

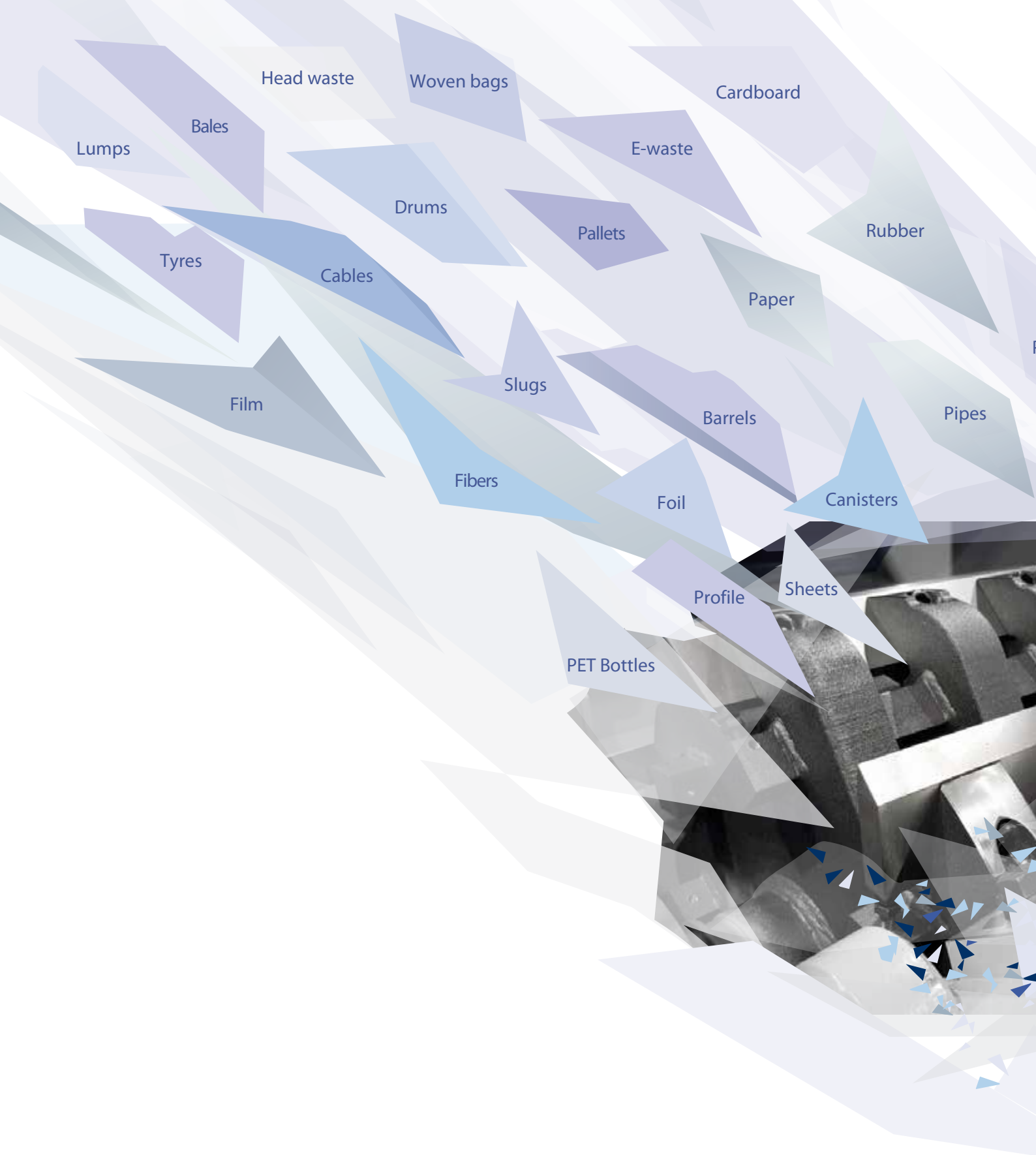


## Heavy Duty Granulators



**ZERMA**

The Home of Size Reduction



**ZERMA** GSH heavy duty granulators are sturdy machines built for the ever changing demands of modern recycling operations. They can be adapted to process a wide variety of materials.

# The Home of Size Reduction

**ZERMA** is a leading supplier to the plastics industry. With a strong focus on post-consumer and postindustrial recycling the GSH series of heavy duty granulators can be adapted to various requirements. They can be customized to withstand high levels of contamination or integrated into washing lines. In combination with **ZERMA** single shaft shredders and accessories we can custom build size reduction systems for high capacities and challenging materials.

