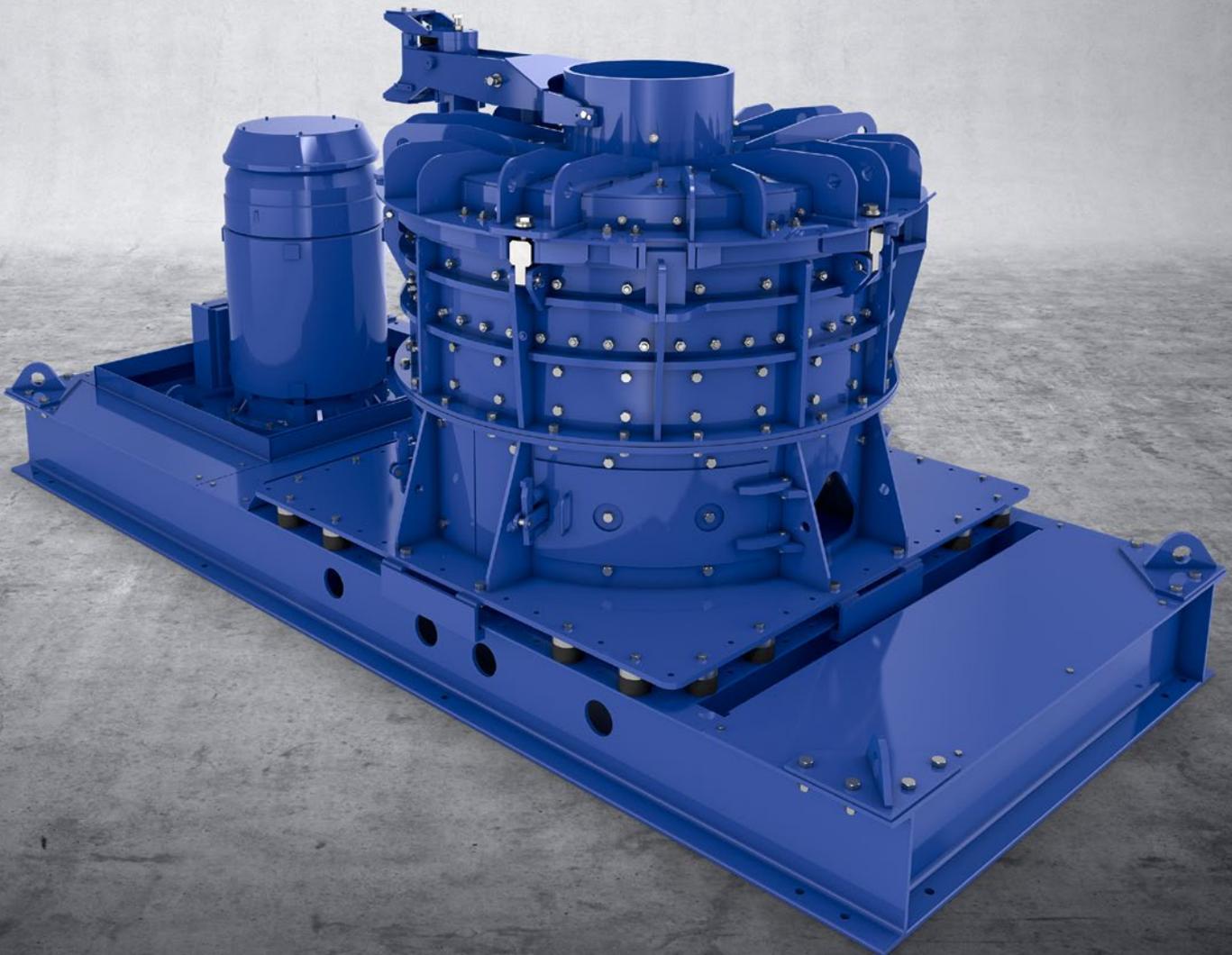


ROTOR IMPACT MILL (RPMV & RPMX)
Metal recovery from composites of ductile
and brittle waste materials

TRANSFORMING
MATERIALS INTO VALUE



YOUR CHALLENGE – OUR SOLUTION

Optimal technology for the recovery of metal concentrates.



