Recycling Solutions
Machines & Complete Systems

For the Effective Processing of Reusable Materials

TRANSFORMING MATERIALS INTO VALUE
BHS-Sonthofen GmbH is an internationally operating company in the field of mechanical process technology. Every day, around 350 employees ensure that we remain a leading provider of intelligent recycling, mixing, shredding and filtration solutions – both at our headquarters in Sonthofen, Germany, and around the world. Our international customers hail from the building materials, recycling, chemical, pharmaceutical, food and feed industries as well as the energy and environmental sectors. At BHS, customers can get everything from a single source: from individual machines through to complete systems.

www.bhs-sonthofen.com
Over 20 Years of Recycling Expertise

Our corporate objective is to help customers process recyclable materials in such a way that they can be utilized as secondary raw materials or for other purposes. BHS provides you with custom recycling solutions, from impact crushers to single- and twin-shaft shredders through to complete, turnkey recycling systems. Customers benefit from our 100+ years of experience in crushing technology and engineering solutions from a single source.

OBJECTIVE & APPLICATION EXAMPLES

TRANSFORMING MATERIALS INTO VALUE

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www.bhs-sonthofen.com/recycling
BHS Recycling Machines

Impact Crushers

- Rotorshredder (RS)
- Impact Crusher & Impact Mill (PB & PM)
- Rotor Centrifugal Crusher (RSMX)
- Biogrinder (RBG)
- Rotar Impact Mill (RPMV & RPMX)
BHS Recycling Machines
Cutting and Tearing Shredders

Pre-Shredder (VSR)
Rotary Shear (VR)

Universal Shredder (NGU)

SpeedCut Granulator (NGV)
Our system expertise.
As customized as your application.
BHS is your reliable partner for intelligent, process- and customer-oriented recycling systems. Our experienced engineers are developing efficient, sustainable and forward-thinking recycling solutions.
From engineering to commissioning – the comprehensive service range of BHS covers all your needs from a single source. Our extensive engineering competence and in-depth process know-how provide you with a decisive competitive edge.

www.bhs-sonthofen.com/recycling-plants

Turnkey BHS system for processing and refining metals derived from waste incineration plant slag and other metal-bearing materials. The system includes one impact mill of type PM 0806 and two rotor impact mills of type RPMV 1113 and type RPMX 1516.
**ROTORSHREDDER (RS)**

The Rotorshredder shreds, separates and isolates materials. The shredding tools exert a high intense stress on the input materials through impact, shock and shearing forces. This results in selective size reduction with the following features:

- Particle sizes are selectively reduced, composite materials are separated, brittle-hard materials are finely shredded, metals are exposed and cleaned and entangled materials are separated.

**Applications**

Electrical and electronic waste, shredder residue (ASR), slag, ash from waste incineration, metals, etc.

**Operating Principle**

1. The Rotorshredder in an idle state.
2. In operation, the hammers are stabilized and horizontally aligned by centrifugal force.
3. The fed-in input material is intensively shredded after entering the impact chamber.
4. It takes just a few seconds of processing before the selectively treated material exits the working chamber through the grate.

» Pre-shredder and secondary shredder for a wide range of input materials
» Continuous operation
» Targeted, selective shredding
» Disaggregation and separation
» High throughput rate
» Robust shredding tools
» Generously dimensioned machine access space
Impact Crusher & Impact Mill (PB & PM)

The impact crushers and mills are universal and economical solutions. The impact crusher reaches a very high level of crushing in the first as well as the second stage. This already creates a wide range of salable, cubical end products. The impact crusher can be repurposed into an impact mill for manufacturing fine grains by inserting a higher machine base and an additional grinding track. This flexible solution allows you to benefit from excellent crushing results and respond to changing project requirements at any time.

Applications
Slag, ash from waste incineration, glass, etc.

Flexible solution for any crushing application

Monoblock casting
Impact crusher design with baffle plates as monoblock casting.

Monoblock casting with wear strips
Impact crusher design as monoblock casting with screw-fastened wear strips made of white cast iron.

Welded construction with wear elements
Impact crusher design with welded baffle plates and screw-fastened wear elements made of white cast iron.

