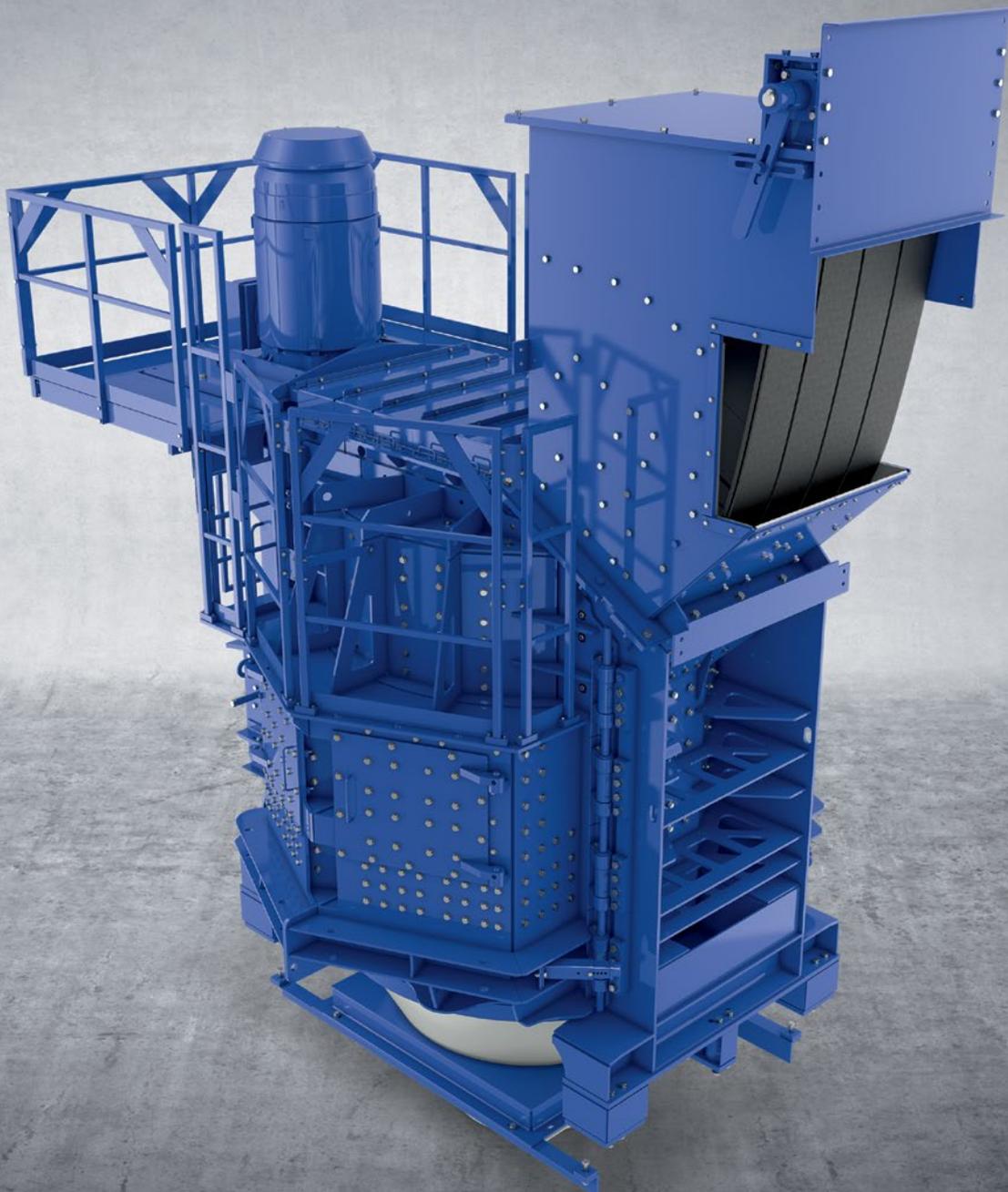


## **ROTORSHREDDER (RS)**

Selective shredding and disaggregation of metal-containing reusable materials

TRANSFORMING  
MATERIALS INTO VALUE



# YOUR CHALLENGE – OUR SOLUTION

Optimal recovery of recyclable materials through impact, shock and shearing forces.