Metal composites



Waste electrical & electronic equipment (WEEE)



Automotive shredder residue (ASR)



Cables & strands

✔ **Maximum performance for optimized fine processing.**
Metal composites and waste materials containing metal can be shredded, separated, isolated, ball shaped, or cleaned. Essential requirement for efficient separation and sorting of non-ferrous metals and other materials.

✔ **Perfect recovery of metal concentrates.**
Brittle-hard materials are shaped intensively, material composites are isolated, and tangled materials are separated out. Rubber and plastic parts are largely retained, but separated from other materials. Metals such as copper or aluminum are shaped into balls.

✔ **Plant integrations made to measure.**
We offer complete system solutions from steel construction in different versions to bunker and dosing technology, feeding and discharging technology, classifying and separation technology, and dust removal systems. We plan the system design in accordance with your requirements and comprehensively coordinate the project with you.

✔ **Global after-sales service.**
Speed, reliability and professionalism are key factors for efficient production processes. Take advantage of our comprehensive range of top-quality consulting and other services to achieve maximum system availability.

[Get more details](#)

www.bhs-sonthofen.com/rpmvrpmx

A WIDE RANGE OF INPUT MATERIALS

All benefits at a glance.

With the globally unique **rotor impact mill** of type RPMV & RPMX, BHS-Sonthofen sets standards in fine treatment and metal recovery for the recycling industry. More than 100 years of experience in crushing technology combined with continuous further development form the basis for this success. BHS-Sonthofen offers outstanding and leading processing technology in this field that is second to none. Optimized and high output quality, an extremely robust, sturdy design, and an improved maintenance concept ensure high machine availability.



High throughput rate

From the machine design to detailed structural solutions and high circumferential speed, everything is designed for a high throughput rate.



Output quality

Thanks to the improved impeller rotor and hammer design, optimum and consistent output quality is achieved over the entire service life.



Low maintenance requirements

A new maintenance concept with improved interchangeability of impact hammers and anvil ring elements ensures fast, effective maintenance.



Sturdy machine design

The machine design incorporates over 100 years of crushing technology experience and offers the most robust and sturdy design on the market.



Sound investment for the future

Qualified, valid test series with customer material in the modern test center and an economic feasibility calculation offer a future-proof solution.



Safe solution

Confidence thanks to proven technology, process experts, modern test center, intensive process consulting, and global after-sales service.

WELL THOUGHT OUT DOWN TO THE SMALLEST DETAIL

Leading technology for the highest requirements: sound investment for the future.

Worldwide unique crushing principle

In the field of metal recovery from composites of ductile and brittle waste materials, the rotor impact mill of type RPMV and RPMX is a high-performance vertical shaft crusher unique in the world. Its unique impeller rotor and the special anvil ring ensures that the feed material is subjected to an optimum level of stress. The high circumferential speed of the rotor generates centrifugal forces. At the same time, the shredding tools generate impact and shear forces that transfer a high energy load onto the feed material. In this process, the rotor impact mill operates selectively, finely crushing and pulverizing brittle materials and mineral fractions. Ductile metals and material composites are optimally disintegrated, separated and pelletized. At the same time, rubber and plastic parts are separated from other materials but remain largely intact. This results in optimal conditions for the subsequent, efficient separation and sorting of valuable components such as non-ferrous metals from other materials.

