PERFORMANCE DATA

Application:	coarse and pre-crushing
Feed material:	medium-hard, hard, brittle, tough
Feed size*:	< 90 mm
Final fineness*:	< 2 mm

*depending on sample material and instrument configuration

www.retsch.com/bb200

Jaw Crusher BB 200

Power horse for coarse and preliminary grinding

RETSCH jaw crushers are used for the rapid, gentle crushing and pre-crushing of medium-hard, hard, brittle and tough materials. With the **benchtop model BB 51** and the **floor models BB 100, BB 200 and BB 300**, RETSCH offers a wide selection of jaw crushers for sample preparation in laboratories and industrial plants. The crushers excel by numerous performance and safety features and are available in various material versions (e. g. heavy-metal-free). With feed sizes ranging from 35 to 150 mm, the crushers achieve grind sizes down to 0.5 mm, depending on the model.

Small amounts of sample can be crushed **batch-wise**; for larger amounts the floor models can be operated **continuously**. Control of the gap width and zero point adjustment allow for reproducible results. A Belleville spring washer serves as overload protection and - in conjunction with the central lubrication - guarantees a long service life.

The breaking jaws are available in manganese steel, stainless steel, tungsten carbide, zirconium oxide and heavy-metal-free steel to ensure optimum adaptation to application requirements.

APPLICATION EXAMPLES

alloys, basalt, cement clinker, ceramics, chamotte, coal, coke, construction materials, feldspar, glass, granite, minerals, ores, oxide ceramics, quartz, rocks, silicon, slag etc.

Silicon for solar energy

Semiconductors are used for a variety of electronic applications such as integrated circuits (microprocessors, microcontrollers etc.), optical detectors and radiation sources (e. g. light emitting diodes), but particularly for photovoltaics where solar energy is transformed into electrical power. For the majority of applications, silicon is the semiconductor material of choice.

With 26% silicon is the second most frequent element in the geosphere, after oxygen, which means its supply is almost inexhaustible. However, it does not occur in its elementary form but mostly bound as silicon dioxide. Therefore, it needs to be reduced to its pure form in a first processing step. Depending on its origin, silicon dioxide contains various metals which would affect the semiconducting properties of the silicon; that is why it needs to be cleaned in a next step. After this process the silicon is rod-shaped. The rods are then broken into pieces of approximately 5 cm for further processing and cleaning. For the subsequent size reduction process two aspects are crucial: the silicon must not be contaminated with iron which would affect the semiconducting properties; moreover, the fine fraction (particle size not smaller than 1 cm) must not be too high. Therefore, the silicon should only be submitted to a short mechanical stress during the crushing process, as the material is very brittle. The RETSCH jaw crushers BB 200 and BB 300 are highly suitable for this application. Both crushers are available in a **special version for the semiconductor industry** with breaking jaws and wear plates of tungsten carbide and with a plastic lining for feed hopper and collecting vessel. The silicon does not come into contact with steel at any point **providing for maximum purity of the final product.**

With the jaw crushers BB 200 and BB 300 high sample throughput and continuous grinding of large sample volumes is no problem. In addition, both crushers are available as in-line versions for integration into the production process.

before

after

RETSCH jaw crushers: from **compact benchtop model** to **robust floor model** for feed sizes up to 130 mm.

Jaw Crusher BB 51
www.retsch.com/bb51

Jaw Crusher BB 300
www.retsch.com/bb300