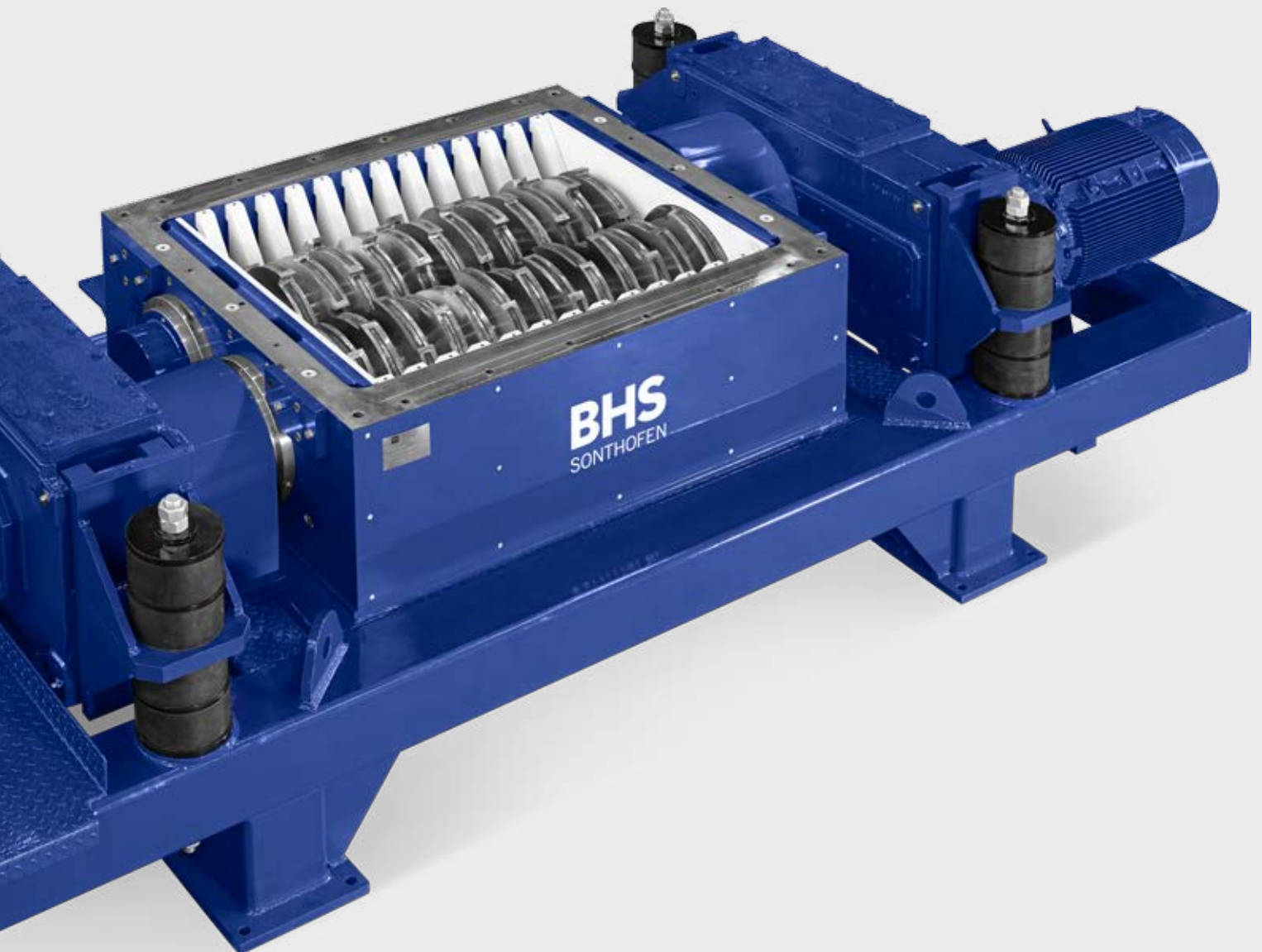


VR Rotary Shear

The universal shredder

BHS
SONTHOFEN

TRANSFORMING
MATERIALS
INTO VALUE



Headquarters of BHS-Sonthofen



TRANSFORMING MATERIALS INTO VALUE

BHS
SONTHOFEN



The company

BHS-Sonthofen, headquartered in Sonthofen, Germany, is an owner-operated group of companies in the field of machine and plant engineering. We offer technical solutions in the field of mechanical process engineering, with a focus on mixing, crushing, recycling and filtration. With over 300 employees and a number of subsidiaries, BHS-Sonthofen has a global presence.