**The GSH series - A cut above**

Purgings

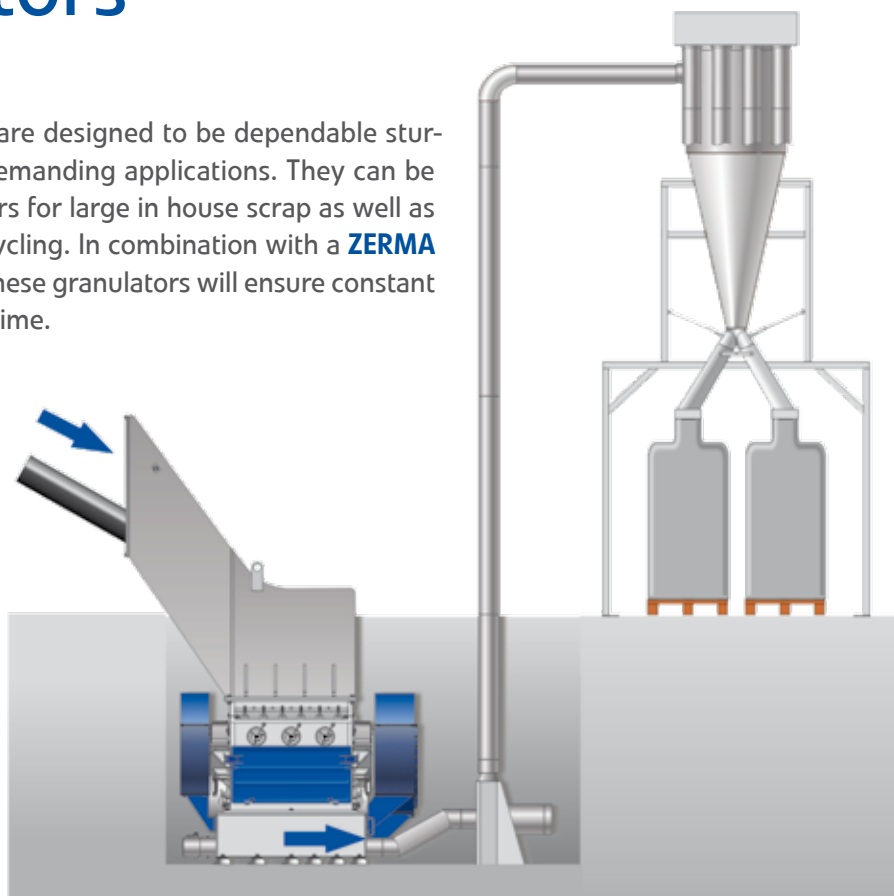
Scrap



# Typical applications of GSH granulators

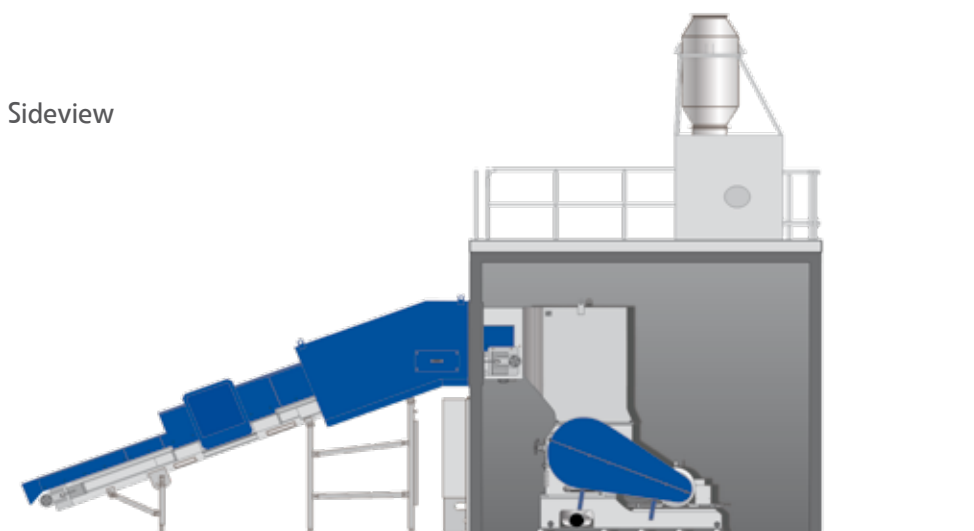
**ZERMA** GSH Heavy Duty granulators are designed to be dependable sturdy machines in high throughput or demanding applications. They can be used as single stage central granulators for large in house scrap as well as post-consumer and postindustrial recycling. In combination with a **ZERMA** ZSS/ZPS or ZXS single shaft shredder these granulators will ensure constant high through-put with minimal downtime.