Selective crushing of brittle materials

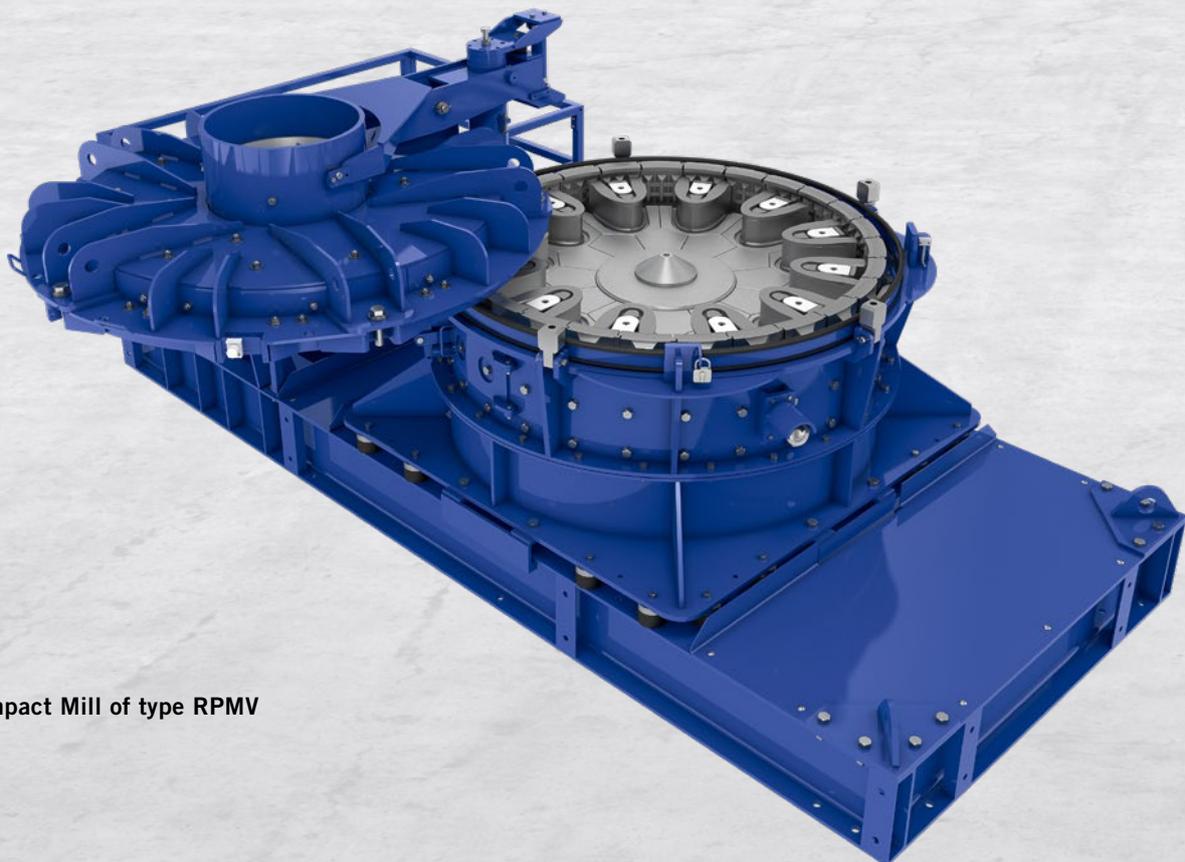
Due to the impact and shear forces, brittle materials such as minerals, glass, or castings are selectively finely crushed and pulverized.

Shaping ductile materials into balls

As a result of the intensive stress between the horse-shoe-shaped hammers and the fixed anvil ring, ductile materials and all plastically deformable metals such as copper or aluminum are shaped into balls.

Separation of composite materials

The energy input and multiple stresses reliably separate composite materials with different material properties, separate entangled materials and clean metals. Plastic sheaths of wires are reliably separated during cable recycling.



Rotor Impact Mill of type RPMV

Two series, depending on requirements

Two rotor impact mill series, the RPMV and RPMX, are available depending on the process and material requirements.

Machine control

Operators can adjust the rotor speed and the customizable ring gap to configure the machine according to the crushing task at hand. Retooling is very simple.

