America, as well as service companies in more than 40 countries. The company is majority-owned by the Austrian ANDRITZ Group.

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