Electrical & electronic waste  
(WEEE)



Automotive shredder residue  
(ASR)



Incinerator bottom ash (IBA)



Metallurgical &  
ironworks slag



Motor armatures &  
electric motors



Aluminum scrap



Light metal scrap



Metals & metal composites

## ✓ High metal recovery rates

The BHS Rotorshredder (type RS) optimally shreds and disaggregates recyclable, waste and composites containing metal. Through impact, shock and shearing forces, the shredding tools exert an intense amount of stress on the input material. In this manner, recyclable materials are first selectively shredded, which creates the perfect conditions for subsequent clean separation into pure fractions.

## ✓ Optimum flexibility despite material diversity

While achieving an optimum output result, the Rotorshredder can precisely disaggregate a wide range of input materials. Various machine parameters can be used to optimally influence the intensity and selectivity of the treatment of the feed material. This requires a proven operating principle and a robust, high-torque machine.

## ✓ Economical solution: low operating costs

Primarily, the Rotorshredder is designed for conventional scrap recycling and processing, which have to process a wide range of input materials containing metal at high throughput rates. An optimized design, mature technology, continuous operation, ease of maintenance, high efficiency and high recovery rates make favorable operating costs possible.

## ✓ Investment security through tests

The modern BHS test center offers the possibility of carrying out targeted tests with customer-specific material on a production scale with various machine parameters. Based on the test results, we offer a tailor-made solution: individual profitability calculation, optimum machine design and process parameters.

[Learn more](#)

[www.bhs-sonthofen.com/rs](http://www.bhs-sonthofen.com/rs)

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# ADVANTAGE THROUGH TECHNOLOGY AND KNOW-HOW

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All benefits at a glance.

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## Continuous operation

Continuous operation facilitates efficient integration into an end-to-end process. Another advantage is the short retention time for input material in the machine to avoid excessive transfer of heat into the shredded material. This prevents plastics from melting, for instance.

## Simple but effective hammers

The BHS Rotorshredder operates with several rotating hammers flexibly mounted one above the other on a vertical shaft. These do not need to be readjusted or sharpened due to the rugged and effective design.



High throughput rate



Economical solution



Low downtime



Intelligent control system



Low maintenance



In safe hands

## Flywheel

We equip all Rotorshredders with a large flywheel. Short-term mechanical or electrical load peaks are handled automatically, which protects the machine and avoids expensive spikes in power consumption.

## Robust machine design

The robust machine housing made of a sturdy welded steel construction guarantees a long service life of the machine.

## Discharge of large impurities

The automatic, sensor-controlled opening of an optionally available impurities slide enables the discharge of large individual parts that cannot be shredded by the rotating hammers.

## Low maintenance requirements

Two large doors ensure very easy access to the interior of the Rotorshredder for maintenance work. All wear parts are bolted in place, which allows them to be quickly replaced.

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# WELL THOUGHT OUT DOWN TO THE SMALLEST DETAIL

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Leading features and technology for the highest requirements.

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## Designed for continuous operation

The advantage of the Rotorshredder (RS) is that the output material is discharged uniformly due to continuous operation. This creates advantages in terms of efficiency, especially for the downstream separation and sorting process. In addition, impurities are detected by the automatic impurities slide (optional) and safely discharged.

### 1 Machine housing

Made of a robust welded steel, the structure of sturdy machine housing easily withstands the forces that occur during operation.

### 2 Hammers

The rotating, solid-design hammers in the working chamber are flexibly suspended on a vertical shaft, but can be changed quickly and easily if necessary. Recyclable materials are shredded intensively and selectively by the hammers during operation.

### 3 Infeed hopper

The input material is loosely fed into the large, central infeed hopper.

