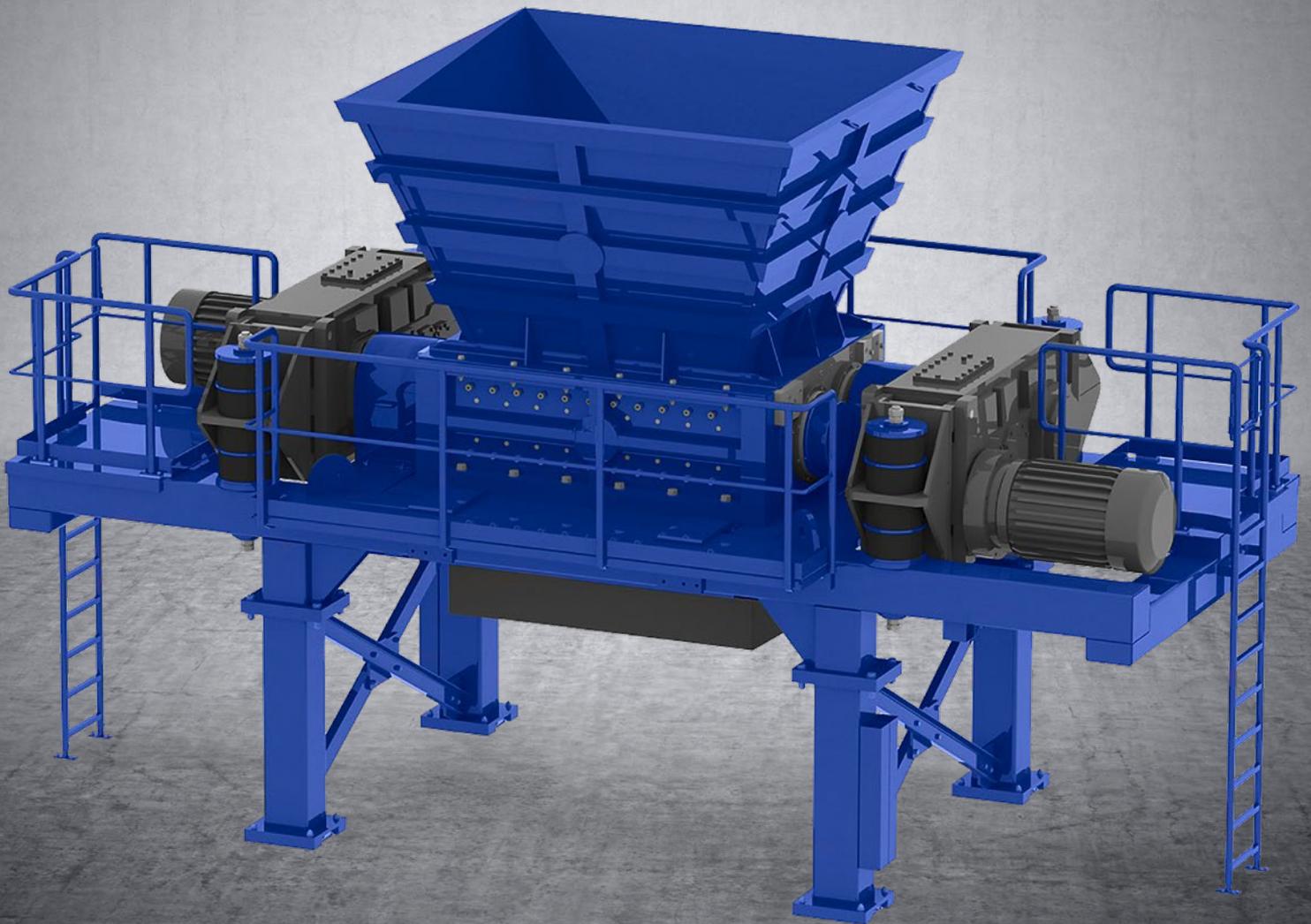


ROTARY SHEAR (VR)

Robust and versatile heavy-duty
twin-shaft shredder

TRANSFORMING
MATERIALS INTO VALUE



YOUR CHALLENGE – OUR SOLUTION

Optimal technology for bulky and elastic waste materials.



E-scrap (WEEE)

Powerful pre-shredding: Small household appliances, lithium-ion batteries, cables and stranded wires, printed circuit boards, photovoltaic equipment, and much more.

Refuse-derived fuels

Universal shredding of bulky or elastic waste materials for thermal utilization: Household, commercial, and industrial waste, paper and cardboard as well as plastics, textiles, and much more.