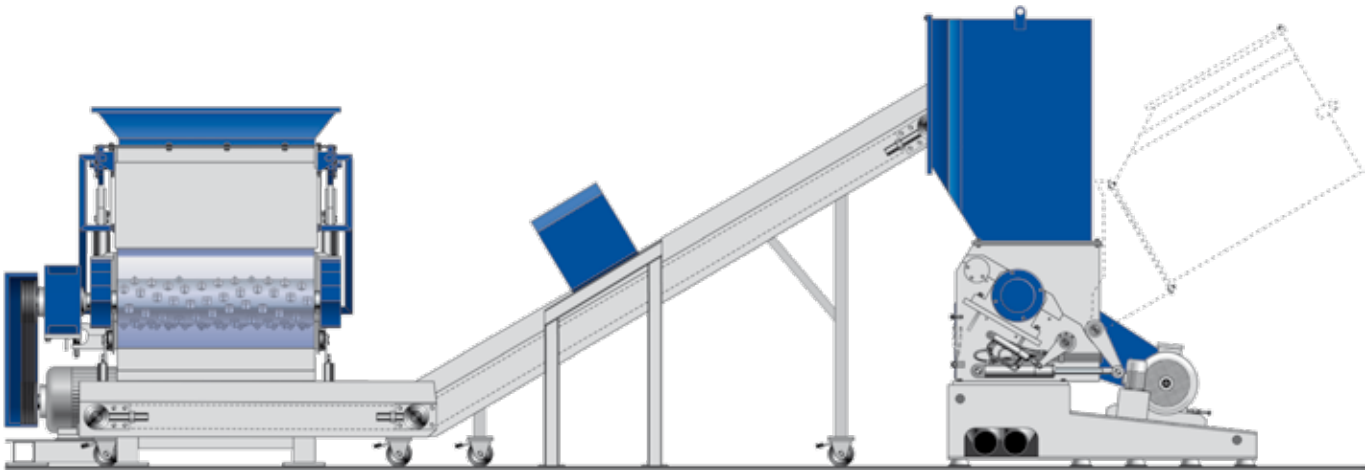
GSH granulator with special hopper for pipes.



Sideview

GSH granulator used for in-house grinding of blow molding scrap and rejected parts. Machine in fully soundproofed cabin with fine separation system and central filter.

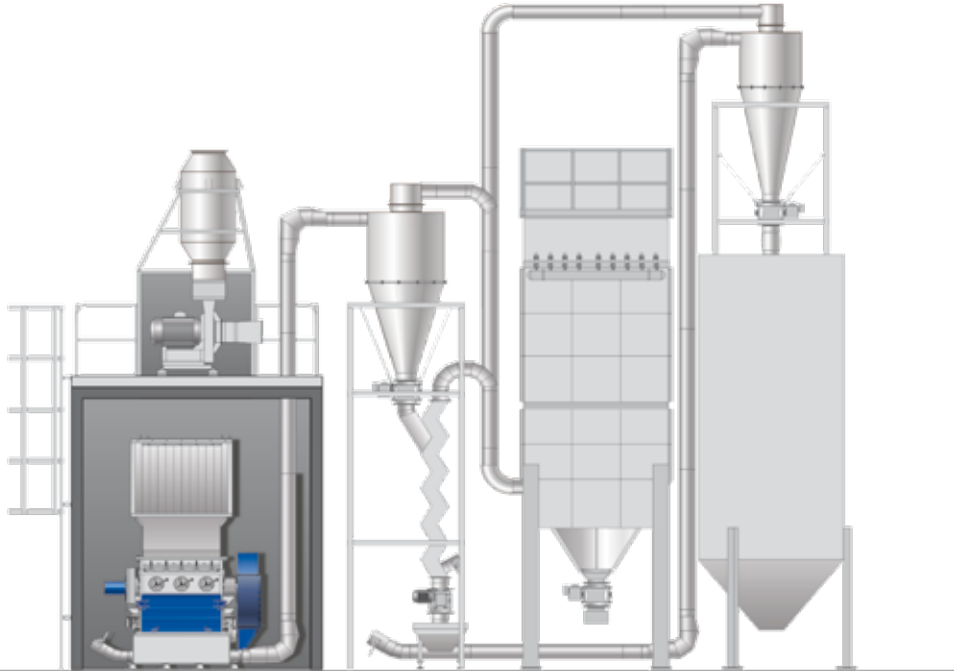




Two stage size reduction system consisting of **ZERMA** single shaft shredder and GSH granulator.



