Simatec Maschinenbau AG
Roll crusher machines - made in Switzerland

Simatec stands for technically innovative and customized roll crushers. Founded in 1989 in Darmstadt (D), we have also been manufacturing and distributing roll crusher machines in Switzerland since 2015.

The label ‘Made in Switzerland’ and our close cooperation with renowned manufacturers guarantee the high standard of quality that distinguishes us.

We rely on comprehensive and flexible services: from individual consulting and planning, through design and manufacturing to optimization, service and maintenance of the technical systems.

We include the entire production process, analysis of the environment and also provide other corresponding parts for the installation, such as steel and sheet metal processing.

Whether for standard or tailor-made roll crusher machines - we offer both - we combine proven methods with latest technologies, thus providing the perfect solution for each individual situation.

Simatec Roll Crusher:
The double roll crusher with smooth rolls is used for secondary or tertiary crushing of middle to small sized materials. A key benefit of the double roll crusher is the ability to produce a narrow particle size distribution, thus minimizing the production of undesired product sizes.

The smooth roll crusher offers a well performing solution for fine grinding processes. The WB 1100/650 offers a suitable solution for fine grinding processes.

Crushing rolls
- The crushing rolls consist of the roller bodies made by manganese steel
- The rolls are secured either with anchor bolts and end disks
- In order to facilitate maintenance, the shafts are arranged in heavy-duty cast steel housing
- To shorten the maintenance time and increase the productivity in cases of wear, SIMATEC provides the smooth roll crusher WB 1100/650 with an online roll turning grinding system

Advantages
- Constant capacity
- High machine availability
- Overload protection
- Easy replacement of wear and spare parts
WB 1100/650 Roll Crusher
Power, quality and sturdy design combined in one product

Feed Material – Application
Hard Rock → Aggregates for Concrete and Asphalt. The smooth roll crusher is able to produce an exceptional constant grain size distribution in manufactured sands for concrete and asphalt. A very linear grain size distribution in the sand with a well-controlled amount of fines is characteristic for the grinding process in the smooth roll crusher.

Grinding petroleum coke with a max. grain size of 25 mm (1.0 inch) to 80% < 2 mm is a standard application for the WB 1100/650 smooth roll crusher.

Mode of Operation
The crushing rolls are driven in counter rotation by two electric motors (pulley, V-belt). The crushing material is fed into the machine by conveyors or similar systems while it is spread over the whole width of the roll. This is necessary to achieve an optimum use of the crushing tools, a minimum of wear and a uniform final grain size distribution. The parameters like roll diameter or circumferential speed are carefully adjusted to the characteristics of the feed material in relation to the required product specifications.

To influence the final grain size of the product, one of the two crushing rolls is designed to move freely. The adjustment is done manually with an integrated automatic horizontal overload protection.
WB 1100/650 Roll Crusher

General Specifications

**Bearings**
- Self-aligning roller bearings with husks to remove them easily
- Custom made machined blocks to house the bearings
- 4 Eriks-type sealings to protect the bearings from dust
- Central lube system
- Protection of the housing blocks with hardox liner plates

**Drive(s)**
- Two motors; each 30 kW
- Per drive: 6 V-belts
- Engine rocker with rosta suspension elements
- Tapper locked pulley Ø 400 mm on motor
- Tapper locked pulley Ø 800 mm on roll

**CSS (closed side setting) adjustment**
- Adjustment of the CSS by a fine-pitch thread: 4 setscrews M64
- All setscrews are lubed
- Hydraulic gap adjustment as an optional feature

**Actuating force rolls**
- One roll is designed as a “loose” roll and is able to move against a pre-set spring force
- 4 compressing springs generate a max. force of 400 kN and have a remaining free movement of 30 mm
- Max. force with “block on block” setting is 832 kN
- During the setup, the correct actuating force has to be defined

**Frame**
- Solid, welded construction
- HEM- beams as main parts
- All fine-pitch threads can be replaced if worn out
- Machined bearing blocks are clamped with massive beams
- Motor- consoles are secured to the main frame by bolts

**Wiper and dust housing**
- Wiper made of PU blades and adjustable hardox blades encapsulate the crushing chamber

**Safety features**
- Pulleys and V-belts are protected with a solid housing: frame and grating

**Overall weight**
- Approx. 17'000 kg
Service and Maintenance

Service is a priority at Simatec, because long downtimes in production are costly. Thanks to our production and service sites in Switzerland and Germany, our qualified service personnel are quickly on site. Thus supporting our policy and promise of excellent quality which does not expire, but remains valid, even after delivery of our machines.

Our service team will, of course, also help with assembly work so that every Roll Crusher is set up professionally.

Careful commissioning and detailed instruction by our experienced professionals guarantee that the equipment functions correctly.

For further information please visit our website: www.simatec.org