### 4 Doors

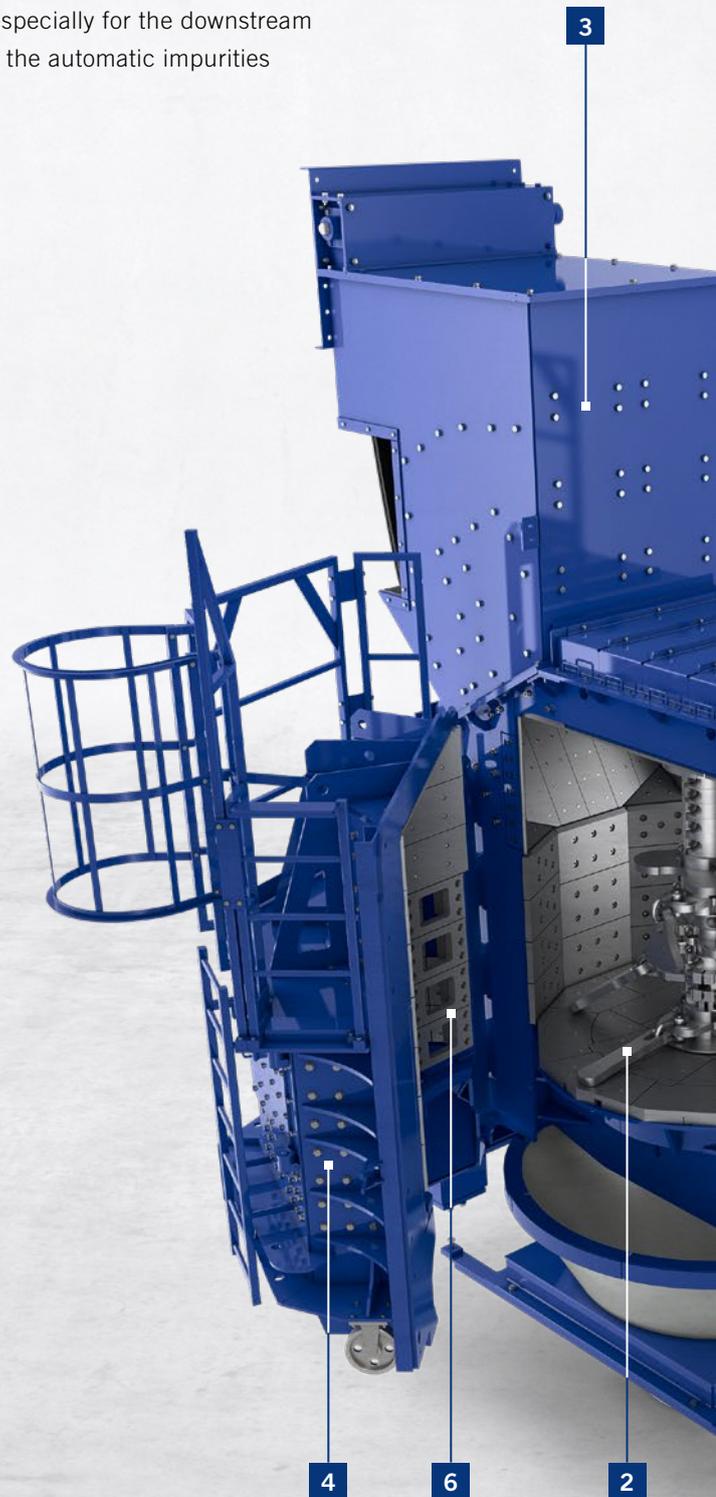
Two large doors on either side of the Rotorshredder ensure very easy access to the interior of the machine for maintenance work.

### 5 Powerful drive system

A powerful drive controlled by a frequency converter with maximum drive powers of the two sizes between 110–250 kW and 200–400 kW offers optimum conditions for intensive pre- and post-shredding. As a result, the machine can be configured to account for the properties of different input materials.