Operational unit

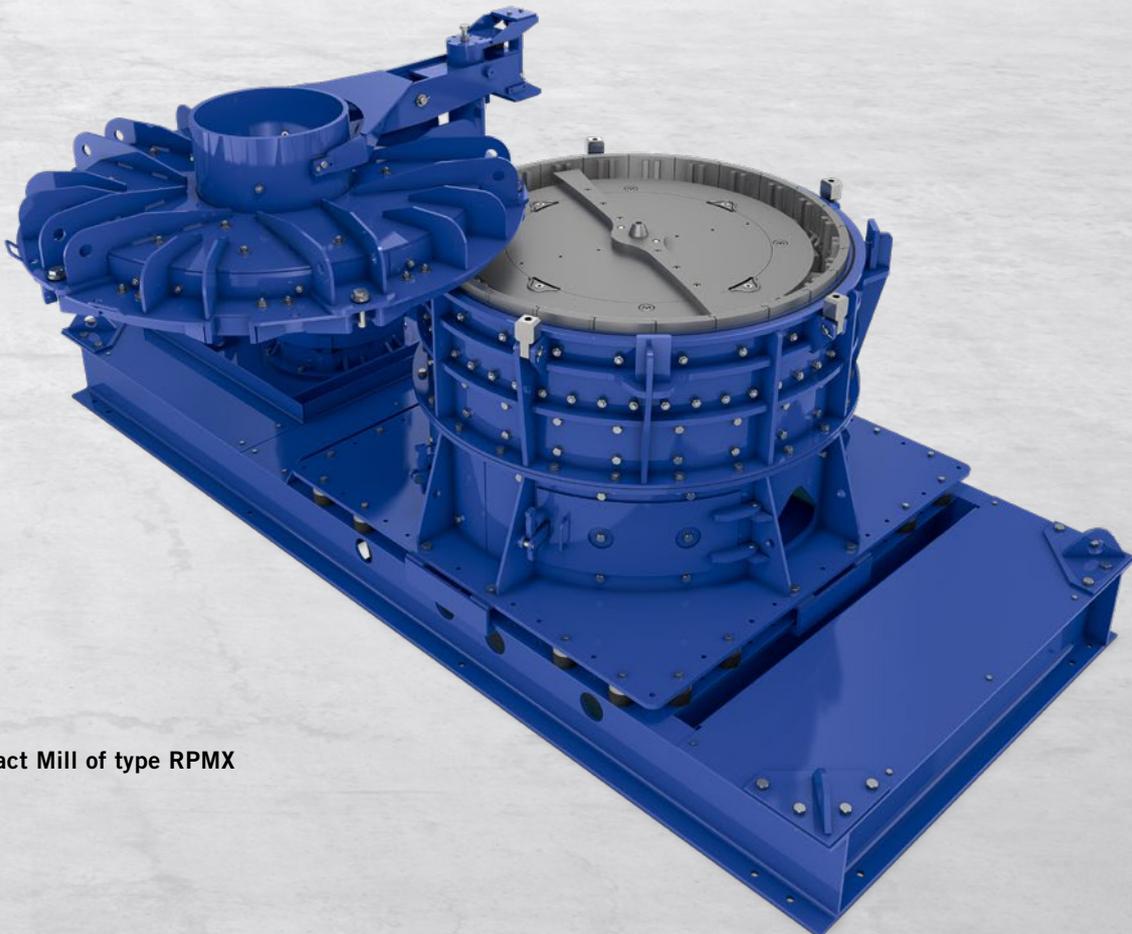
The machine and drive train are assembled onto a base frame as a unit that is ready for installation. A large cover that can be raised hydraulically and pivoted by 360° allows fast, unimpeded access.

Maintenance concept ensures high availability

A new maintenance concept with improved interchangeability of impact hammers and anvil ring elements ensures simplified, effective maintenance. Important machine elements are reliably protected by easily replaceable wear parts. In addition, improved materials used in wear parts are optimized for the relevant application

Certainty through tests

A modern test center in Sonthofen offers customers the opportunity to carry out targeted crushing tests with the customer's own materials on a production scale and with various machine parameters. Test results are documented and analyzed in a qualified manner.



