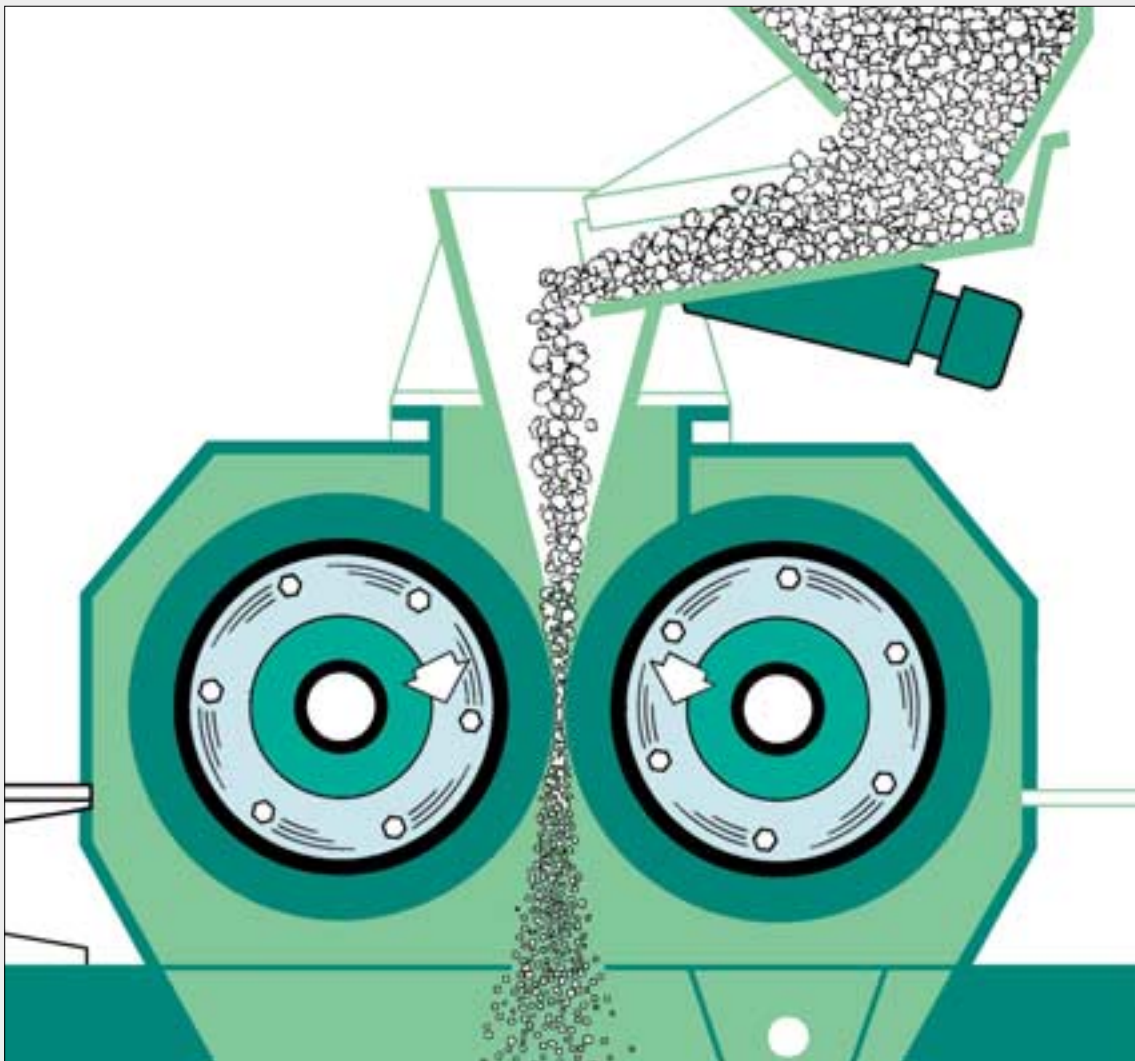GENTLE

SMOOTH ROLL

CRUSHING

CRUSHER

A·U·B·E·M·A

MASCHINEN MIT BISS

THE FIELDS OF APPLICATION

Smooth roll crushers are particularly suitable for medium and fine grinding processes, demanding a strictly defined portion of fine grain and a low dust content.

THE FEED MATERIALS

Raw materials, secondary raw materials and by-products such as coke duff, coal, rock, fireclay, fertilizer, salt, glass and similar products.

Smooth roll crusher with mechanical horizontal adjustment, type 2411

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◆ THE MODE OF OPERATION

The crushing rolls are driven individually and direct-ly by means of electro-motors or with coupling and gears, counterrotating via V-belts. The material is fed into the machine by means of conveyors while it is spread over the whole width of the roll. The roll diameter grants an optimum angle of entry. The careful adjusting of the roller speed towards the fall-ing speed of the feeding material guarantees a gentle grinding process with a minimum of wear and tear.