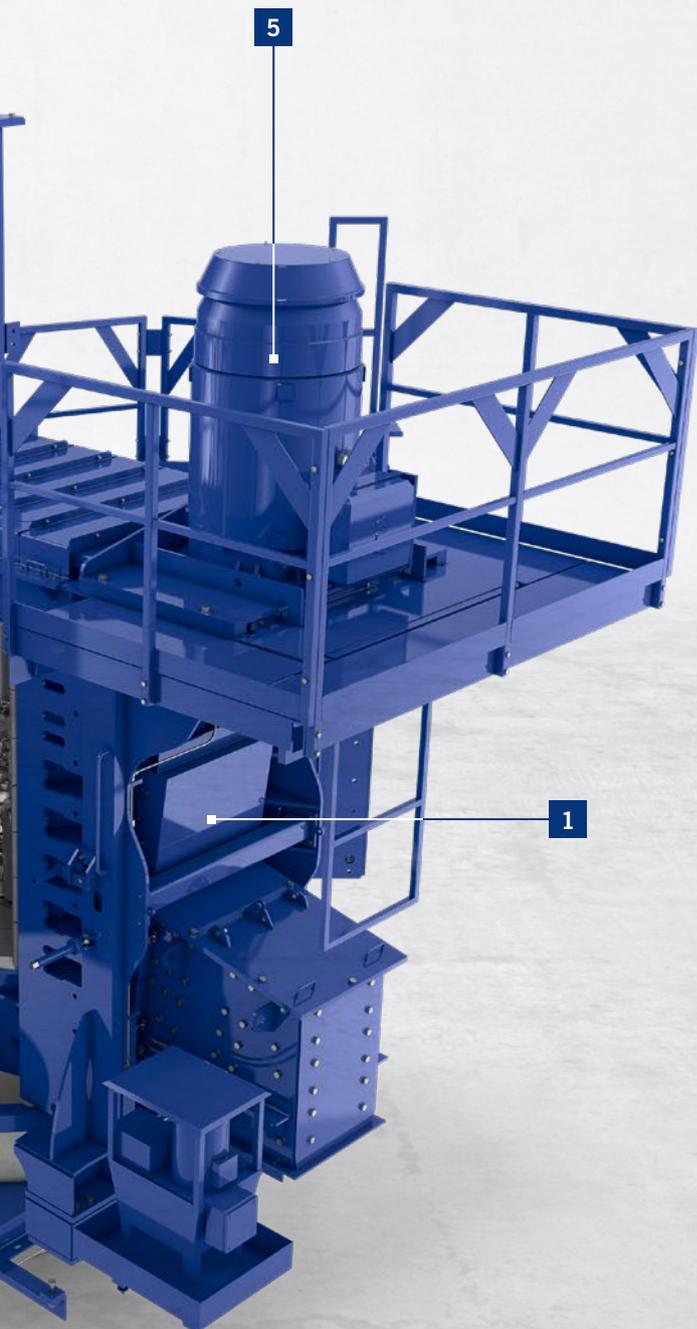
### 6 Door grate segments for material discharge

One special feature of the Rotorshredder is its patented grate opening located in the large, double-walled doors. The inside of the doors consists of grid segments with openings through which the material to be shredded automatically exists the working chamber when the required particle size has been attained. Different grate segment types can be used depending on the input material and the specific requirements at hand. The grate segments can be changed easily and quickly.



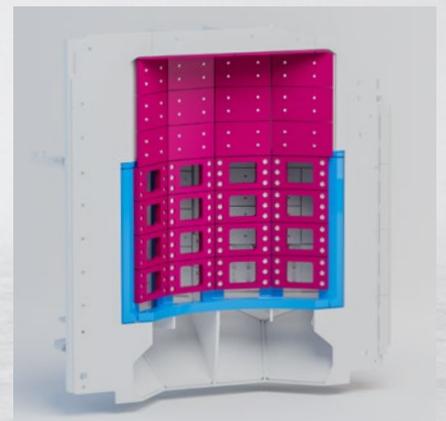
### Intelligent control system

The fill level and throughput of the Rotorshredder are optimized by the intelligent control system of the feed conveyor.

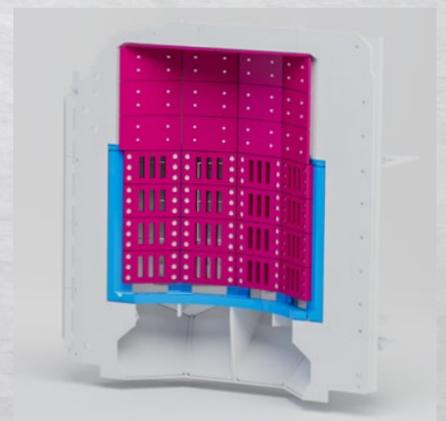


### Options

- ⊕ Hammers (material-specific)
- ⊕ Impurities slide
- ⊕ Feed and discharge hopper
- ⊕ Grate segments (application-specific)