Shredding, mixing, pumping

For the safe shredding of toxic waste materials, from which a pumpable mass is produced in SMP plants for subsequent thermal utilization.

Tires

In order to recycle scrap tires and recover the valuable resources they contain, such as rubber, steel and textile fibers, the high-torque rotary shear effectively shreds them.

High performance, heavy-duty

The rotary shear (VR) is a slow-running twin-shaft shredder with high torque that is ideally suited for the cutting/shredding of bulky materials or elastic feed material. Large-volume feed material as well as waste materials with a high unit weight are also easily reduced with a very high degree of shredding. The robust machine design paired with the powerful drive system forms the basis.

On-target shredding results

The first process step in the mechanical processing or thermal utilization of waste materials is to reduce and homogenize the particle size of the feed material. The rotary shear masters this process step with ease.

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.

Customized plant integration

Our experts will provide you with competent support for customized integration into existing systems, or for the planning and project engineering of a new system, right through to installation and commissioning.

GAIN THE TECHNICAL EDGE

All benefits at a glance.

On-target shredding results

When reducing and standardizing the piece sizes of the feed material, the rotary shear ensures that the feed material is reduced to the desired piece size and that a uniform bulk weight is achieved.

Clean and consistent cutting quality

Precision-made blades manufactured to very tight tolerances ensure optimal and consistent cutting results. They are hardened using a special process to ensure a long service life.

Great flexibility with input materials

The rotary shear is capable of processing a broad range of input materials. Voluminous, light, or bulky input material is safely gripped and effectively shredded by the machine's large shaft diameters.

Optimal throughput rate

A powerful drive system with high torque value enables high throughput rates. In addition, the geometry of the shearing tools is optimized for a high hourly output and the machine can be used in three-shift operation without difficulty.

Extremely robust machine design

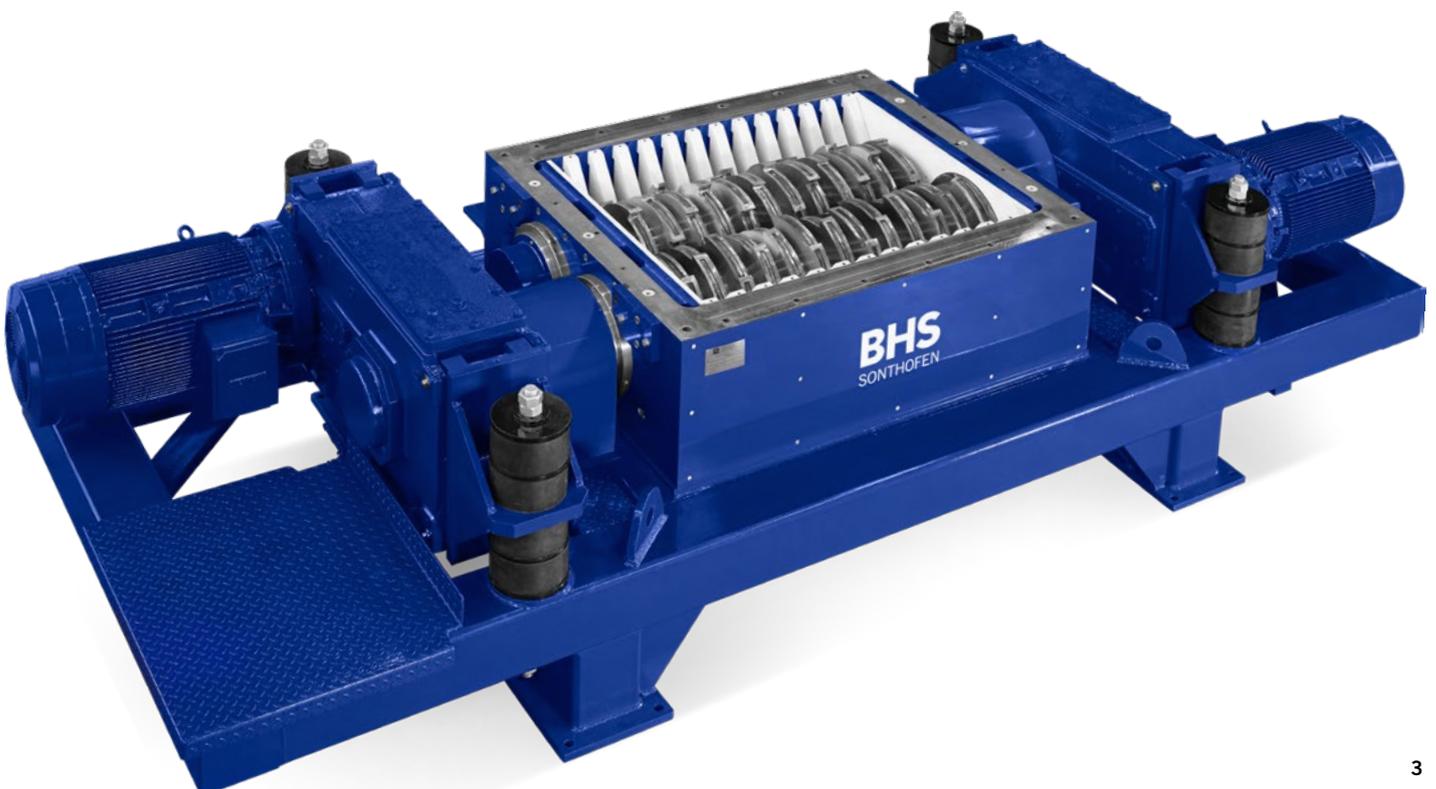
Thanks to the robust machine housing in a very sturdy, one-piece welded steel construction, there are no screw connections that are prone to failure. That guarantees a long machine life.