Over 100 years of experience in crushing technology

We built our first crushers for the aggregates industry over 100 years ago. For the past 20 years, we have been manufacturing innovative crushing machines designed for the recycling industry. The acquisition of the products of AMNI Maschinenbau GmbH further enhances our portfolio to include cutting technology. AMNI's machine technology is founded on many years of experience and extensive practical applications. Today, we are the technologically innovative problem solver and experienced system supplier for recycling applications of all types.

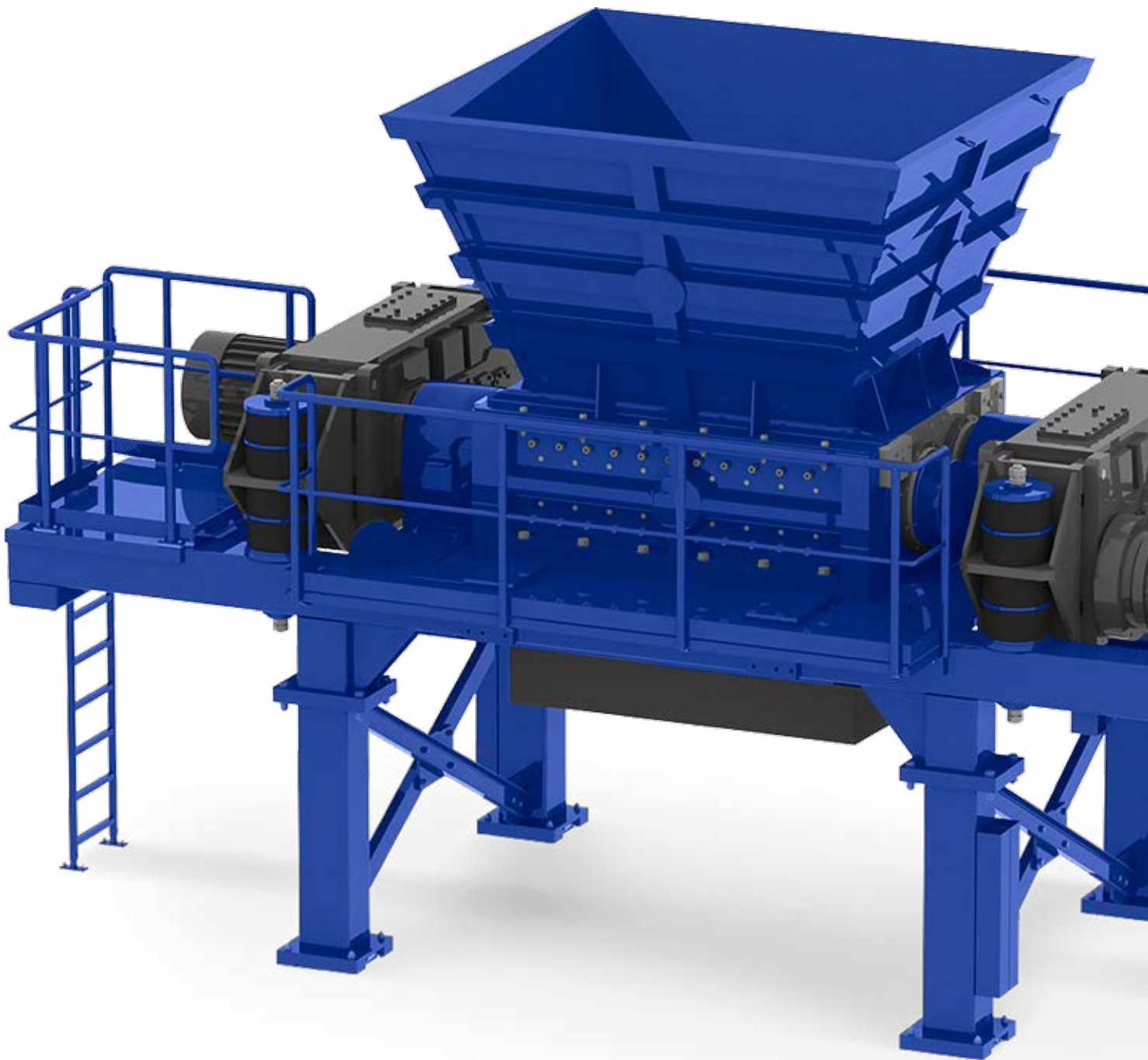
Worldwide service

We offer quick and reliable service worldwide with our technical customer support and a large stock of spare parts for all standard machine types and also for older machines.

