

IMPACT CRUSHER

REVERSIBLE SBM HORIZONTAL IMPACT CRUSHER SMR



With the development of the legendary swing bar mill over 50 years ago, the history and the naming of SBM both came into being simultaneously. Today, around 5000 impact crushers around the world are testament to the efficiency, the reliability and above all the success of this established crusher concept.

The experience of numerous generations of crushers, the application on diverse types of stone and materials and the constant further development have made SMR machines from SBM the number 1 name in horizontal impact crushers for sand and gravel production.



SMR in Malta

IMPACT CRUSHER

Why impact crushers from SBM?

- Best grain shape with high quality grain proportion.
- Long service life of the machine due to the use of high quality materials.
- Quality made in Austria.
- Designed for a wide range of applications in order to facilitate flexible production for the customer.

Areas of application

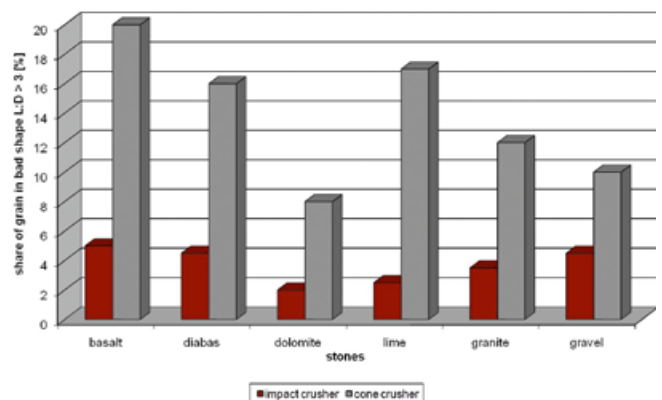
- Natural stone (medium hard - hard)
- Sand & gravel
- Slag

Advantages of impact grinding on product result:

- High degree of grinding
- Selective grinding
- Improved product quality
- Greater cubicity and therefore improved grain shape
- Reduced impact fragmentation value per Los Angeles

Economic advantages of the SMR:

- Reduced wear due to the use of particularly tough materials even with highly abrasive substances.
- Easy maintenance due to extremely accessible design.
- Low energy and cost of investment in comparison to other crushing methods.
- A single machine for economic production of sand as well as for high-quality gravel.
- Low filler content.
- High medium particle proportion in sand and gravel.
- Uniform crushed product due to regrinding of the striking bars in reverse operation.



Comparison impact crusher to cone crusher: Proportion of poorly formed grains (chipped grain 8/11)



Key switch for crusher doors.

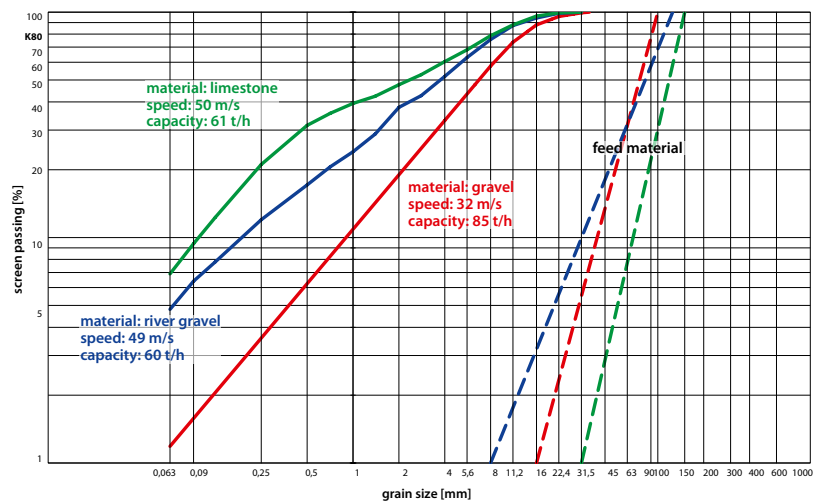
Re-sharpening of the striking bars in reverse operation.