Low operating costs

The rotary shear is designed to maximize system availability and ensure a long service life of wear parts. Cost-effective replacement of the shear shaft set in case of wear is possible due to cutting tools that can be regenerated multiple times. Thanks to the proven and patented quick-change system for the bearing shells, replacement can be carried out within four hours.

[Get more details](#)

www.bhs-sonthofen.com/vr



WELL THOUGHT OUT DOWN TO THE SMALLEST DETAIL

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

Optimized cutting and shredding

Two counter-rotating shear shafts grasp and shred the input material. Each shaft is equipped with several high-precision cutting tools that function like scissors. There are gripping hooks at the tip of each tool that guarantee fast and reliable material infeed. Scrapers are placed on the outside of the shaft to prevent material from sticking. The piece size of the final product is affected depending on the cutting blade width.

1 Infeed hopper

In addition to a large, central infeed hopper for feeding, customer-specific hoppers are optionally available.

2 Machine housing

Even the highest loads are easily handled by the sturdy machine housing in very robust, one-piece welded steel construction.

3 Drive system

The powerful drive system respectively consists of a spur gear and electric motor, individually driving each shaft. In case of an overload, the drive allows the shearing disc to be retracted by changing the direction of rotation.

4 Shear shafts

High shredding capacities are achieved by the special arrangement of the shearing tools on the shafts. Replacement is done by changing the worn shear shaft set, which is then reconditioned and available for the next replacement.

5 Scrapers

Scrapers are attached to the long sides of the machine housing and reach between the shear discs. This prevents the buildup and wrapping of material.

6 Torque buffering

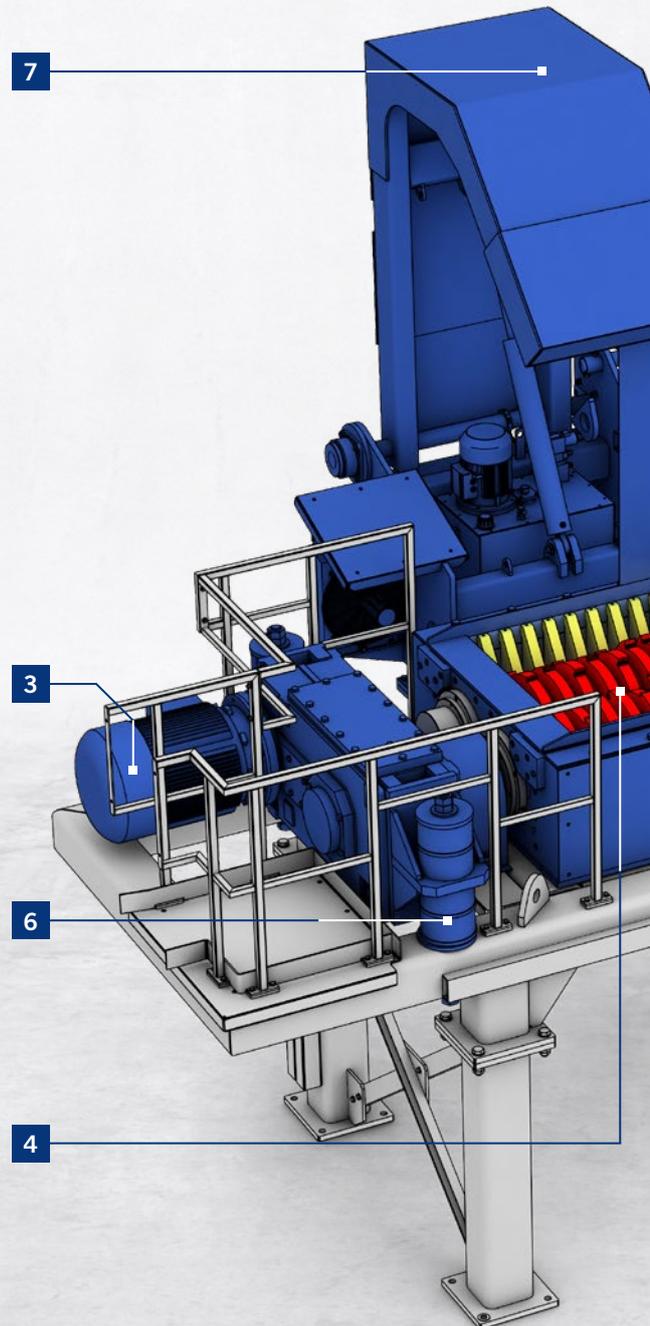
Each drive unit is protected against damage by generously dimensioned solid rubber torque buffers as standard.

