SD three-roll mills. For top-quality requirements.
SD three-roll mills.
Efficient processes for numerous industries.

SD three-roll mills are suitable for universal use and meet the highest quality requirements. They are characterized by straightforward, user-friendly operation as well as quick and easy cleaning. Areas of application include low-viscosity to high-viscosity masses such as printing inks, artist’s paints, industrial and architectural paints, toners, coating masses, greases and products used in the electronics, cosmetics and pharmaceutical industries.
Machine design. Functional and safe.

Hydrodynamic roll pressing system.
This system guarantees a high throughput and constant, reproducible roller pressure in the three-roll mill's milling gap.

Manual roll-gap setting.
An adjustment mechanism allows the gap size between the rolls to be defined precisely. This makes it possible to produce high-viscosity, medium-viscosity and low-viscosity products efficiently, in line with precise specifications.

CE-compliant safety concept.
The pivoting aluminum safety cover enables the loading of the rolls using a pump, a press-out device or manually. The electrically detected catch basin protects the pinch point under the apron. For safe cleaning, there is a roll-in protection included.

Individual roll cooling.
Open and closed cooling systems are available for Bühler SD roller mills. The cooling capacity and processing temperature of each roll can be set individually.
Overview of the machine series.
The appropriate solution for any requirement.

SDX.
Economic batch size 2–150 kg.
The SDX is suitable for small to medium-sized production batches. The system is available with centrifugally cast rolls or alternatively with VIVA™ rolls. Motors with a capacity of 7.5 to 13.5 kW can be supplied. Various safety devices and Ex de II B T4 are optionally available. ATEX II2G Ex c T3 is standard for this roller mill.

SDY.
Economic batch size 1–50 kg.
The SDY is the ideal solution for the laboratory, pilot projects and small batches. This roller mill has centrifugally cast rolls, comprises a continuous flow cooling system and is driven by a 2.2 kW motor. The roll gap is set manually. ATEX II2G Ex c T3 can be ordered as an option.

SDW.
Economic batch size 150–250 kg.
The SDW is used for the production of medium-sized batches. It has centrifugally cast rolls, comprises an automatic roll cooling system and is driven by a 30 kW motor. The roll gap is set manually. ATEX II2G Ex c T3, product level monitoring, loading control and further technical enhancements can be ordered as an option.
**SDV.**

**Economic batch size 300–1000 kg.**
The SDV is a powerful roller mill for large production batches. This system has centrifugally cast rolls and various safety features. Motors with a capacity of 55 or 75 kW can be supplied. A tub tilting device can be ordered as an option.

**SDVE.**

**Economic batch size 300–1000 kg.**
A programmable logic control system and electronically controlled roll cooling increase production reliability. The system is available with centrifugally cast rolls or alternatively with VIVA™ rolls. The safety standards of this machine exceed those of the SDV. A tub tilting device can be ordered as an option.
Bühler rolls. 
Technology from the market leader.

**VIVA™ camberless rolls.**

Roller mills without a camber work reliably – even when subject to changing requirements and different roll pressures. In contrast to conventional rolls, camberless VIVA™ roll technology can be used to cover the entire range of pressing forces. The camberless VIVA™ roll technology makes it possible to achieve a constant product quality over the entire roll length, regardless of the pressing force. This results in easily reproduced product qualities and increased efficiency.

**Roll hardness.**

Thanks to a special casting process, Bühler rolls are very durable.

- Hardness curve of the Bühler centrifugally cast roll: the hardness remains constant up to a depth of 10–15 mm and only then decreases to the hardness of the soft gray cast iron.
- Hardness curve of the statically cast roll: the hardness curve falls directly after the roll surface.

**Ceramic rolls.**

This type of roll is particularly suitable for metal-free applications and abrasive products. Furthermore, ceramic rolls are excellent for cooling, which means that they are exceptionally well-suited for the production of temperature-sensitive products.
Automated.  
**Practice-oriented control concepts.**

Manual control of Bühler SD roller mills is appropriate for simple requirements and constant recipes. A PLC control unit is available for demanding tasks and frequently changing recipes.