Frontview



**Advanced engineering –  
great results**

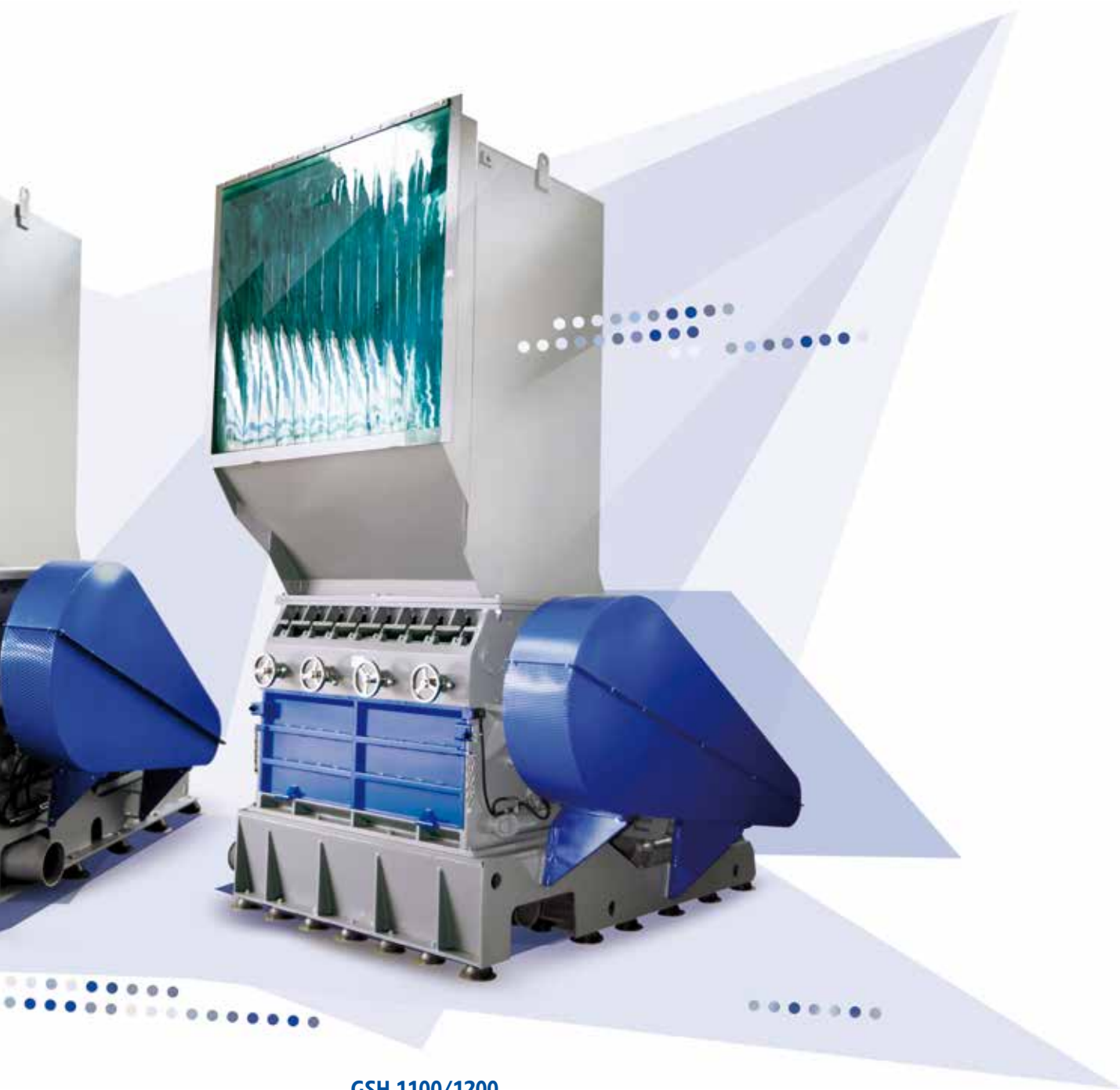
# The right machine for today's recycling requirements



GSH 350/500

GSH 700/1000

**ZERMA** GSH granulators span a wide range of sizes. Starting from 350 mm diameter up to 1100 mm, in widths ranging from 500 to 2400 mm. All sizes are engineered to deliver constant high quality results with minimal downtime for service and maintenance.