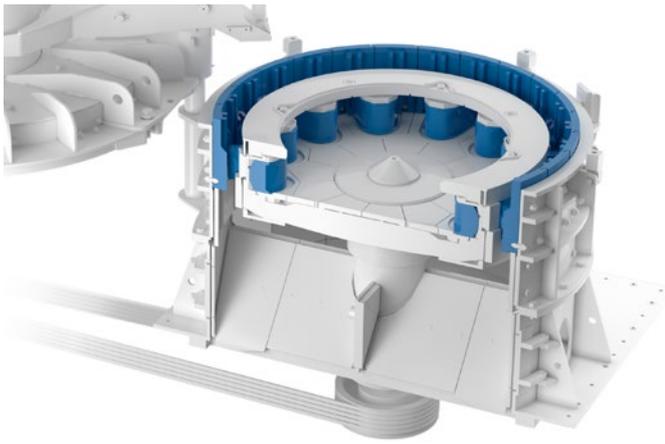
Rotor Impact Mill of type RPMX

BENCHMARKS IN THE RECYCLING INDUSTRY

Rotor impact mills for perfect metal recovery.

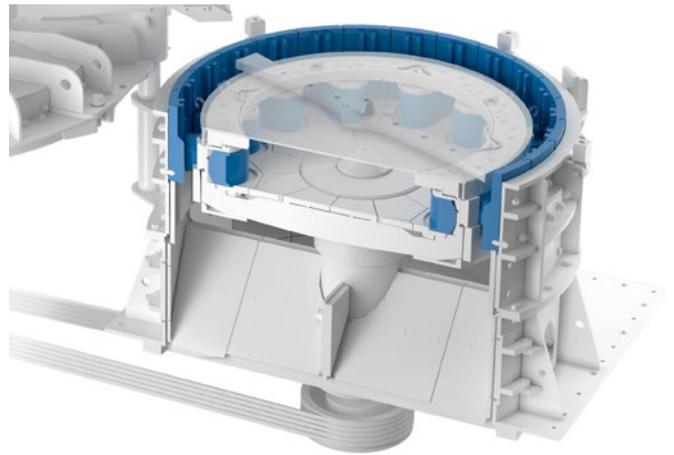
Two series for perfect output: RPMV and RPMX

For years, the rotor impact mill has been setting standards in the recycling industry for processing and recovering recyclable materials from metal-bearing fine fractions. Two series are available depending on the process and material requirements – the RPMV for a wide range of applications and the RPMX for perfect fine treatment..



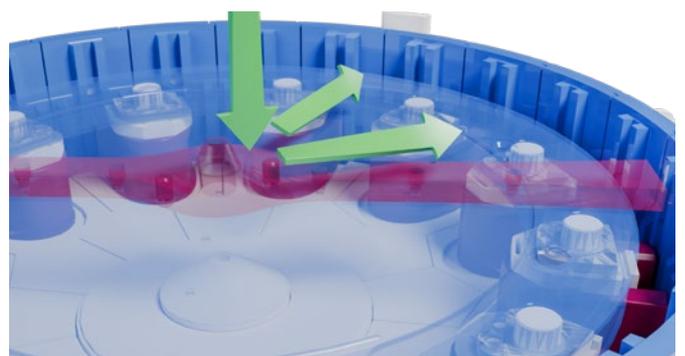
RPMV rotor impact mill: wide range of applications

The RPMV has proven itself many times over in the recycling industry around the world for separating metallic composites, crushing brittle components, and shaping metals with particle sizes from 5 to 30 mm into balls. The input material is loaded into the working chamber from the top center. When it impacts the rotor, the material is accelerated outwards by centrifugal forces; there, the horseshoe-shaped impact hammers engage it and throw it against the anvil ring. Between the tips of the impact hammers and the anvil ring, the rotation creates a definable grinding gap in which intensive impact and shearing forces takes place. The input material is treated until it reaches the target size and then drops down through two discharge chutes.



