Task:

Application field: Glass / Ceramics

Material: Ceramic-cones
(Al₂O₃ - ZrO₂ - SiO₂; fire-resistant ceramics)

Feed size: 80 x 70 mm

Feed quantity: Total sample of 1 kg (2 cones) / fine grinding: 40 g

Material specification(s): hard brittle

Customer requirement(s): Pre-grinding: 2 – 8 mm / approx. 1 kg/batch; fine grinding: < 150 µm

Subsequent analysis: X-ray Fluorescence Analysis

Solution:

Selected instrument(s): Jaw Crusher BB 200
Vibratory Disc Mill RS 200

Configuration(s): BB 200: Breaking jaws of precision-cast manganese steel;
RS 200: 50 ml Grinding set WC

Parameter(s): BB 200: gap width = 2.5 mm
RS 200: revolution speed = 1200 rpm

Time: 30 - 40 s (BB 200) / 90 s (RS 200)

Achieved result(s): BB 200: 97 % < 8 mm
RS 200: 73 % < 100 µm

Remark(s): To prevent contamination with iron, breaking jaws made of tungsten carbide can be used.

Recommendation: For crushing of ceramic-cones the Jaw Crusher BB 200 is suitable under the above mentioned conditions.
Pictures of the sample

**Fig. 1:** original sample

**Fig. 2:** after crushing in BB 200

**Fig. 3:** after fine grinding in RS 200