

**Performance along the line. Automation by Schuler.**



Forming the Future

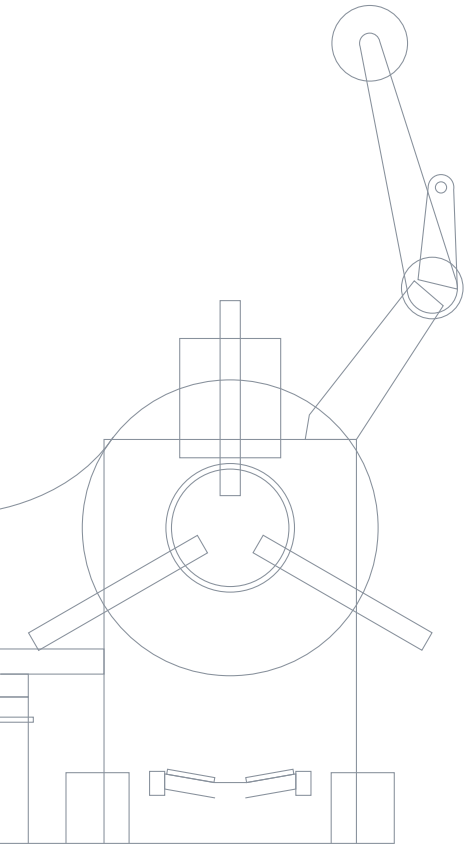
PERFORMANCE ALONG THE LINE – AUTOMATION BY SCHULER.

## 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



### SCHULER VALUE

#### 170 YEARS OF SCHULER – 170 YEARS OF PROCESS KNOW-HOW

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

#### 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.

*Blanking line with ServoDirect Technology.*



*Servo press with combination of coil feed line and blankloader.*



*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.

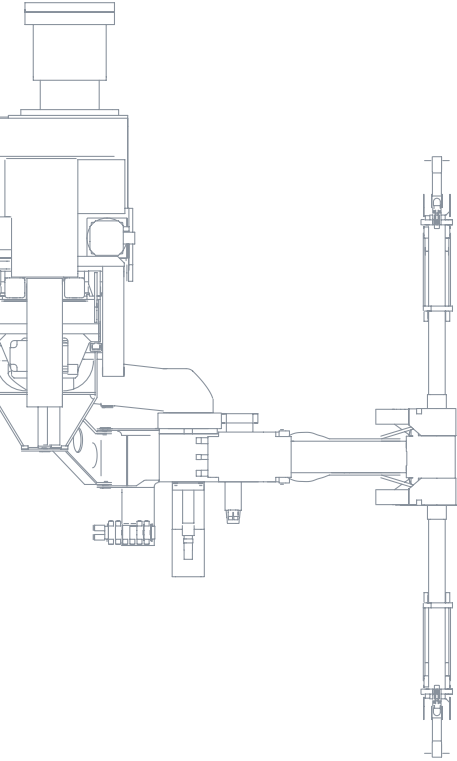
PERFORMANCE ALONG THE LINE – AUTOMATION BY SCHULER.

## Automatically more ... Process reliability. Always in motion with automation.

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.

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.

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.