**GSH 1100/1200**

- Sturdy recycling focused design
- Various rotor options
- Replaceable wear plates
- Easy knife change/adjustment

# GSH 350 and 500 series – compact and sturdy

The heavy duty granulators of the GSH 350 and 500 series feature rotors in widths ranging from 500 mm to 1000 mm with a diameter of 350 or 500 mm. Different rotor and hopper styles allow the granulators to be tailored to different applications in the plastic recycling field.

The machines in the GSH 350 and 500 series are mainly used as central granulators for in house recycling applications to process thick walled parts in one step or as a second step granulator after a shredder to reach higher throughput rates.







### **Typical Applications**

- Films margins from inline recycling
- Window profiles
- Fibers
- Thin-walled non-ferrous waste as non-ferrous metals
- Copper and aluminum cables

# GSH 600 and 700 series – the allrounder

The heavy duty granulators of the GSH 600 and 700 series offer different rotor designs in widths ranging from 800 mm to 1600 mm with diameters of 600 and 700 mm.

These medium sized machines are used as central grinders for heavy applications such as thick walled pipe, injected parts such as crates, in blow molding settings to handle parts as well as cold parisons. As a secondary grinder after a shredder they can achieve output of more than 1 ton per hour consistently.





#### **Typical applications**

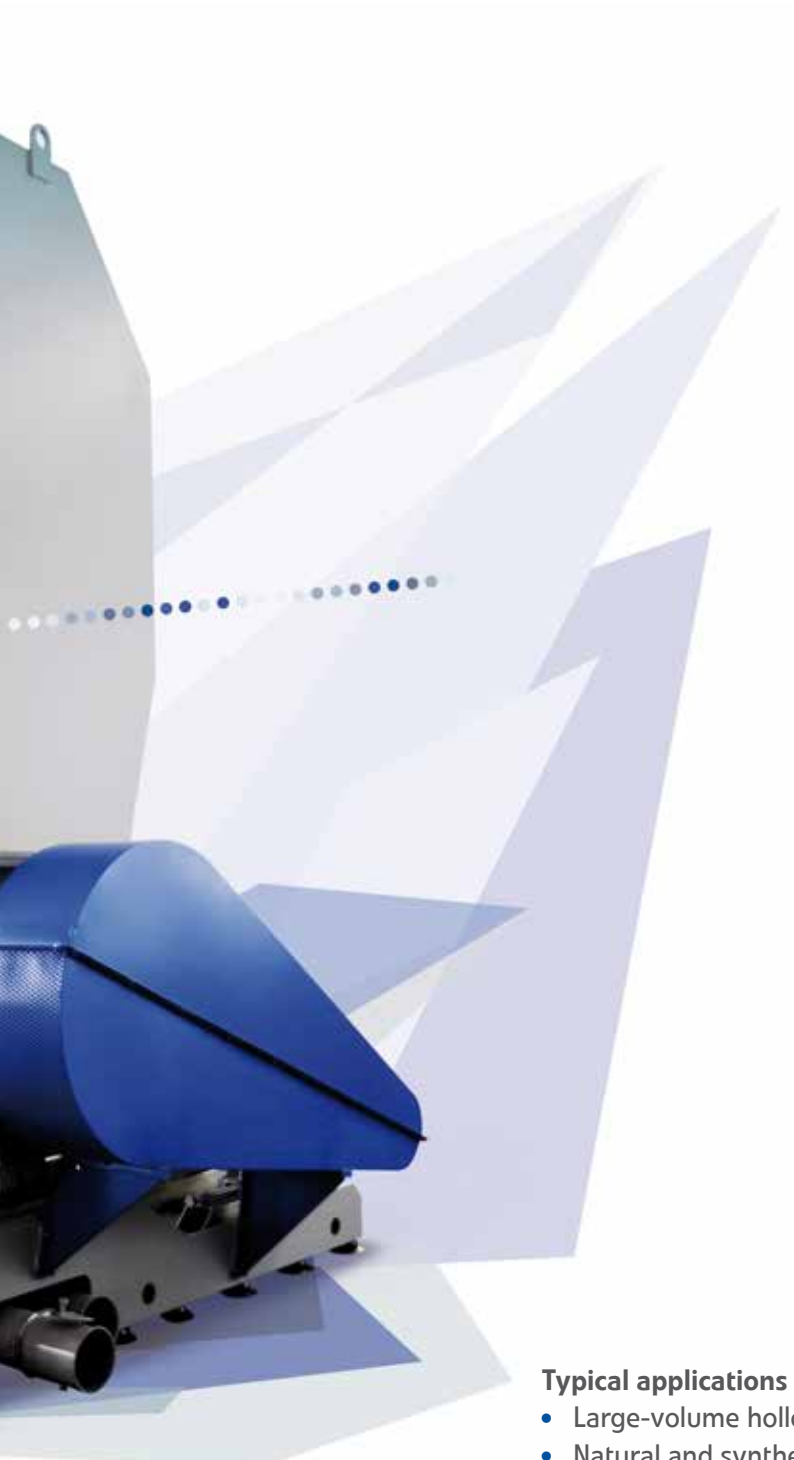
- Chunks and lumps
- Foil sheets for Inline-recycling
- Bumpers, door panels, fuel tanks and slugs
- Insulation materials
- Electronic waste
- Bottle crates