RPMX rotor impact mill: perfect fine treatment

With the narrow grinding gap of 5 mm, the RPMX is the ideal machine for ball-shaping and separating composite materials with smaller particle sizes from 0 to 15 mm. In contrast to the RPMV, the RPMX rotor impact mill uses a rotor cover plate to direct the material from above into the narrow gap between the optimized impact hammers and anvil ring. Thus the full height of the grinding gap is utilized for fine processing, ensuring a longer retention time and a higher stress frequency of the input material. An intense ball-shaping effect is achieved in combination with a high circumferential speed, a narrower grinding gap, and a specially toothed anvil ring. Optimal for reliably removing cable sheathing and other substances adhering to metals.



OPERATING PRINCIPLE: SIMPLE BUT INGENUOUS

100 years of crushing technology experience.

Simplified replacement of the crushing tools

Both the anvil ring and the impact hammers can be easily replaced. On the RPMV, the anvil ring elements are suspended in the milling housing, and on the RPMX they are firmly bolted in place. The optional mandrel and load hook tools can be used for easy hammer replacement. This significantly simplifies maintenance and reduces the physical strain on operating personnel.



Impact hammers of the rotor impact mill

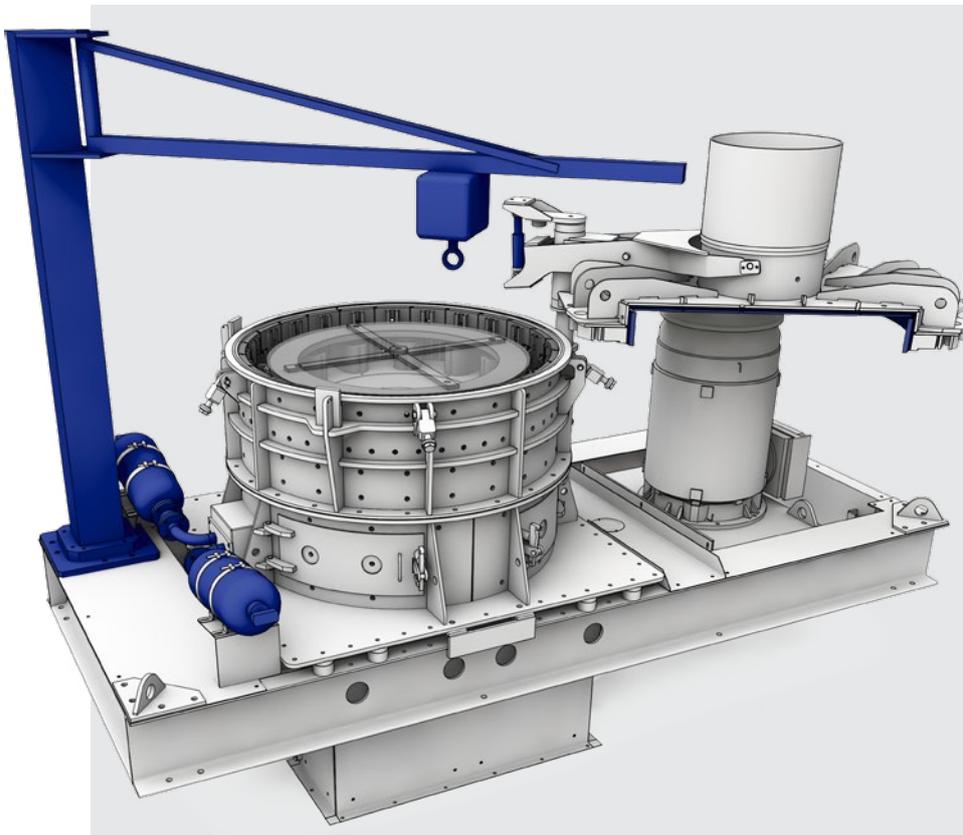
Optimized and improved impact hammers

For consistent output quality, a higher throughput rate and significantly reduced wear, the impact hammers have been continuously improved. To ensure this over the entire service life, the size of the ring gap to the anvil ring and thus the gap width can be effectively readjusted over the long term by simply replacing spacers of different sizes as the impact hammers wear.