### THE HIGHEST LEVEL OF PRODUCTIVITY

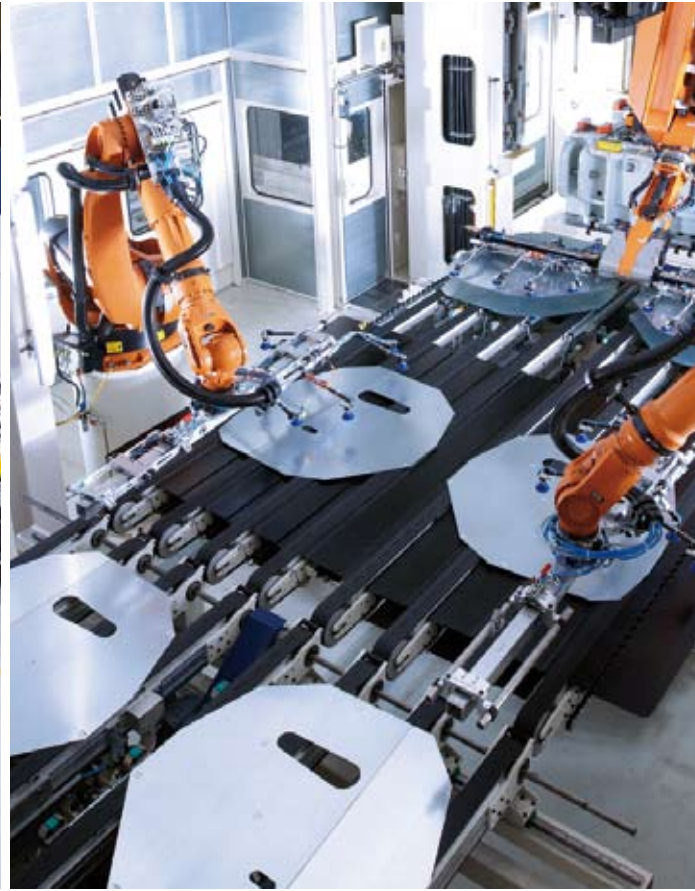
Automation solutions by Schuler meet the increasing requirements for flexibility and workpiece quality while also increasing output capacity.

### 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.



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



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



*Main control panel of a blanking line with ServoDirect Technology.*

PERFORMANCE ALONG THE LINE – AUTOMATION BY SCHULER.

## Automatically more... Flexibility. Automation for single press systems.

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 high-strength steel or aluminum processing.

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

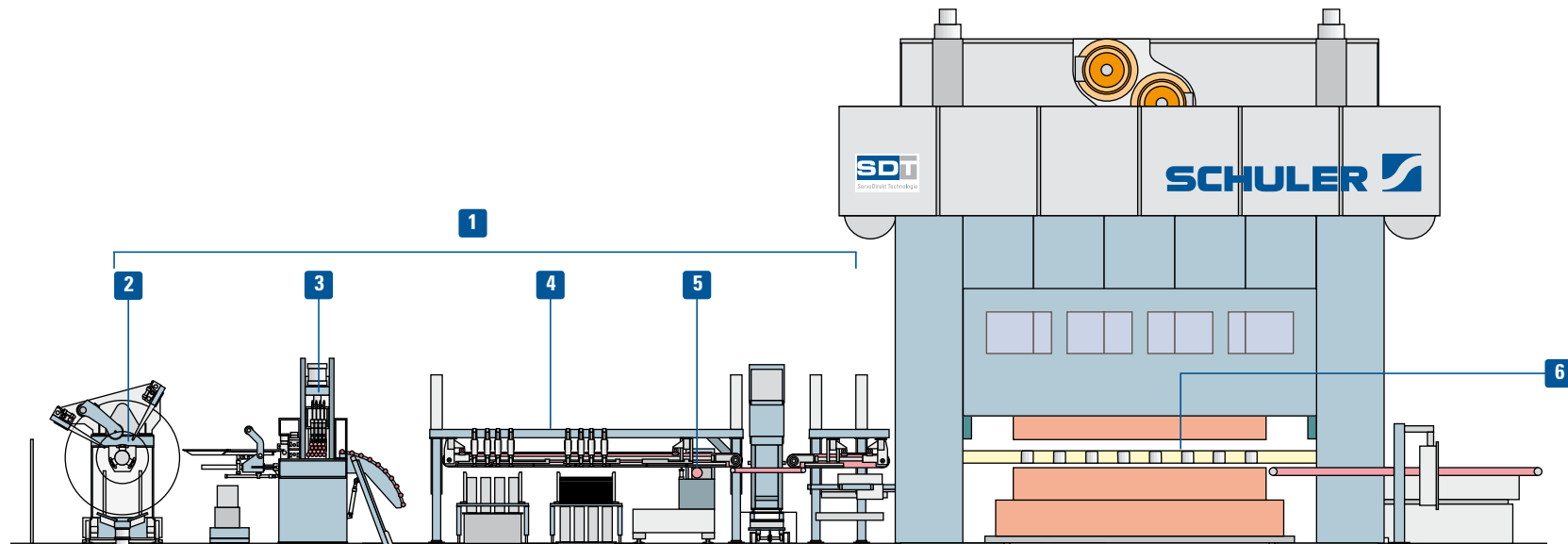
- Coil feed lines in short or long space versions
- Roll feed units
- Blankloaders
- Modular electronic three-axis transfer systems
- Finished part stackers