Machine characteristics

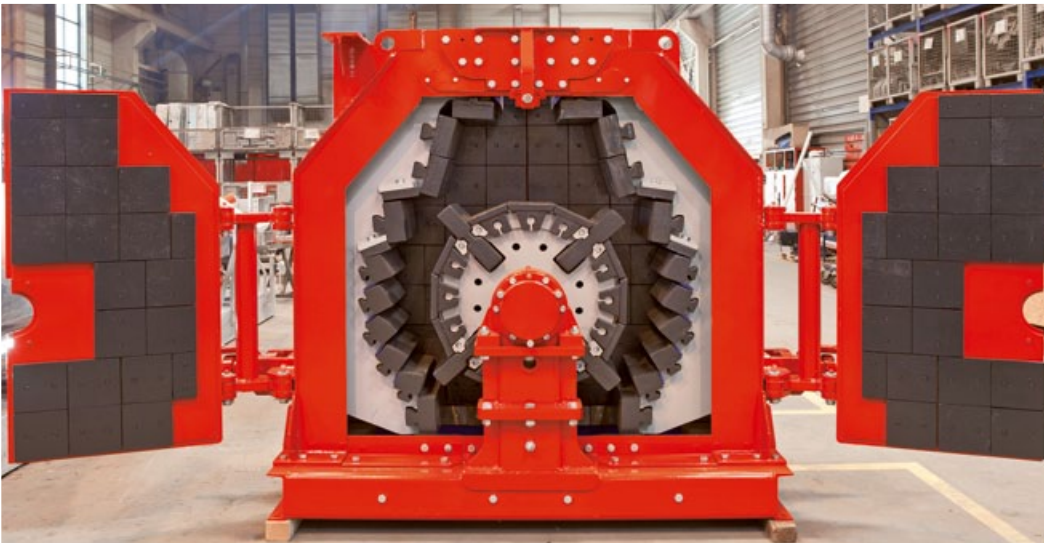
- Eight crushing levels enable optimal grinding and an extremely high-quality grain shape.
- Excellent accessibility and short maintenance cycles.
- Re-sharpening of the striking bars in reverse operation.
- Optimal striking bar utilisation in comparison to other rotor designs (>50%).
- Options to retrofit the machine thanks to modular design. Mechanical - hydraulic - automatic oscillation adjustment.
- High level of standardisation for the wearing parts ensures high economic efficiency of the machine.
- A single unit with trough and feed box ensures constant loading across the entire width of the machine. This guarantees the best possible utilisation of the baffle plate over the entire width of the machine.
- The motor is positioned underneath the crusher to ensure optimal accessibility from all sides.

Electrical, control and safety management

- The complete package including control direct from the manufacturer.
- Simple and economical integration into existing systems.
- Safety management in accordance with the latest machinery directive 2006/42/EC
- Remote maintenance



Screening lines SMR 10/05/4



Impact crusher SMR 10/5/4



Impact crusher SMR 10/10/4

Automation - SBM Crush Control

A comprehensive automation system is available in combination with the fully hydraulic impact plate adjustment and frequency converter with the following functions:

- Automatic wear compensation
- Recipe selection for various materials and products
- Manual manipulation options and correction of machine parameters during the running production process.
- Setting options for the impact plates and the rotor rim speed possible under load.

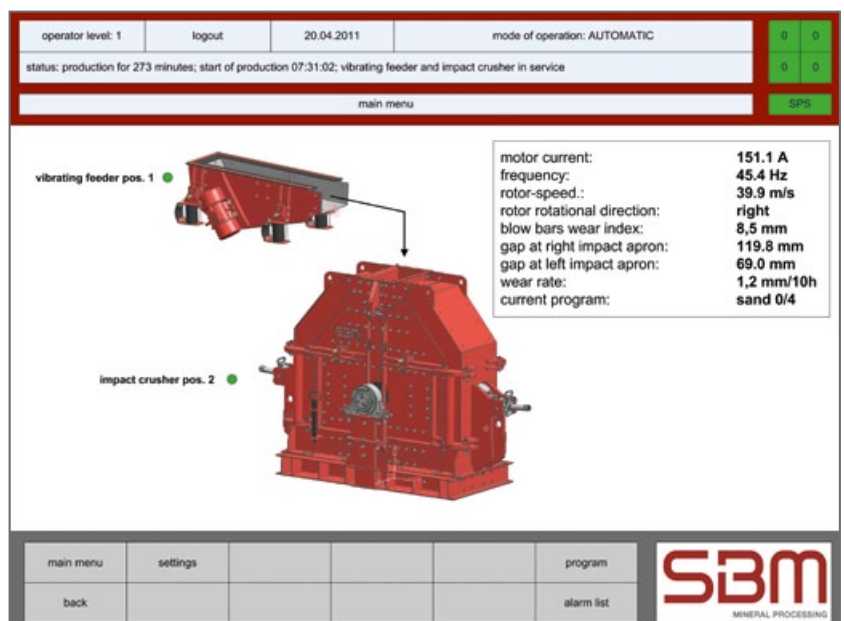
Advantages of automatised production with SBM Crush Control