Spacers

Standard equipment & options



Standard equipment:

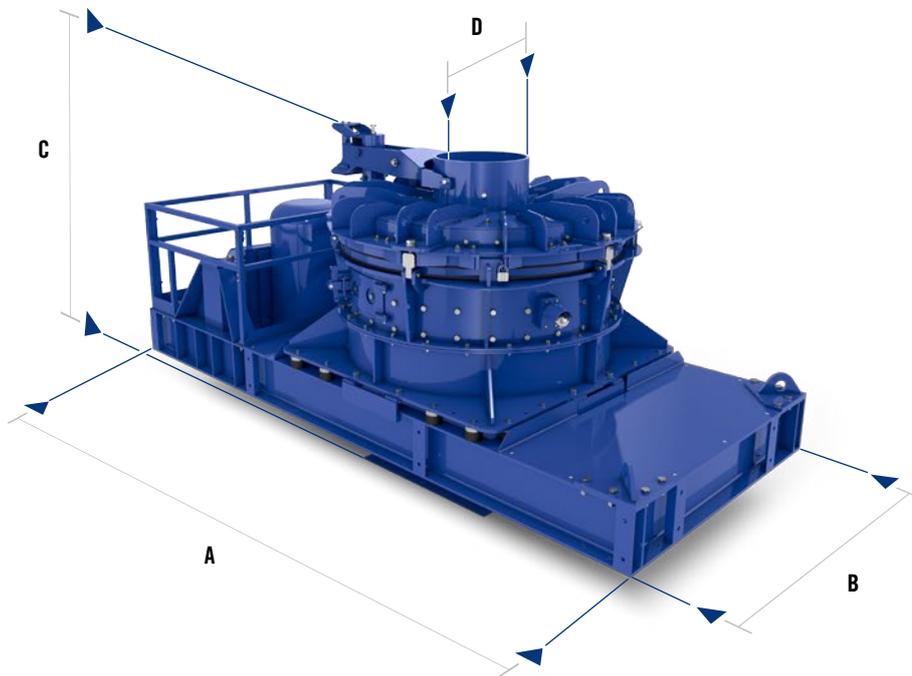
- Electro-hydraulic cover opening
- Vibration absorption
- Recirculating oil lubrication

Options:

- Column-mounted slewing crane
- Plant or PLC control
- Special tools

UNCOMPROMISING PERFORMANCE AND FLEXIBILITY

Two series and five sizes: Optimal individualization.



Performance data

Type	Rotor diameter x height	Number of hammers	Circumferential speed max.	Drive power max.
RPMV 1113	1,150 x 135 mm	8 units	70 m/s	132 kW
RPMV 1513	1,500 x 135 mm	12 units	70 m/s	200 kW
RPMX 1116	1,150 x 160 mm	8 units	90 m/s	250 kW
RPMX 1516	1,500 x 160 mm	12 units	90 m/s	315 kW

Dimensions and weights

Type	A	B	C	D	Weight ¹⁾
RPMV 1113	4,600 mm	2,000 mm	2,700 mm	406 mm	7,700 kg
RPMV 1513	4,900 mm	2,120 mm	2,740 mm	610 mm	12,000 kg
RPMX 1116	4,600 mm	2,000 mm	2,790 mm	406 mm	8,500 kg
RPMX 1516	4,900 mm	2,120 mm	2,850 mm	610 mm	12,800 kg

1) Weight data for standard version without motor and options.
All technical data stated correspond to the standard version and are subject to development.