Grate configured for separating entangled input material



Grate configured for a high degree of shredding with brittle input material

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# OPERATING PRINCIPLE: SIMPLE BUT INGENUOUS

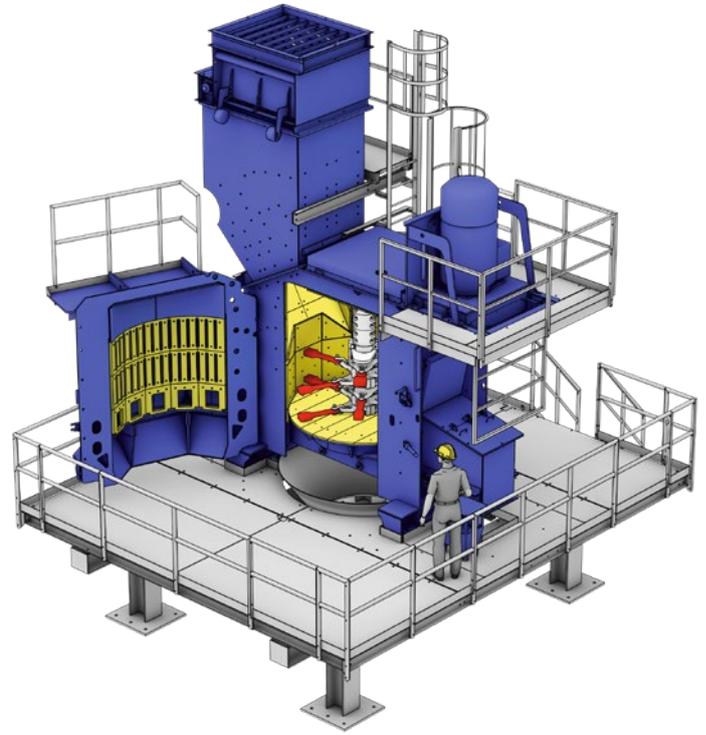
100 years of crushing technology experience.

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## Proven operating principle

The BHS Rotorshredder consists of a cylindrical working chamber with a vertical, high-speed shaft. Mounted on this are pairs of working tools, called hammers, in a vertical floating arrangement. The hammers are stabilized and horizontally aligned by centrifugal force. At the same time, the flexible suspension of the hammers on the shaft serves to provide overload protection. In addition, the Rotorshredder has a flywheel as an energy storage device. On the inside of the cylinder wall of the door there is a solid split grate, the openings of which may vary based on the customer's specific requirements.

The input materials are fed into the working chamber from the top via a hopper. Upon entering the crushing radius of the tools, they are subjected to very intense stress through a combination of impact, shock and shearing forces and crushed. The selectively processed material then exits the working chamber through the split grate.



## Setting of the degree of shredding

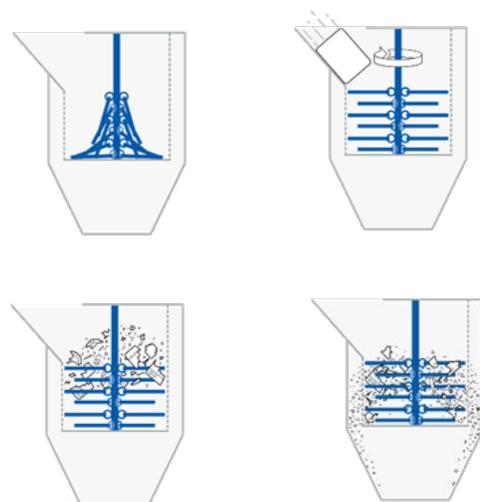
The degree of shredding and the intensity of the processing can be variably adjusted by changing the speed, tool or grate, as well as the fill level of the machine. The machine is offered in two different sizes to accommodate different requirements, particularly with regard to throughput rates and the size and compactness of the input material.

## Convenient removal of impurities

It is not possible to fully prevent impurities from finding their way into the input material. Solid impurities that cannot be shredded by the hammers can exit the working chamber via the automatic, sensor-controlled opening of a separate impurities slide.

## Separating out impurities

The EU directive on the recycling of electrical and electronic waste requires the reliable separation of specific components containing harmful substances (batteries, capacitors, printed circuit boards and so on). Without severely damaging them, the BHS Rotorshredder can remove these substances from the composite. These impurities can be consistently removed from the material flow after passing through the shredder.



Electrical scrap shredding process

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# EQUIPMENT AND EFFICIENCY MADE TO MEASURE

Highest efficiency and flexible plant engineering.

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## Plant integrations made to measure

Our experts will provide you with competent support for customized integration into existing plants, or for the planning and project engineering of a new plant, right through to installation and commissioning. Depending on your needs, we even offer complete system solutions, including process development and turnkey recycling plants – all from one source. If necessary, the offering can include hopper and dosing technology, feeding and discharge technology, classifying and separation technology and dedusting systems. We plan the plant design in accordance with your requirements and comprehensively coordinate the project with you.



Specialized personnel during installation



Turnkey recycling plant

## LONG-LIFE service contract and BHS original spare parts: wide assortment of parts in stock

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Your machines deserve regular optimal maintenance. A **LONG-LIFE service contract** will not only extend the service life of your equipment, but you also save operating costs and keep the budget for your machinery in check thanks to predictable costs. The framework agreement for the annual requirement of original BHS spare parts also ensures you 100% delivery availability and short-term call-off options as required. This means that both the operational safety and reliability of your machinery remain at the highest level.