# GSH 800 and 1100 series – high throughput

The large GSH 800 and 1100 series machines are available with rotors of 800 and 1100 mm diameter ranging in width from 1200 to 2400 mm. These heavy duty machines are designed to withstand the toughest applications and deliver consistent high quality regrind at rates exceeding 5 tons per hour. From light materials like bottles and barrels to pallets and purgings, these GSH granulators can handle almost any application.

For contaminated materials such as post consumer waste the rotor and cutting chamber can be protected with special steel to ensure long service life.

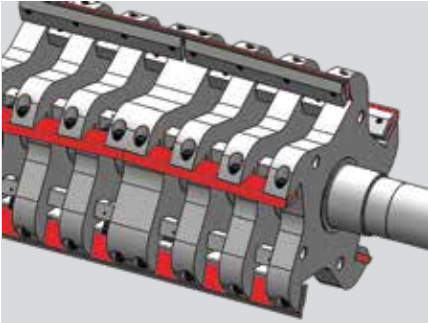




#### **Typical applications**

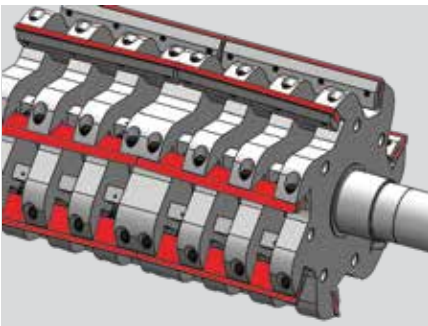
- Large-volume hollow body such as drums, tanks, multi-boxes, buckets
- Natural and synthetic rubber bales
- Fiberglass reinforced plastics
- Vulcanized, technical rubber parts, such as pre-shredded, iron-free car and truck tires
- Pipe sections

# Rotor and cutting chamber – details ensure consistent results



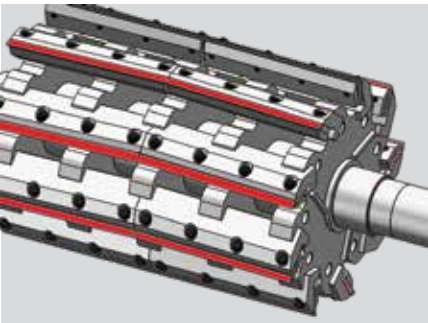
## S5-Rotor

This rotor is suitable for light materials as well as thick rigid pieces like tanks or crates. The semi-closed design reduces the aggressivity of the rotor.



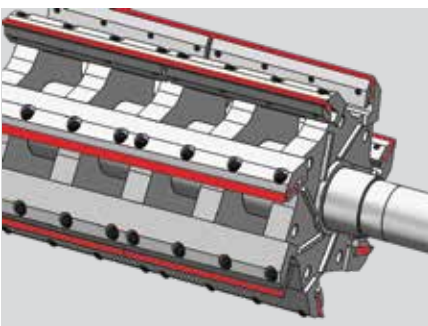
## S7-Rotor

The closed 7 blade rotor is used for heavy thick walled products. It is closed thus will avoid overloading even on heavy materials such as solid lumps or thick walled pipe.