*1. Coil feed line and blankloader in combination.*

### AUTOMATION FOR SINGLE PRESS SYSTEMS – AT A GLANCE

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





*Servo Press with coil feed line, blank loader and three-axis transfer system.*

2. Decoiler

3. Straightener

4. Blank loader

5. Roll feed unit

6. Modular electronic three-axis transfer.



PERFORMANCE ALONG THE LINE – AUTOMATION BY SCHULER.

## Automatically more ... Productivity. Automation for press lines.

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 workpieces is performed without intermediate storage, with high production reliability and at high speed – directly from one die to the next.

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

- Robots
- Schuler Crossbar robots
- Schuler Crossbar feeders
- Schuler Speedbar

**The Schuler product spectrum is complemented by:**

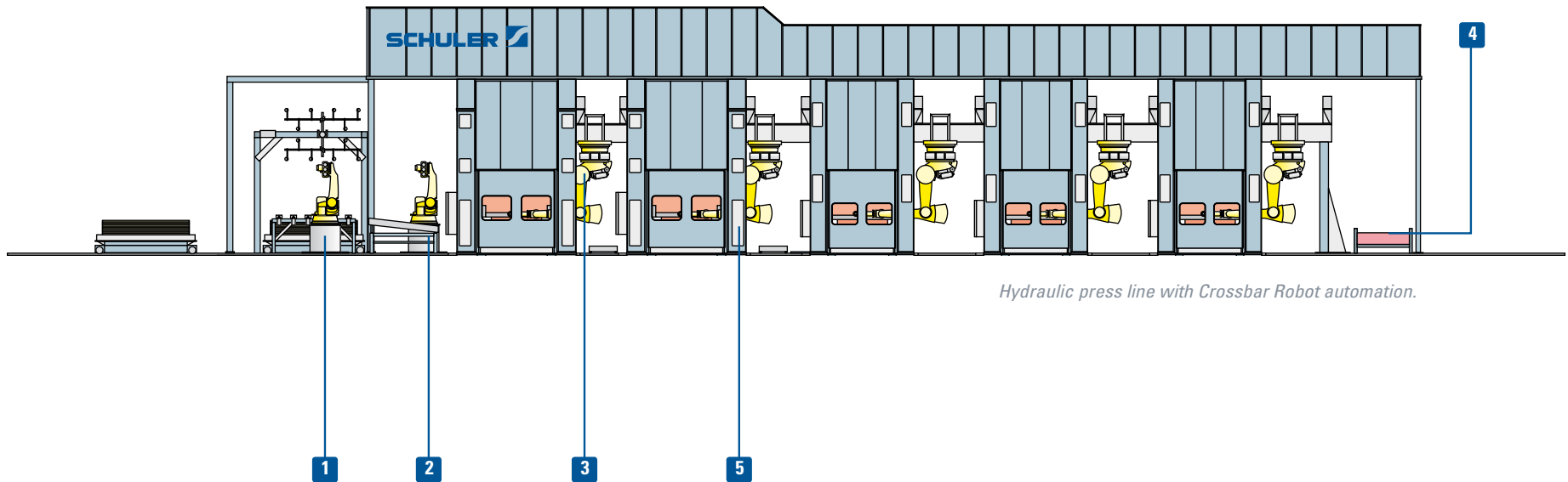
- Blankloaders with optical centering station
- Blank washers
- Tooling and die change systems
- Finished part stackers

1. Destacking by robots.

### AUTOMATION FOR PRESS LINES – RETROFIT IS AN ALTERNATIVE

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





Hydraulic press line with Crossbar Robot automation.