www.bhs-sonthofen.com

BHS Rotary Shear

The Rotary Shear is a low speed, high-torque, twin-shaft shredder. The machine is suitable for the shredding of bulky materials (e.g. domestic, commercial and bulky waste) or ductile input material (e.g. tires, cables, plastic film, paper, textiles) using cutting tools. It also reduces high-volume input materials and items with a large unit weight. At the same time, the Rotary Shear reliably achieves an extremely high shredding ratio.



Targeted shredding results

The first process step in the mechanical treatment of waste materials is to reduce and homogenize the particle size of the input material. The Rotary Shear reduces the input material to the desired particle size, at the same time ensuring a uniform bulk weight.

Clean and consistent cut quality

The cutting tools are precision made and are manufactured with very tight tolerances. Long cutting tool life is guaranteed by using a special hardening process during manufacture. The cutting tools are easily adjusted or replaced.

Low operating costs

The cutting tools can be refurbished multiple times. This makes for cost-effective exchange of a shear shaft assembly in the event of wear.

High availability

The Rotary Shear is designed for high availability and a long service life of the wear parts. With the well-proven and patented bearing shell bridge system, the shear shaft assembly can be exchanged in just four hours.

High throughput rates

The machine is designed with a sturdy, high-torque drive, allowing for high throughput rates. In addition, the geometry of the cutting tools is optimized for a high hourly throughput. The machine can be used in three-shift operation without difficulty.

Flexibility

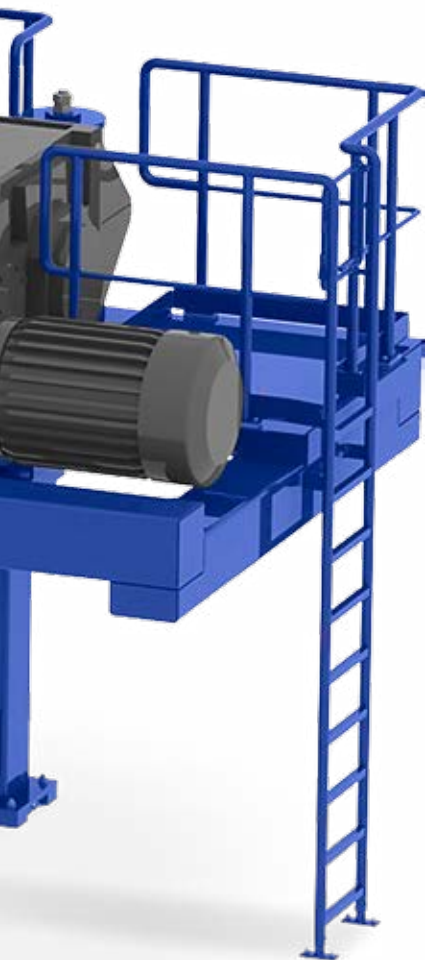
The Rotary Shear is capable of disaggregating a broad range of input materials. Due to the relatively large shaft diameters, the machine can safely process even large-volume or bulky input material. In addition, an optional push-in device can be installed for particularly difficult materials.

One-piece machine housing

The machine housing consists of an extremely robust, one-piece welded steel construction. There are no bolted connections which are susceptible to malfunctions. Furthermore, this design ensures a long service life for the machine.

Torque buffering

In the case of sudden stops, a special torque buffer absorbs the abrupt machine loads exerted, thereby increasing the operational reliability and preventing damage.



1 Feed hopper

The input material is fed into the machine through a large, central hopper. In addition to standard solutions, customer-specific hoppers are available.

2 Machine housing

The machine housing consists of an extremely robust, one-piece welded steel construction. This allows the machine to absorb extremely high forces without difficulty.

3 Rotor with cutting tools

The input material is shredded between two counter-rotating rotor shafts which converge at the center. The special configuration of the cutting tools on the rotor shafts guarantees an excellent size-reduction performance.