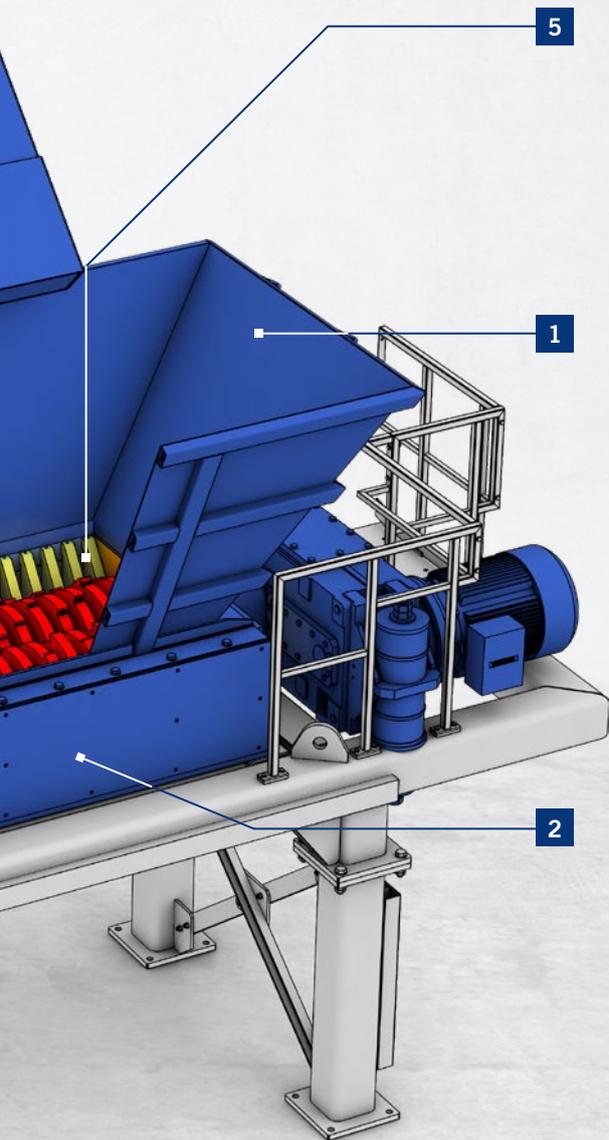
7 Hydraulic push-in unit (optional)

For the feeding of voluminous, lightweight, or bulky feed material, a hydraulic push-in unit is available as an option.

Frequency converter

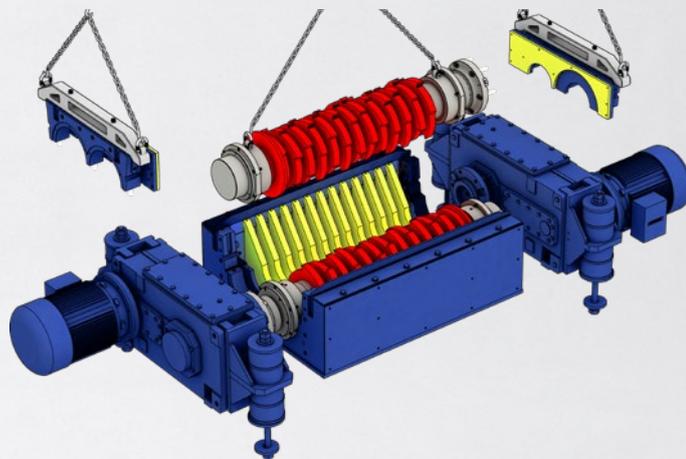
As standard, each rotary shear is equipped with an electronic frequency converter that allows the speed to be adapted to the respective process conditions.