### ◆ THE SPECIAL CHARACTERISTICS

The roller shells are wearing parts, and are there-fore connected to the roller shafts by roller discs and braced with tie rods. This effective assembly method makes the constant reutilization of the sup-porting roller structure and the quick replacement of worn roller shells possible.
The roller shells are made of highly wear-resistant cast alloys. The possible efficiency is between 60 and 70 per cent of the cover thickness. In order to facilitate maintenance, the smooth roller shafts are arranged in labyrinth-sealed plummer blocks with lubricated, amply dimensioned spherical roller bearings.
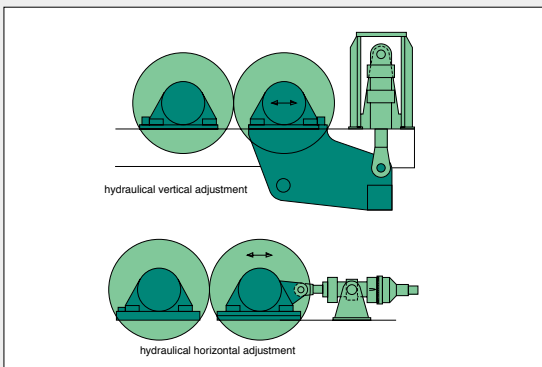Depending on the hardness of the feeding material, a machining of the roller surface at different inter-vals is necessary. This can easily be done by an optional machining device. Thus the installed rolls can be exactly cylindrically turned.
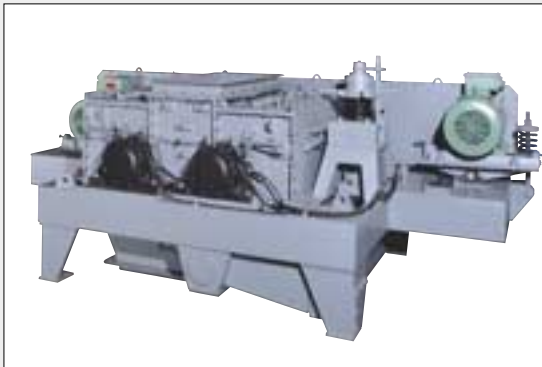
Smooth roll crusher with mechanical vertical adjust-ment
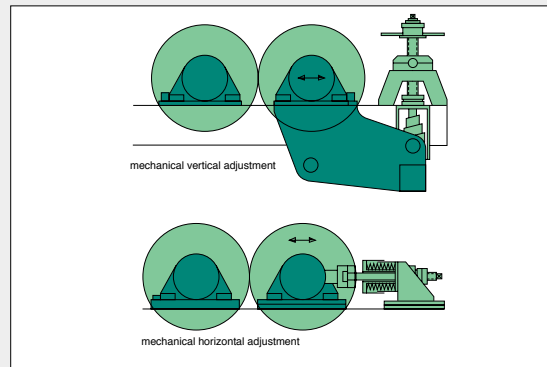
Possibilities for mechanical adjustment

Possibilities for hydraulical adjustment

Smooth roll crusher with hydraulical horizontal adjustment and machining device.

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THE VERSATILITY

The uniform final grain size is affected by the gap width between the rolls. In order to alter the gap width and to compensate wear and tear, one of the two crushing rolls is designed as a loose roll. The adjustment is done mechanically, hydraulically or electromechanically. Overload protection is always integrated.

– **The mechanical vertical adjustment**
Two swivel arms located in the housing of the machine are linked by means of a transversal bar. The gap width is changed by adjusting the loose roll aided by a hand-operated hollow thread shaft.

– **The mechanical horizontal adjustment**
The thread shafts directly affect both of the loose roll sliding bearings located in guiding skids.

– **The hydraulical vertical adjustment**
If the required power can no longer be achieved manually, hydraulic cylinders take over the loose roll adjustment.

– **The hydraulical horizontal adjustment**
The hydraulical horizontal adjustment consists of two hydraulic differential cylinders and the accompanying hydraulic aggregate. All of the mechanical adjustment functions are fully integrated into the hydraulic system.

– **The electromechanical vertical adjustment**
The adjustment is done by means of a driving motor and a reduction gear, via a hollow shaft.

– **Gap measurement system**
Upon request the hydraulic and electromechanical adjustments can be provided with a fully automatic gap measurement system.

THE ADVANTAGES

– high and constant capacity
– low susceptibility to breakdowns
– long lifetime
– easy replacement of wear and spare parts
– wide range of application
– with a minimum of fine grains
– gentle crushing

THE SCOPE OF APPLICATION

– Capacity:	up to 200 m³/h
– Feeding size:	up to approx. 80 mm
– Final grain size:	up to approx. < 1 mm depending on the product and feed material and its size
– Reduction ratio::	up to 1 : 5
– Required drive:	up to 2 x 110 kW

ACCESSORIES

– Machining Device

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M A S C H I N E N   M I T   B I S S