4 Scrapers

The scrapers are attached to the long sides of the machine housing and mesh with the cutting tools. They prevent material from adhering to and winding up on the rotating cutting tools. The individual cutting tools can be exchanged easily in case of wear.

5 Drive system

Each shaft is powered independently. The drive system consists of spur gearing and an electric motor from a major manufacturer. In case of overload, freeing off can be achieved by reversing the rotation.

6 Torque buffering

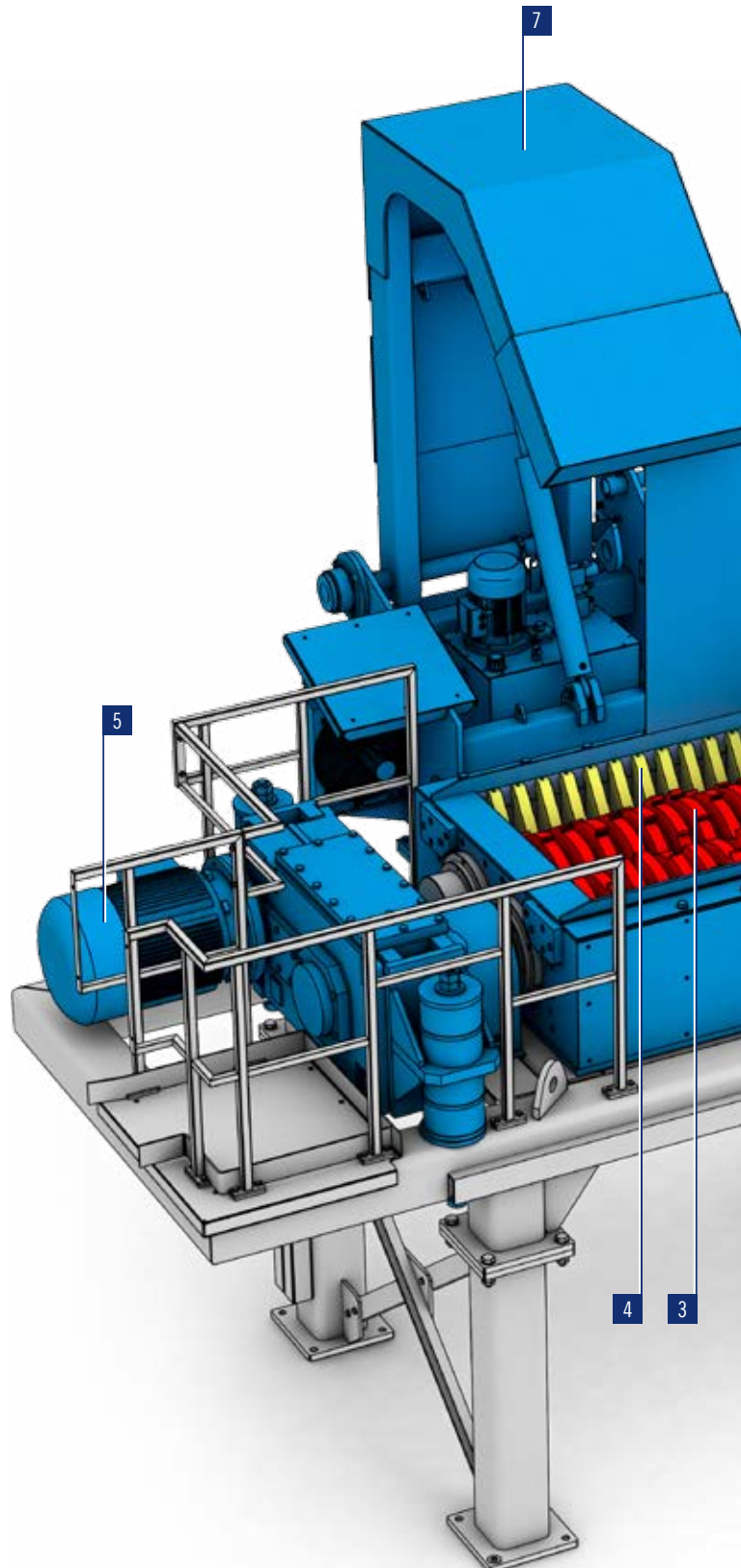
Each drive unit is protected as standard by a generously dimensioned torque buffer. Each buffer unit consists of four solid rubber elements which are located in a sturdy welded steel construction.