Blank washer

2. Optical centering station.

3. Crossbar Robot.

4. Exit conveyor.

5. Automatic die and tooling change.



PERFORMANCE ALONG THE LINE – AUTOMATION BY SCHULER.

## Automatically more ... Output capacity. Blanking lines with ServoDirect Technology.

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 Stop2Drop stacker, support the high press performance and powerful dynamic characteristics found in blanking operations.

**Schuler blanking lines have a modular structure and consist of the following components:**

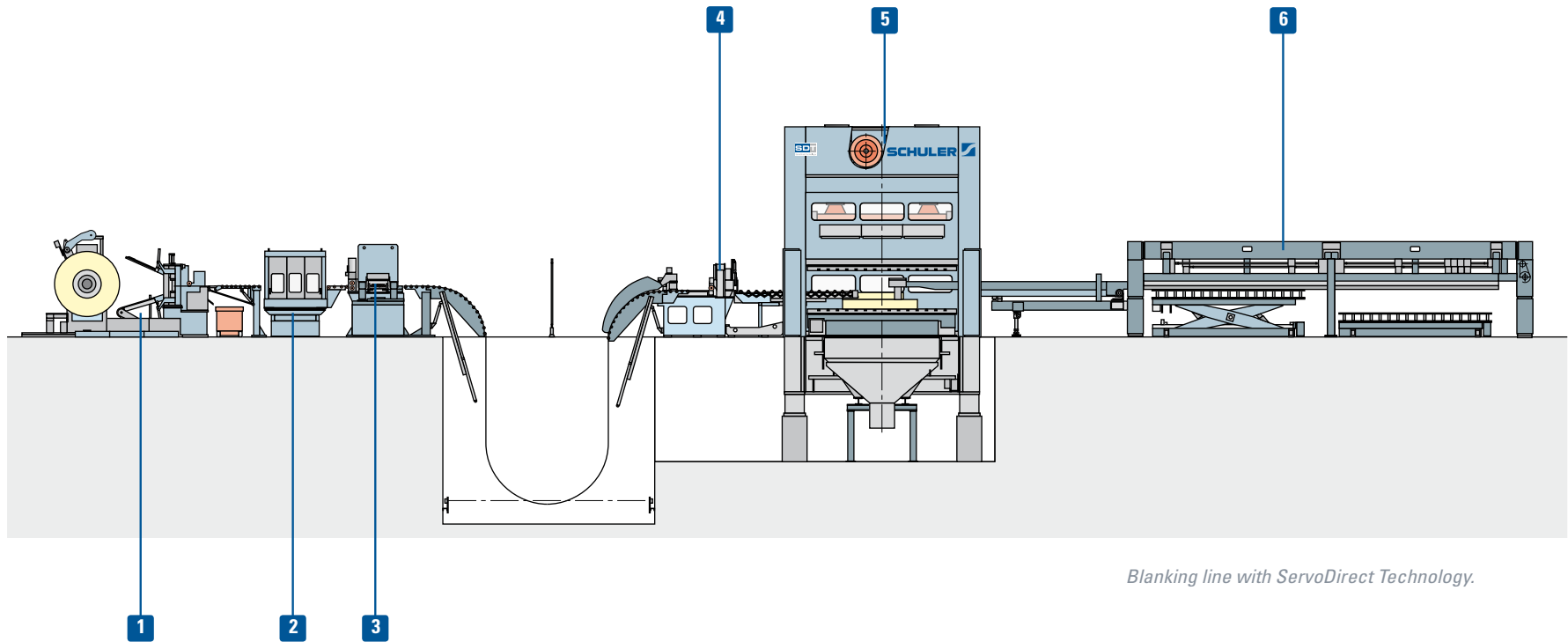
- Initial crop station
- Coil loading / decoiler
- Threading unit
- Trimming unit
- Wash unit
- Straightener
- Loop equipment
- **Schuler Power Feed** roll feed unit
- Telescopic roller conveyor
- Blanking press with ServoDirect Technology
- Swiveling die, swivel-mounted shear
- **Stop2Drop** stacker

1. Coil infeed

BLANKING LINES – INDIVIDUAL SOLUTIONS, TRIED AND TESTED AND INTEGRATED.