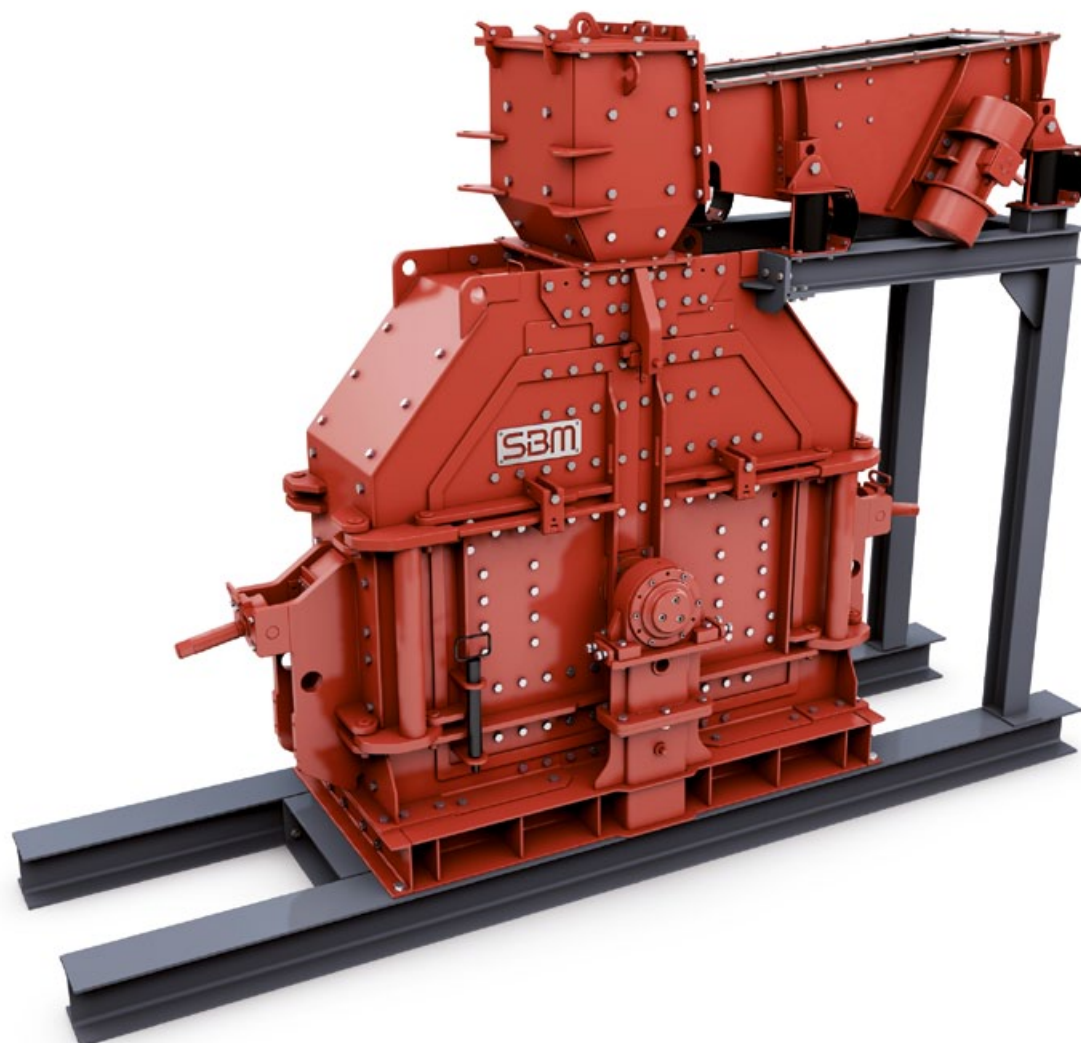
- Maximum system availability (increase of >4% in system availability due to automatic impact plate adjustment).
- Constant production thanks to wear compensation.
- Simple adjustment processes during operation.
- Visualisation of machine and operating data with wear coefficients.
- Adaptation to variations in demand for individual grain classes.

Economic aspects

- Prevention of unnecessary material transport for intermediate storage or regrinding of excess grains.
- Minimisation of space required for intermediate storage of products.
- Reduction of operating costs caused by regrinding of coarse chipped grains to finer gravel or sand.

Visualisation of SBM Crush Control:





SMR dimensions

Build dimensions	Throughput* from – to [t/h]	Drive output [KW]	Feed size** [mm]	Intake opening H x B [mm]	Machine weight [kg]
10 / 05 / 4	70 – 130	75 – 160	150	260 x 515	8,100
10 / 10 / 4	130 - 200	110 - 250	150	260 x 1,015	12,400

Application examples SMR

Build dimensions	Feed material	Rotor rim speed [m/s]	Feed [mm]	Final product achieved at k_{80} [mm]
10 / 05 / 4	River gravel	44	32/80	0 / 11
10 / 10 / 4	River gravel	37	32/150	0 / 14

Wear coefficients under actual operation

Feed material	Feed size [mm]	Throughput* [t/h]	Rotor rim speed [m/s]	Service life / set of striking bars* [h]
Quarzporphyr	16 / 45 + 8 / 30	100	44	400
River gravel (97% SiO ₂)	16 / 32(50) in circuit	100	32	60
Limestone	4 / 120	80	45	1,550
LD-slag	32 / 150	80 - 100	53	90

*) Dependent on the feed material and machine settings

**) Values relate to volume diagonals of the size of the biggest single piece



Semimobile SMR