7 Hydraulic push-in device

A hydraulic push-in device is available as an option. It ensures the continuous feeding of large-volume, lightweight or bulky input material.

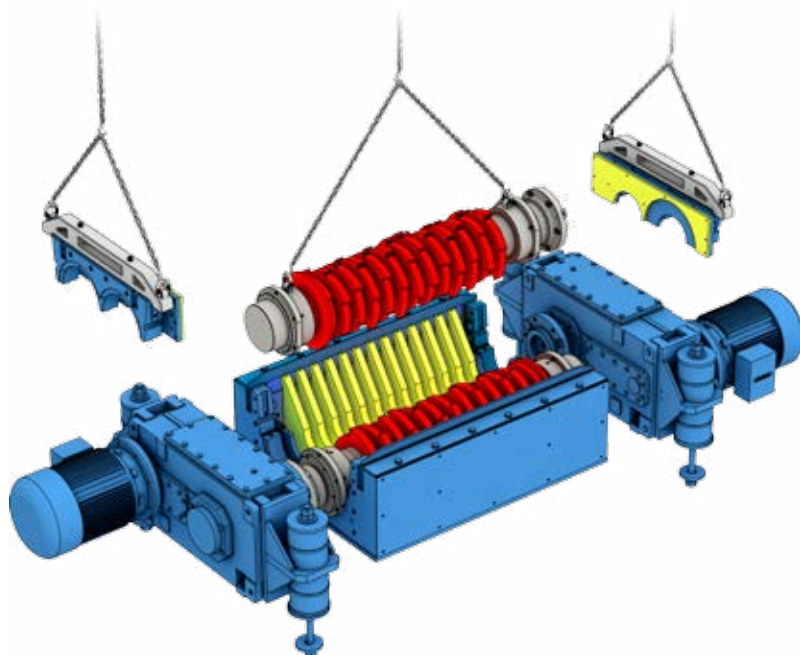
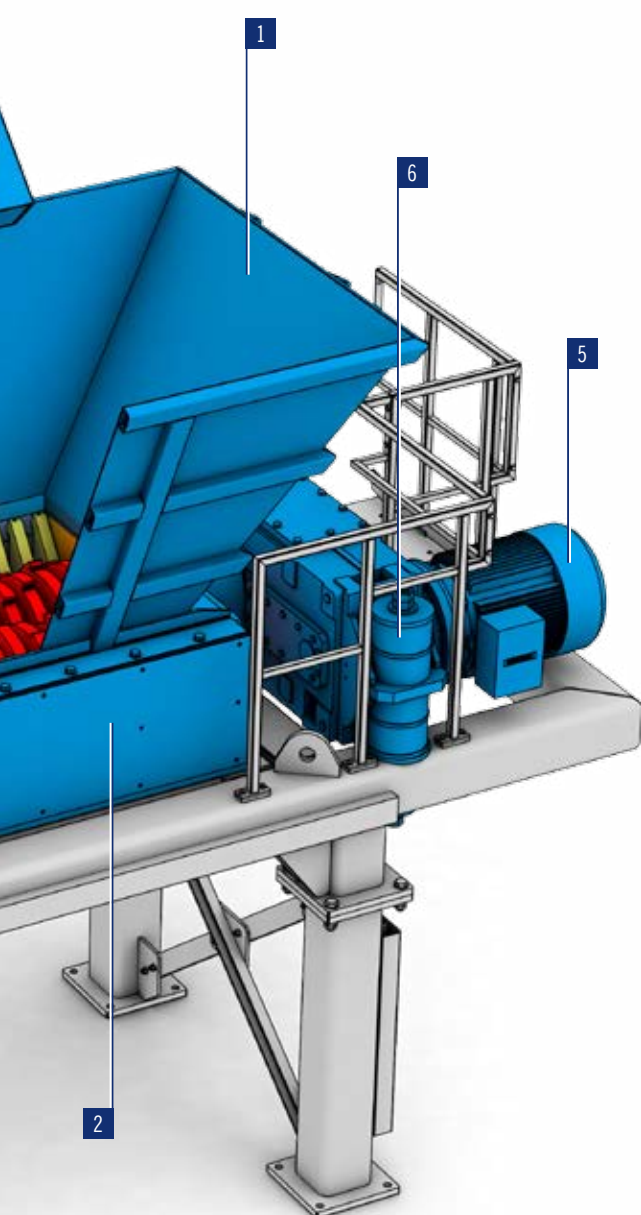
Frequency inverter

The machine can optionally be equipped with an electronic frequency inverter. The frequency inverter allows the speed to be adapted to the individual process conditions, preventing costly current peaks.