Shaft changing system: reduced downtime!

Thanks to the proven and patented quick-change system, the shear shaft set can be replaced quickly and efficiently. It consists of a specially designed quick coupling located between the shear shaft and the gearbox, and a patented bearing shell bridge. The quick coupling is screw-fastened and makes shaft changing possible without having to disassemble the gearbox, and the bearing shell bridge is easy to remove. Then the shear shafts can be removed.



Inertizable designs for absolute process safety

When shredding and processing potentially hazardous materials such as batteries or toxic waste, it is necessary to inert the working chamber to prevent fires, explosions, hazardous gas leaks, or chemical reactions. For process reliability in processing these problematic materials under a protective atmosphere, BHS offers the rotary shear in an appropriate, inert design.

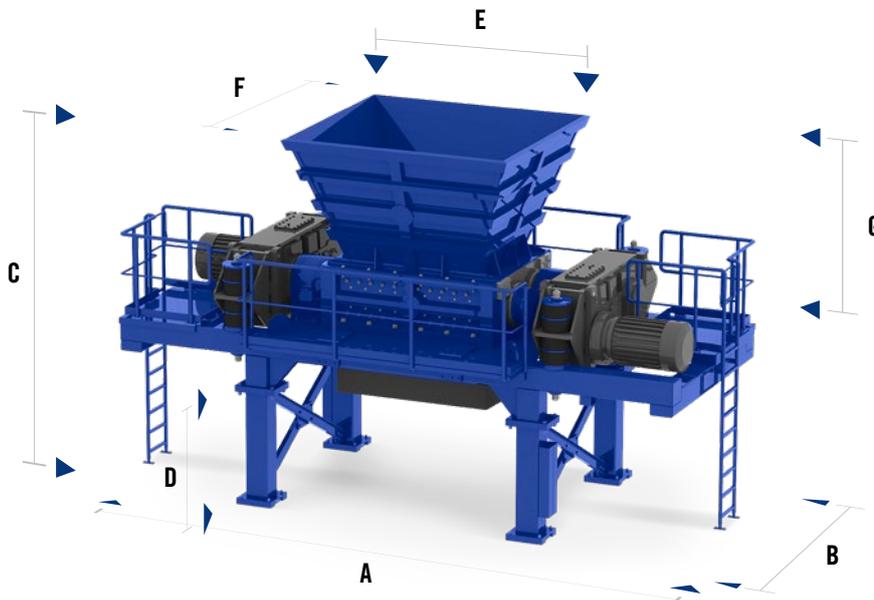


FLEXIBILITY FOR PEAK PERFORMANCE

Three sizes offer pure performance.

BHS original spare parts – wide assortment of components in stock

Even small 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 delivery of 10,000+ wear parts available in stock and reduce your downtimes to a minimum.



Dimensions and Weights

Type	A	B	C	D	E	F	G	Weight	Work access opening length x width
VR 0912	5,200 mm	2,200 mm	4,000 mm	1,500 mm	2,500 mm	2,300 mm	1,500 mm	14 tons	1,200 x 900 mm
VR 1215	5,500 mm	2,500 mm	4,200 mm	1,500 mm	2,800 mm	2,500 mm	1,500 mm	22 tons	1,500 x 1,200 mm
VR 1518	7,600 mm	3,000 mm	4,800 mm	1,500 mm	2,900 mm	2,800 mm	1,500 mm	40 tons	1,800 x 1,500 mm

Performance Data (Standard Versions)

Type	Drive power	Rotor speed (max.)	Rotor diameter x length	Number of cutting tools	Width of cutting tools
VR 0912	2 x 55 kW	18 rpm	480 x 1,200 mm	12 units/shaft	50 mm
VR 1215	2 x 90 kW	18 rpm	530 x 1,500 mm	13 units/shaft	58 mm
VR 1518	2 x 160 kW	11 rpm	730 x 1,800 mm	11 units/shaft	80 mm