

High performance
three-roll mill with
VIVA roll technology.

SDV / SDVE



BUHLER

Scope of applications. Our competence at a glance.



Intaglio printing: bank notes



Offset printing: books, newspapers, magazines



Artists' colors



Materials for the electronics industry



Cosmetics



Packaging printing inks



Industry and building paints



Screen printing: textiles, posters



Sealing compounds, lubricants

Fully hydraulic three-roll mill. Meeting highest quality demands.

SDV/SDVE – a three-roll mill designed for universal applications and for meeting the most stringent quality standards. Convenient, easy operation, handy design and easy to clean. Versatile machine for low to high viscosity masses, e.g. all types of printing inks, artists' colors, industrial and decorative paints, toners, coating masses, etc., applied also to products from the fields of electronics, cosmetics and pharmaceuticals.



Your advantages.

Each of the three rolls is equipped with an individually adjustable high-efficiency cooling system. Automatic, precise control ensures constant roll temperatures and thereby uniform, reproducible operating conditions. The cooling water supply is automatically stopped when the machine is not running. This prevents undesirable cooling of the rolls and unnecessary water consumption. The hydro-dynamic roll pressing system guarantees high throughput and permanently stable, reproducible pressures in the roll gap.

Three roll operating positions can be selected:

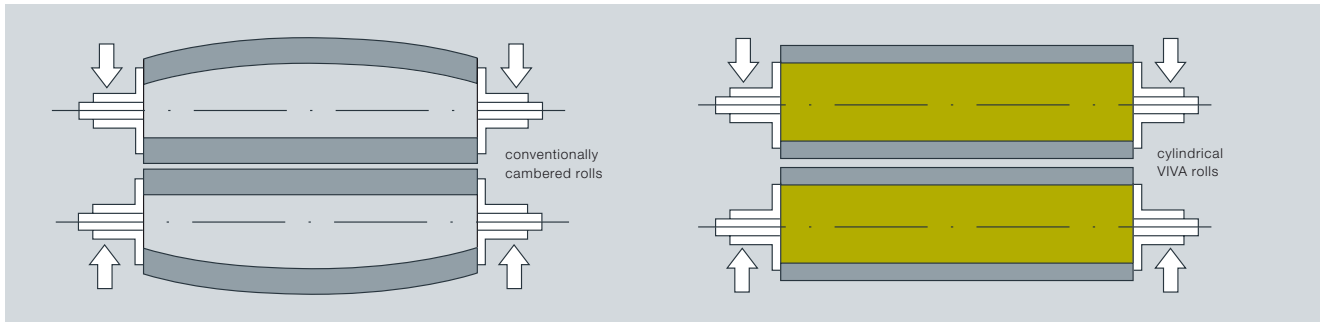
- Pressing: Working position for fine grinding and dispersion
- Mixing: Intake gap is pressed for intermixing the material
- Disengagement: Rolls are disengaged for cleaning

An adjustment mechanism allows a defined roll gap to be set. This permits the processing of short, dilute and low-viscosity products.

VIVA – The revolutionary roll technology. Camberless Rolls.

In the past nine decades Buhler has accumulated extensive competence in developing high performance and reliable three-roll mills. An outstanding result of these developing efforts is the patented VIVA roll technology. VIVA rolls are the first camberless rolls on the market. Conventional rolls are limited to work in a narrow pressure range because of their camber. VIVA camberless

rolls whereas can be used in any pressure range. The secret of this principle is hidden. A system of dynamic active chambers inside the roll guarantees highest flexibility and perfect performance. Equipped with VIVA rolls, one and the same machine can handle demanding grinding, conditioning and potting tasks.



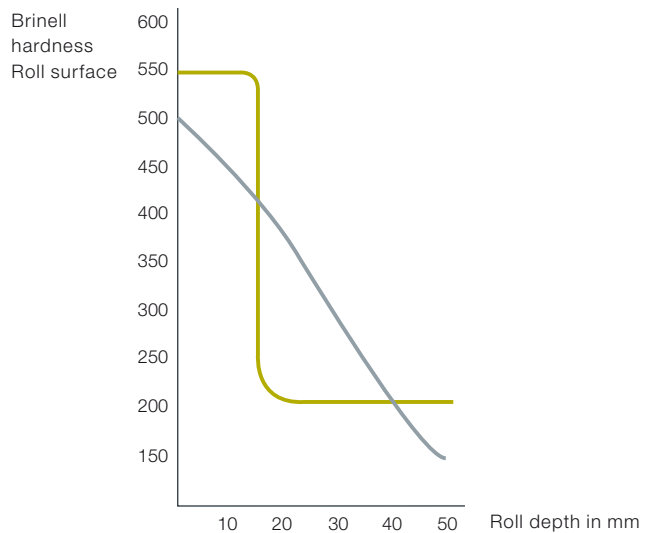
Safety

The new Buhler safety concept for three-roll mills satisfies the latest CE requirements.

- Swiveling aluminum guard for material feed to the rolls by pump, press-out device, or manually.
- Collection sump with electrical detector to protect the intake point underneath the scraper knife
- Safety bar for cleaning



Roll hardness



- Hardness curve of a Buhler centrifugally cast roll: The hardness remains constant to a depth of 10–15 mm, dropping only then to the hardness of the soft gray cast iron.
- Hardness curve of a statically cast roll: The hardness curve drops just beneath the roll surface.