## H9-Rotor

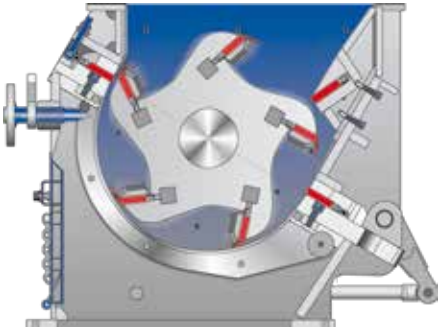
Similar to the S7 rotor the H9 rotor is a closed rotor and mainly used in heavy applications. The design allows for the knife support to be made from highly wear resistant steel when used with contaminated materials.



## L7-Rotor

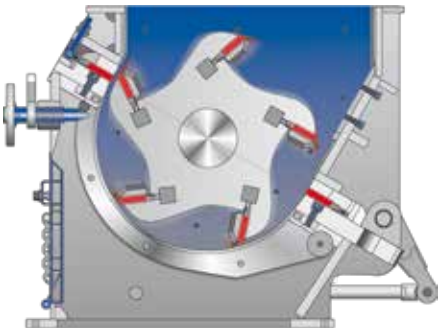
The L7 rotor features a single cross cut design which is used in high temperature applications, such as car tanks.





### With Deflection Wedge

The removable deflection wedge houses a third stator knife. It allows easy and fast adjustments of the machines aggressivity.



### Without Deflection Wedge

The infeed is very strong and aggressive, the first cut will happen at the 4 o' clock position. Well suited for bulky materials, such as canisters or pales. The deflection wedge alters the infeed of the machine and moves the first cut to the 2 o' clock position. Well suited for heavy thick walled parts such as lumps or pipe. Due to the added stator knife it increases the number of cuts per revolution the output on light material such as film is increased.



### Cutting chamber

The heavy duty bearings are separated from the cutting chamber to avoid lubricants from entering the cutting chamber and failure of the bearings due to material contamination.



### Knife adjustment

Rotor and stator knives are preset outside the machine prior to installation in a supplied fixture. This makes awkward adjustment inside the machine unnecessary.

# Advanced engineering – great results

# Technical specifications – overview

Applies to all models: screen size is > 6 mm or > 8 mm and each machine has 2 or 3 rows of stator blades. The model name is composed of the rotor diameter and rotor width (A/B)

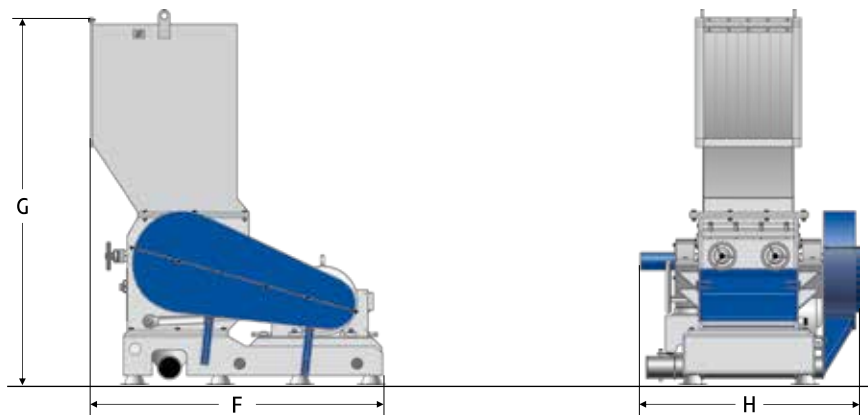
- A** = Rotor diameter in mm
- B** = Rotor width in mm
- C** = Drive capacity in kW
- D** = Rotor knives in rows
- E** = Effective working area in mm