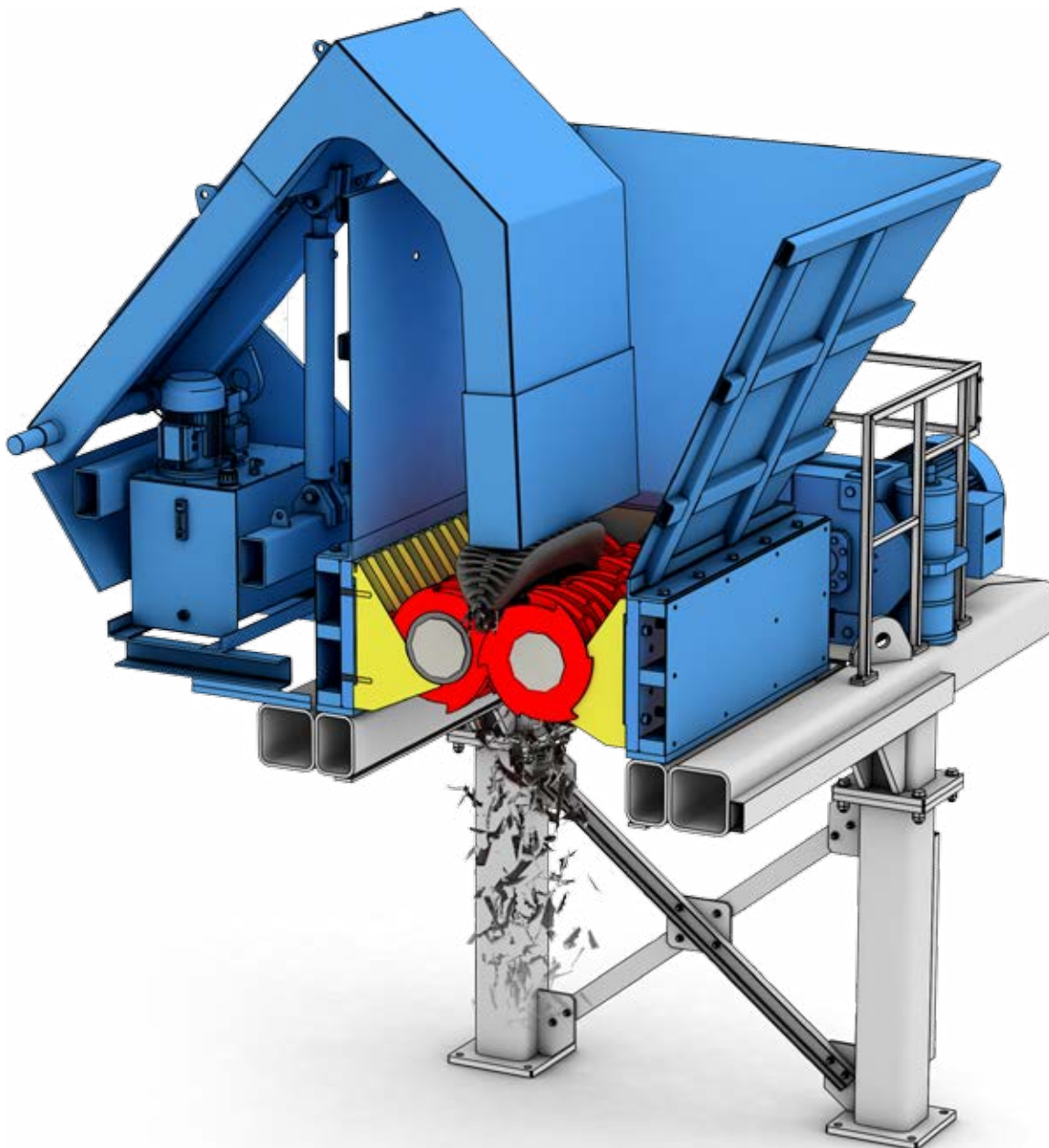
Quick-change system

The quick-change system for the shear shafts consists of a specially developed quick-action coupling between the shear shaft and gearbox, as well as the patented bearing shell bridge. The quick-action coupling is bolted in place, making it possible to exchange the shaft without dismantling the gearbox. The bearing shell bridge can be easily removed, followed by the shear shafts which are taken out from above.