**Comfort control.**

A compact Siemens control is used to set all process parameters on the machine manually. Operation is straight-forward and transparent.

**Premium control.**

This control concept, based on the PLC Simatic S7, is highly practical. The graphical user interface with a touch panel is designed in a clear, straight-forward way, making it easy to train operators. Once all production data has been entered, the machine can be operated fully automatically. Easily understandable control circuits ensure reliable, reproducible machine operation.
Automation.
Practice-oriented control concepts.

With batch tracking, reproducible product qualities and integration into fully automated production systems, Bühler software solutions provide useful features for improving plant efficiency.

Recording data with WinTrend.

WinTrend is a powerful software product that facilitates the task of recording measurements such as pressure, temperature or speed. Process data can be entered, represented graphically, exported and evaluated. Thanks to its flexibility and performance, the product can be used in a wide range of data recording situations.

Interface to the control system.

The interface to the control system plays a key role for integration into fully automated production plants. The Bühler plant control system transfers the target value specifications to the machine control unit and receives the latest actual values. These values can be recorded as trend data, evaluated and archived. End-to-end production data acquisition is ensured. Operating effort is significantly reduced.
Press-out device.

*Increased productivity for your processes.*

This press-out device supplies three-roll mills with medium-viscosity to high-viscosity products. The reliable, tried and tested system is controlled by the three-roll mill’s level control.
# SD three-roll mills machine series.

## Technical data.

<table>
<thead>
<tr>
<th>Specification</th>
<th>SDY200</th>
<th>SDX300</th>
<th>SDX600</th>
<th>SDW800</th>
<th>SDV1300</th>
<th>SDVE1300</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drive</strong></td>
<td>2.2 kW</td>
<td>7.5 kW</td>
<td>13.5 / 17.5 kW</td>
<td>37.5 kW</td>
<td>55 / 75 kW</td>
<td>55 / 75 kW</td>
</tr>
<tr>
<td><strong>Rolls</strong></td>
<td>Open</td>
<td>Open, VIVA-C</td>
<td>Open, VIVA-S, VIVA-C</td>
<td>Open</td>
<td>Open</td>
<td>Open, VIVA-S</td>
</tr>
<tr>
<td><strong>Roll diameter</strong></td>
<td>150 mm</td>
<td>200 mm</td>
<td>200 mm</td>
<td>300 mm</td>
<td>400 mm</td>
<td>400 mm</td>
</tr>
<tr>
<td><strong>Roll length</strong></td>
<td>200 mm</td>
<td>300 mm</td>
<td>600 mm</td>
<td>800 mm</td>
<td>1300 mm</td>
<td>1300 mm</td>
</tr>
<tr>
<td><strong>Cooling</strong></td>
<td>Open / open with tempering device</td>
<td>Open / circuit cooling</td>
<td>Open / circuit cooling</td>
<td>Open / open with tank</td>
<td>Open / open with tank</td>
<td>Open / open with tank / circuit cooling</td>
</tr>
<tr>
<td><strong>Max. speed for 3rd roll</strong></td>
<td>300 rpm</td>
<td>500 rpm</td>
<td>500 rpm</td>
<td>500 rpm</td>
<td>400 rpm</td>
<td>400 rpm (VIVA only)</td>
</tr>
<tr>
<td><strong>Automation</strong></td>
<td>Comfort</td>
<td>Comfort</td>
<td>Comfort</td>
<td>Comfort</td>
<td>Comfort</td>
<td>Premium</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td>non Ex / ATEX</td>
<td>non Ex / ATEX</td>
<td>non Ex / ATEX</td>
<td>non Ex / ATEX</td>
<td>non Ex / ATEX</td>
<td>non Ex</td>
</tr>
<tr>
<td><strong>Regulation of gap size</strong></td>
<td>Mechanically</td>
<td>Mechanically</td>
<td>Mechanically</td>
<td>Mechanically</td>
<td>Mechanically</td>
<td>–</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length – L</td>
<td>990 mm</td>
<td>900 mm</td>
<td>900 mm</td>
<td>1410 mm</td>
<td>1740 mm</td>
<td>1740 mm</td>
</tr>
<tr>
<td>Width [mm] – W</td>
<td>810 mm</td>
<td>1055 mm</td>
<td>1355 mm</td>
<td>1910 mm</td>
<td>2560 mm</td>
<td>258 mm</td>
</tr>
<tr>
<td>Height – H</td>
<td>1000 mm</td>
<td>1070 mm</td>
<td>1070 mm</td>
<td>1355 mm</td>
<td>1585 mm</td>
<td>1585 mm</td>
</tr>
<tr>
<td>Roll length – R</td>
<td>200 mm</td>
<td>300 mm</td>
<td>600 mm</td>
<td>800 mm</td>
<td>1300 mm</td>
<td>1300 mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Approx. 536 kg</td>
<td>Approx. 1035 kg</td>
<td>Approx. 1285 kg</td>
<td>Approx. 3015 kg</td>
<td>Approx. 4700 kg</td>
<td>5000–5700 kg</td>
</tr>
</tbody>
</table>