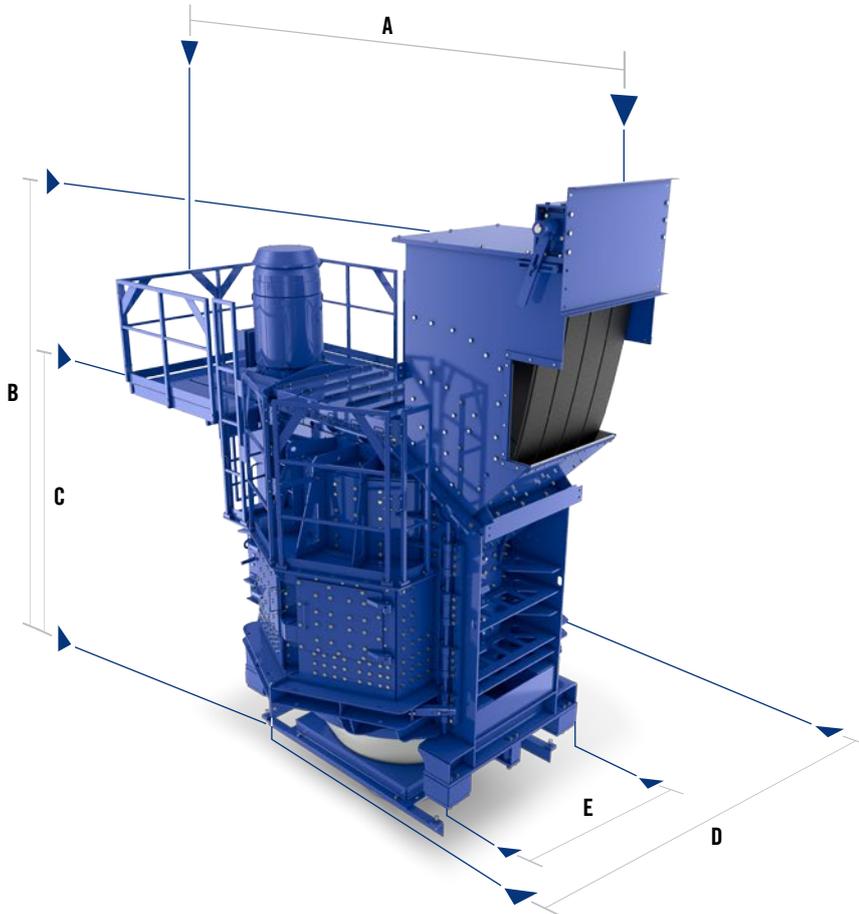


Even the smallest parts can have a big impact if they break. **BHS ORIGINAL PARTS** meet the highest standards in terms of quality and are designed to work seamlessly with our machines and systems. Take advantage of the speedy worldwide delivery of 10,000+ spare parts available in stock and reduce your downtimes to a minimum.



# FLEXIBILITY FOR PEAK PERFORMANCE

Two sizes offer pure performance.



## Performance data

Type	Working chamber (diameter)	Working chamber (height)	Feed opening clear width <sup>1)</sup> (H x W)	Drive power max.
RS 2018	2,000 mm	1,800 mm	750 x 1,200 mm 900 x 1,200 mm	110-250 kW
RS 3218	3,200 mm	1,800 mm	1,500 x 1,500 mm	200-400 kW

## Dimensions and weights

Type	A <sup>2)</sup>	B <sup>2)</sup>	C	D	E	Weight <sup>3)</sup>
RS 2018	4,800 mm	6,300 mm	3,350 mm	3,500 mm	1,900 mm	34,000 kg
RS 3218	5,750 mm	7,250 mm	3,200 mm	5,150 mm	3,800 mm	55,000 kg

1) Not suitable for shredding solid parts or materials with high strength and larger than the largest grate gap. The maximum piece size for the RS 2018 is 500 mm and an individual weight of up to 15 kg. For the RS 3218, the maximum piece size is 800 mm and an individual weight of up to 30 kg. | 2) Data may differ depending on the feed hopper used. | 3) Weight data for the standard version, including feed and discharge hoppers. | All technical data mentioned correspond to the standard version and are subject to continuous development. Subject to change without notice.

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