Functional description

Located in a robust housing, two counter-rotating rotor shafts converge at the center and take hold of the input material. Each shaft is equipped with a row of precisely manufactured cutting tools which mesh with each other like scissors. Gripper hooks are located at the tip of each cutting tool to insure the fast and reliable feeding of the material. The hydraulically operated push-in device can be used in individual cases if required. Scrapers are located behind the shafts to prevent material from adhering to the rotating cutting tools. The particle size of the final product depends on which cutting tool width is selected.





Rotary Shear VR 1215 as the centerpiece of a plant for the pre-shredding of tires in Eastern France



Plant for the pre-shredding of industrial waste with a Rotary Shear VR 1215 in Southern France

Tires



Cables



Refuse-derived fuels (RDF)



Domestic & commercial waste



Oil filters



Aluminum



Paper & corrugated cardboard



Steel drums



Textiles



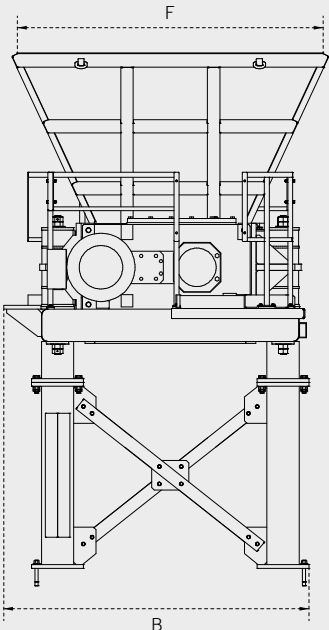
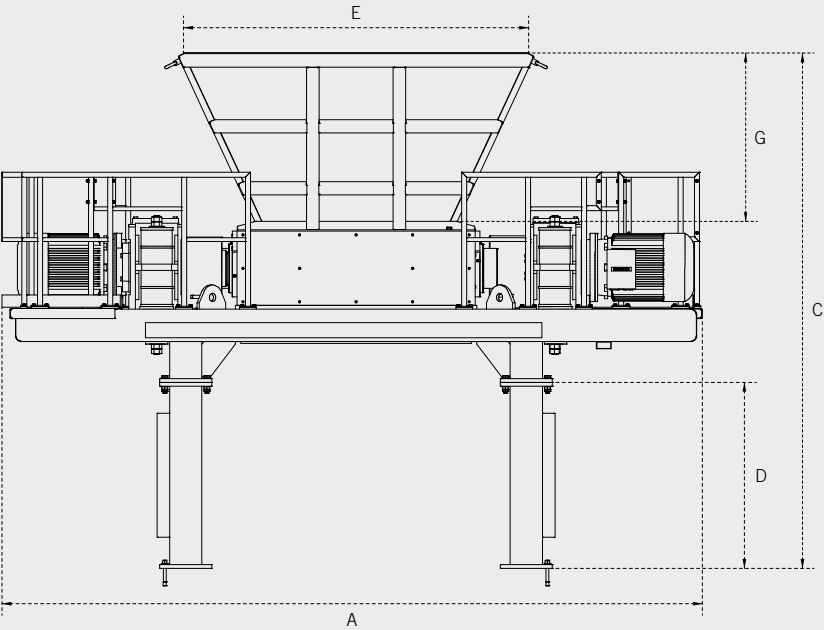
Performance data (standard designs)

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 per shaft	50 mm
VR 1215	2 x 90 kW	18 rpm	530 x 1,500 mm	13 per shaft	58 mm
VR 1518	2 x 160 kW	11 rpm	730 x 1,800 mm	11 per shaft	80 mm

Dimensions and weights (standard designs)

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


All specifications apply to the standard design.
Technical data for customized designs may differ from the specified data.
All technical data may change due to development.
Subject to modification without notice.



BHS FIELDS OF COMPETENCE



MIXING
TECHNOLOGY



CRUSHING
TECHNOLOGY



RECYCLING
TECHNOLOGY



FILTRATION
TECHNOLOGY