All data constitutes approximations. Specifications subject to change.
Specification SDY200 SDX300 SDX600 SDW800 SDV1300 SDVE1300

Drive
- 2.2 kW
- 7.5 kW
- 13.5 / 17.5 kW
- 37.5 kW
- 55 / 75 kW
- 55 / 75 kW

Rolls
- Open
- VIVA-C
- Open, VIVA-S,
- VIVA-C
- Open
- Open
- Open
- Open, VIVA-S
- Open / open with
- tank
- Open / open with
- tank
- Open / open with
- tank / circuit
- Open / circuit
- Open

Roll diameter
- 150 mm
- 200 mm
- 200 mm
- 300 mm
- 400 mm
- 400 mm

Roll length
- 200 mm
- 300 mm
- 600 mm
- 800 mm
- 1300 mm
- 1300 mm

Cooling
- Open / open with
- tempering device
- Open / circuit
- cooling
- Open / open with
- tank
- Open / open with
- tank
- Open / open with
- tank / circuit
- Open / circuit
- Open

Max. speed for 3rd roll
- 300 rpm
- 500 rpm
- 500 rpm
- 500 rpm
- 400 rpm
- 400 rpm,
- 500 rpm (VIVA only)

Automation
- Comfort
- Comfort
- Comfort
- Comfort
- Comfort
- Premium

Design
- non Ex / ATEX
- non Ex / ATEX
- non Ex / ATEX
- non Ex / ATEX
- non Ex / ATEX
- non Ex

Regulation of gap size
- Mechanically
- Mechanically
- Mechanically
- Mechanically
- Mechanically
- –

Dimensions
- Length – L
  - SDY200: 990 mm
  - SDX300: 900 mm
  - SDX600: 900 mm
  - SDW800: 1410 mm
  - SDV1300: 1740 mm
  - SDVE1300: 1740 mm
- Width [mm] – W
  - SDY200: 810 mm
  - SDX300: 1055 mm
  - SDX600: 1355 mm
  - SDW800: 1910 mm
  - SDV1300: 2560 mm
  - SDVE1300: 256 mm
- Height – H
  - SDY200: 1000 mm
  - SDX300: 1070 mm
  - SDX600: 1070 mm
  - SDW800: 1355 mm
  - SDV1300: 1585 mm
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  - SDY200: 200 mm
  - SDX300: 300 mm
  - SDX600: 600 mm
  - SDW800: 800 mm
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- Weight(1)
  - SDY200: Approx. 536 kg
  - SDX300: Approx. 1035 kg
  - SDX600: Approx. 1285 kg
  - SDW800: Approx. 3015 kg
  - SDV1300: Approx. 4700 kg
  - SDVE1300: 5000–5700 kg

1 SDX300 and 600
2 SDY200
3 SDW800
4 SDV1300 and SDVE1300