- All dimensions are in mm
- F** = length
  - G** = height
  - H** = width

## GSH Series

| A / B | 350 / 500 | 500 / 600 | 500 / 1000 | 600 / 800 | 700 / 1000  |
|-------|-----------|-----------|------------|-----------|-------------|
| C     | 22        | 55        | 75         | 75        | 90          |
| D     | 3 or 5    | 3 or 5    | 3 or 5     | 5 or 7    | 5 or 7 or 9 |
| E     | 460 x 516 | 636 x 590 | 985 x 590  | 790 x 695 | 900 x 800   |
| F     | 1820      | 2105      | 2255       | 2350      | 2815        |
| G     | 2390      | 2565      | 2740       | 2940      | 3350        |
| H     | 1280      | 1560      | 1945       | 1840      | 2060        |

## GSH 350 and 500 Series

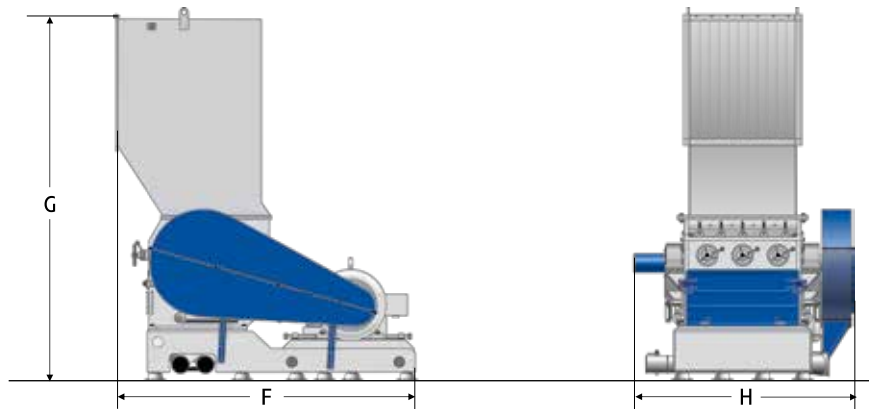




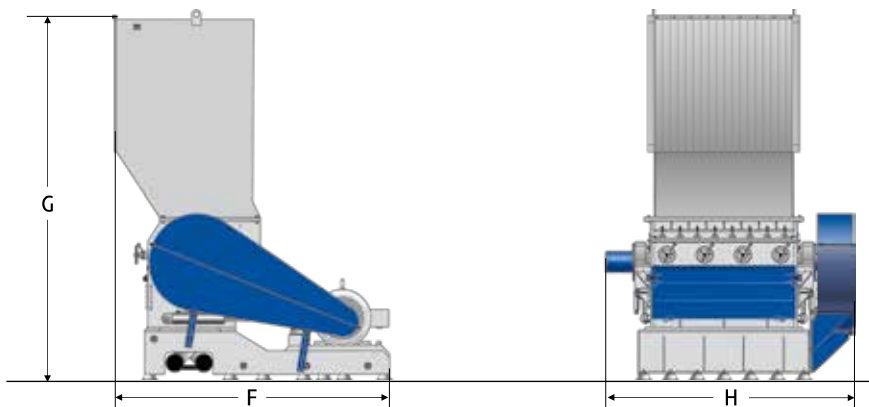
## GSH Series

| A / B | 800 / 1200  | 800 / 1600  | 800 / 2000 | 1100 / 1200  | 1100 / 2400  |
|-------|-------------|-------------|------------|--------------|--------------|
| C     | 132         | 160         | 2 x 160    | 200          | 2 x 200      |
| D     | 5 or 7 or 9 | 5 or 7 or 9 | 7 or 9     | 7 or 9 or 11 | 7 or 9 or 11 |
| E     | 1150 x 915  | 1570 x 915  | 1960 x 915 | 1150 x 1210  | 1960 x 1210  |
| F     | 3100        | 3175        | 3175       | 3115         | 3115         |
| G     | 3750        | 4085        | 4655       | 4430         | 4430         |
| H     | 2430        | 2860        | 3465       | 2440         | 3830         |

## GSH 600 and 700 series



## GSH 800 and 1100 series



**Wide range – great results**

# The product range – the right solution for any application



**GSL** - Slow speed granulators

**GSE** - Economical granulators

**GSC/GST** - Compact soundproofed granulators

**ZSS/ZPS** - General purpose shredders

With more than 70 years of experience, **ZERMA** is one of the leading manufacturers of high quality size reduction machinery. With the wide range of machines **ZERMA** covers the whole spectrum of plastic size reduction applications.



**ZTS** - Heavy duty shredders

**PM** - Pulverizer

# ZERMA – The Home of Size Reduction



## Close to our customers

The global ZERMA network of branches and distributors



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