SDVE – Process optimization. Automation to fit your demands.

SDV – Manual control concept

The SDV is equipped with a straightforward relay-type control system. The process parameters are manually adjusted at the machine.



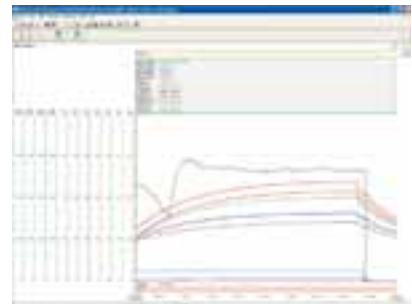
SDVE – Control concept based on Simatic S7 PLC

This concept is based on the vast experience and expertise of our process engineers. The structure of the graphic user interface with touch-panel is simple and easy to understand, making it easier for operators to familiarize themselves with the system. Once all the production data have been entered, the machine can be fully automatically operated. Easy-to-comprehend control circuits ensure reliable, reproducible operation of the machine.



Data registration with «WinTrend»

«WinTrend» is a powerful software product for convenient recording of measurement values such as pressure, temperature, or rpm. Process data can be registered, graphically displayed, exported, and evaluated. Thanks to its flexibility and high performance, this product can be applied across a wide data registration range.



Possible applications include:

- Quality assurance
- Production optimization
- Product development
- Production documentation
- Error analysis

Interface with the master process control system

If your machine is to be operated in a fully automated production plant, its interface with the master process control system is crucial. The machine software has been prepared so that data exchange is easily possible. The Buhler process control system transmits the target values to the machine control system and receives the current actual values. These can be recorded, evaluated, and archived as trend data. This ensures complete production data registration. In addition, it allows the manpower requirement to be substantially reduced.



Technical data.

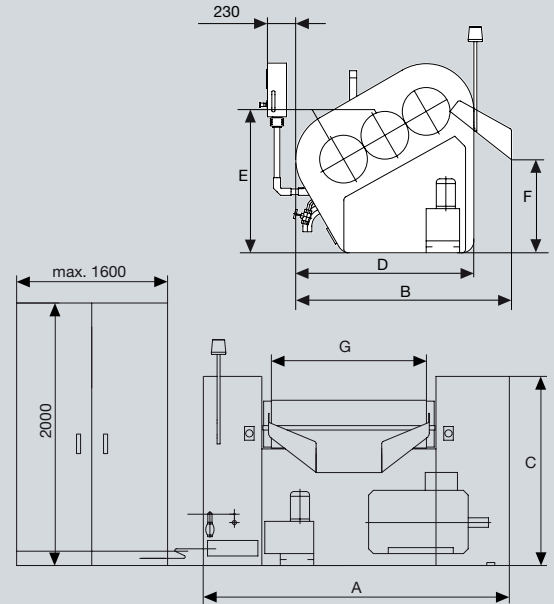
Specification

S = standard features

O = optional features

Efficient batch sizes of 0.3 – 1.0 tons

	SDV 1300	SDVE 1300	SDVE 1300 VIVA
Programmable logic controller	-	S	S
Centrifugally cast rolls	S	S	S
Electronic controlled roll cooling	-	S	S
Closed cooling circuit	-	-	S
Alarm messages	-	S	S
Safety device	S	S	S
55 kW motor	S	S	O
75 kW motor	O	O	S
Drip oiler	O	-	-
Wedge lubrication	O	S	S
Automatic product feed control with dry running protection	O	S	S
Hydraulic potting system	O	S	S
Tube tilting system	O	O	O



Dimensions, weights, etc.

SDV / SDVE	Dimensions mm						Rolls		Motor	Approx. weights kg		Volume of seaworthy packing m ³
	A	B	C	D	E	F	Ø	G	kW	net	by sea	
1300	2560	1685-1740*	1585	1495	1200	780-795*	400	1300	55-75	4550	5300	12.0

* depending on position of scraper

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Services.



Training of customer personnel by Buhler specialists.

Technology laboratories throughout the world

- Extensively equipped in Switzerland, Germany, the U.S., and Japan
- Competent and experienced technologists
- Solution-oriented development of formulations, processes, and equipment
- Simulation and fine-tuning of processes

Training of customers' personnel

- Personnel training courses locally on site
- Selective specialist courses in our technology laboratories
- Broadly based programs, created and headed by our specialists

Installation and start-up

- Very short installation and start-up times
- Competent installation engineers
- Experienced start-up engineers
- Professional construction site management

Plant engineering

- Customized concept and feasibility studies
- Process engineering for everything from small production cells to large-scale turnkey plants
- Single-source supply: process, technology, and automation
- Professional quality planning, budgeting, and scheduling

Customer service

- Consulting by our engineers and service specialists
- Assurance of smooth operation of your plant throughout its life cycle
- Support provided by a global, efficient spare parts service organization

Reconditioning of rolls

- Specialist reconditioning of your rolls
- For consistently high product quality
- Consistently high efficiency

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