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





*Blanking line with ServoDirect Technology.*

*2. Blank washer*

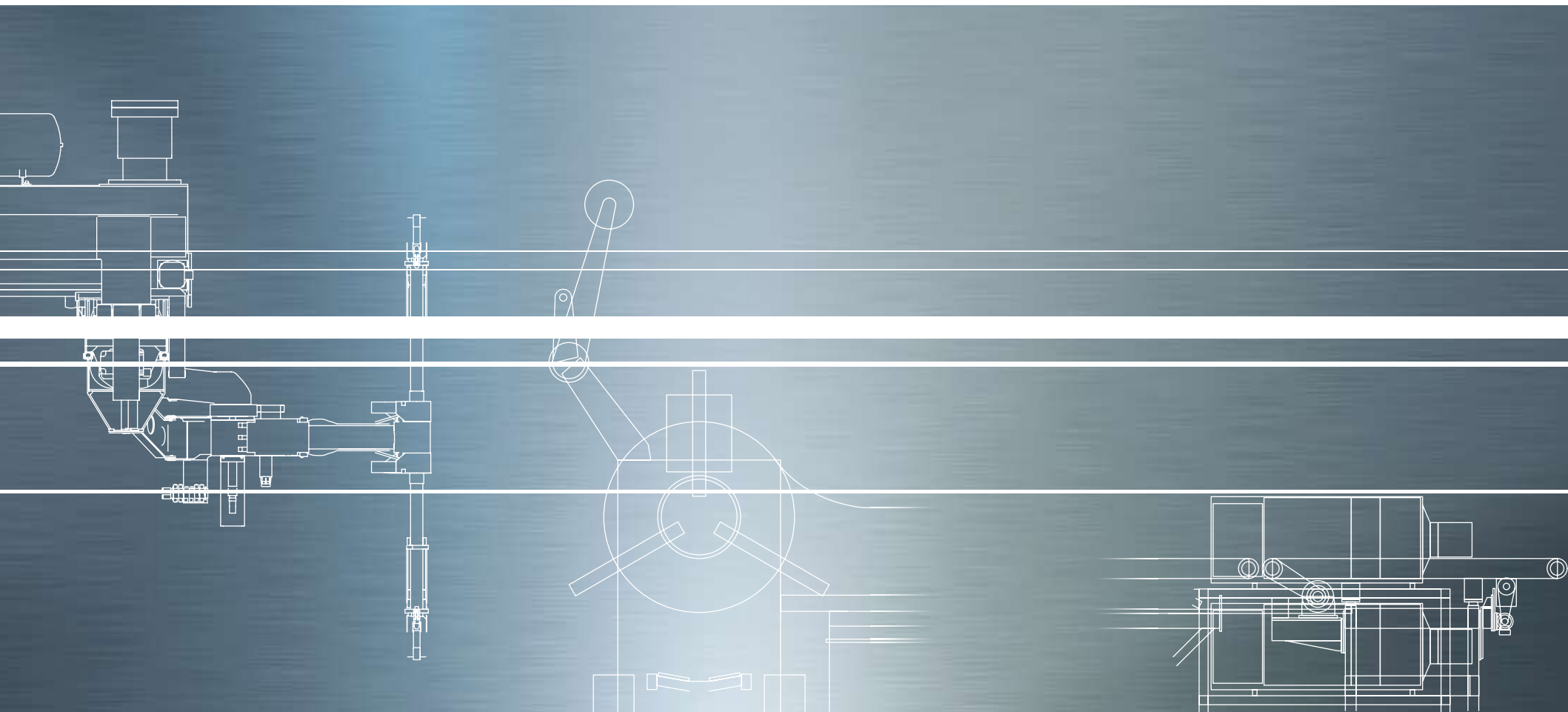
*3. Straightening roll cassette.*

*4. Roll feed unit.*

*5. Blanking press with ServoDirect Technology.*

*6. Stop2Drop blank stacker.*





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