Impact mill with additional grinding track
The impact mill is equipped with baffle plates and an additional grinding track beneath the rotor shaft.
**Rotor Centrifugal Crusher (RSMX)**

The Rotor Centrifugal Crusher is a high-performance crusher with a vertical shaft. The total input material is accelerated to a high speed in the patented twin-chamber rotor and then thrown against a fixed impact wall. Due to the selective crushing effect, the machine is particularly well suited to cleaning materials.

**Applications**
Slag, ash from waste incineration, glass, metals, etc.

- For crushing and separation
- Cleaning metals
- Consistent quality of end products
- Targeted, selective size reduction
- Globally proven twin-chamber rotor
- Flexible operation with anvil ring or material bed
Rotor Impact Mill (RPMV & RPMX)

There are two versions of the Rotor Impact Mill. The RPMV model has a proven track record in the recycling industry as a ball shaper with a selective crushing effect. The RPMX model is a turbo ball shaper. It is used for the recovery of valuable materials that have previously been considered too fine and thus difficult to process, such as insulated copper wire.

Applications
Electrical and electronic waste, shredder residue (ASR), metals, slag, cables, etc.

» Unique crushing principle
» Selective crushing
» Shaping of metals into balls
» Separation of composite materials
» High system availability
SPEEDCUT GRANULATOR (NGV)

The Granulator is a high-speed single-shaft machine designed for the secondary granulation of low-density, light, elastic and brittle materials. The input material is cut between the rotor equipped with fly blades and the static blade seat. The final product has the desired particle size.

Applications
Refuse-derived fuel (RDF), residual shredder fractions (ASR), plastics, foils, etc.

Operating principle
Swiveling screen unit
Working area
Static blade seat
Operating principle
Universal Shredder (NGU)

The Universal Shredder is a high-speed single-shaft machine designed for pre- and post-cutting of any material that can be cut. It shreds the loaded material to a size between 10 and 120 mm.

Applications
Cables, plastics, file and data destruction, etc.

» Pre-cutter and secondary cutter for a large number of input materials
» Continuous operation
» Consistent cutting quality
» Moveable machine bench
» Quick, convenient removal of contaminants
» Swiveling screen support (hydraulic)
» Manually adjustable cutting gap
» Universal, economical solution
Pre-Shredder (VSR)

The Pre-Shredder is a low-speed twin-shaft shredder with high torque. Each shaft is equipped with rotating tools that reliably tear the input material. The machine is suited for the pre-shredding of especially large or voluminous materials.

Applications
Refuse-derived fuel (RDF), metals, household and commercial waste, bulky waste, electrical and electronic waste, etc.

» Pre-shredder for low-density, bulky materials
» Flexible deployment through optional push-in unit
» High system availability
RoToR SHEAR (VR)

The Rotary Shear is a low-speed twin-shaft cutter with high torque. The machine is suited for cutting large or elastic materials into small pieces. It also reduces large-volume input materials as well as parts with high unit weights. The Rotary Shear reliably achieves a very high level of cutting.

Applications
Tires, household and commercial waste, cables, metals, plastics, etc.

> Pre-shredder for a wide range of input materials
> Flexible deployment through optional push-in unit
> Consistent cutting quality
> High throughput even when processing low-density, bulky materials
> Efficient quick change system
> One-piece machine housing (no screw connections)
Biogrinder (RBG)

The Biogrinder is used for the intensive mechanical processing of biomass before it is fed into the fermenter for the generation of biogas. The input material is crushed and mashed by means of impact and shear forces. Use of the Biogrinder accelerates the gas yield and stabilizes the overall process. It also greatly expands the selection of raw materials and significantly increases the overall cost-effectiveness of the biogas plant.

Applications

Organic waste, manure, corn straw, corn silage, grass, sugar beet, green rye, EFB (Empty Fruit Bunches), etc.

Biogrinder (RBG)

» Efficient substrate processing
» Continuous operation
» Unique operating principle
» Wide range of possible applications
» Higher gas yield
» Impervious to contaminants
» Lower energy consumption
» High throughput

Producing biogas with the Biogrinder:
Increase gas yield by up to 40%

Operating principle

Rotor and stator bars
Working area

BIOGRINDER (RBG)
BHS-Sonthofen operates a technical center at its headquarters in Sonthofen for individual testing. All of our recycling machines are installed there on an industrial scale. Drawing on our technology expertise, we are able to create optimal machine configurations. We are happy to do this in collaboration with interested parties.

Register for a test now
www.bhs-sonthofen.com/recycling-tests