

# GSH

Heavy Duty Granulators



**ZERMA**  
The Home of Size Reduction



The ZERMA GSH series granulators are designed for the most universal and extreme applications required for today's plastics recycling facilities.

The completely welded heavy steel manufactured construction is designed to withstand the most demanding and universal applications through the removable deflection wedge (third stator knife). Rotor bearings, knife mounts and rotor shaft are manufactured in over-size to cope with extreme feed stock.

Depending on the required application, (including temperature sensitive materials), the GSH series offers a complete range of rotor variations which are all built with the unique chevron "V" cut technology.

The complete GSH range produces a high quality granulate whether it be from bottle crates, profiles, sheet, film, pipes or start-up lumps. The machines are economical, reliable, easy to clean and have extremely long service life. ZERMA offers a wide range of necessary ancillaries such as material transport systems, conveyor feed belts, metal separators, fines separators, nip roller feeds, etc.

- **Cutting chamber wear plates are standard**
- **Outboard Rotor Bearings**
- **Drop Down Screen Cradle**
- **Reversible screen**
- **"Clam Shell" Opening of Upper Cutting Chamber**
- **"V" Cut Rotor/Stator Knife Configuration**
- **Double Sided Stator Knives**



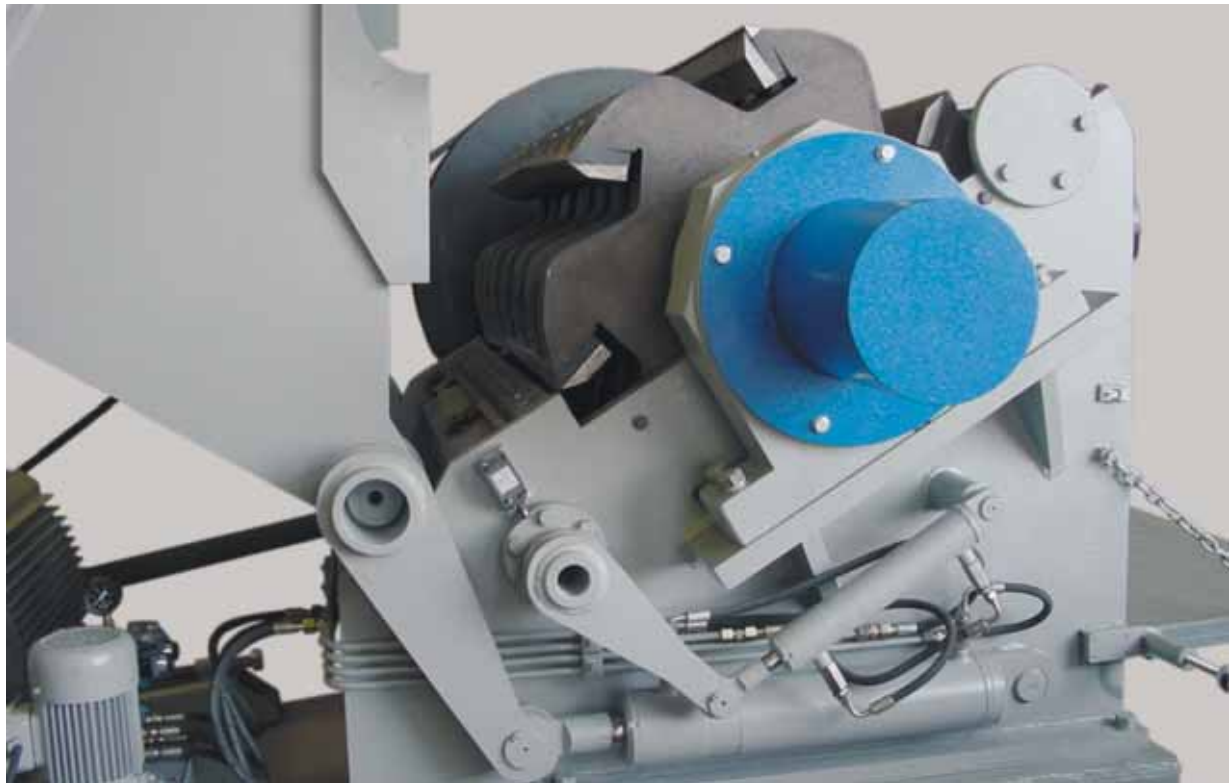


Designed for Demanding and Universal Applications

ZERMA



ULTIMATE SIZE REDUCTION TECHNOLOGY



### Unique Housing Design

The housing cutting chamber is divided across the centre line which allows the upper section to be easily opened hydraulically. The screen is positioned in a front mounted easy access screen cradle which is separate from the upper cutting chamber and also opens hydraulically.

### Heavy Duty Rotor

The over-sized pedestal type rotor bearings are mounted outside the cutting chamber in solid steel housings. They are designed for minimal service and built for demanding applications. The outside bearing assembly eliminates material contamination through lubricant and eliminates pre-mature bearing failure through material contamination in the bearings. Outside bearing assembly is also an advantage during wet granulating operation.

### Flywheel

To increase rotor inertia an auxiliary flywheel is available as option on the non-driven rotor shaft side. All rotor shafts in the GSH series are standard with the extended rotor shaft for flywheel installation.

### Utmost Operational Reliability

The granulators in the GSH series are manufactured to current European Union machine requirements and are fully CE certified. Machine safety is ensured through time-delay bolts with safety switches, hydraulic safety check valves, etc.



### Easy Rotor/Stator Knife Adjustment

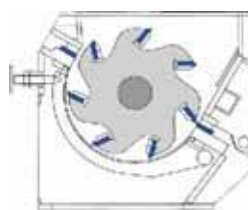
Rotor and stator knives are pre-set outside the granulator in a supplied bench-top fixture prior to installation. Awkward adjustments inside the machine are no longer necessary. The knives are manufactured from heavy duty high quality alloy steel and can be re-sharpened numerous times.



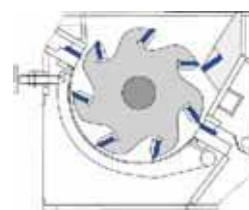
### Integrated Deflection Wedge knife

A removable adaptor carrying a third stator knife, termed the deflection wedge, can be installed to control the aggressiveness of the rotor at the first cutting point.

This will eliminate rotor blocking during extreme applications. When the deflection wedge is removed the granulator is applicable for large voluminous parts such as hollow parts, crates, and other high volume parts.



Deflection wedge removed

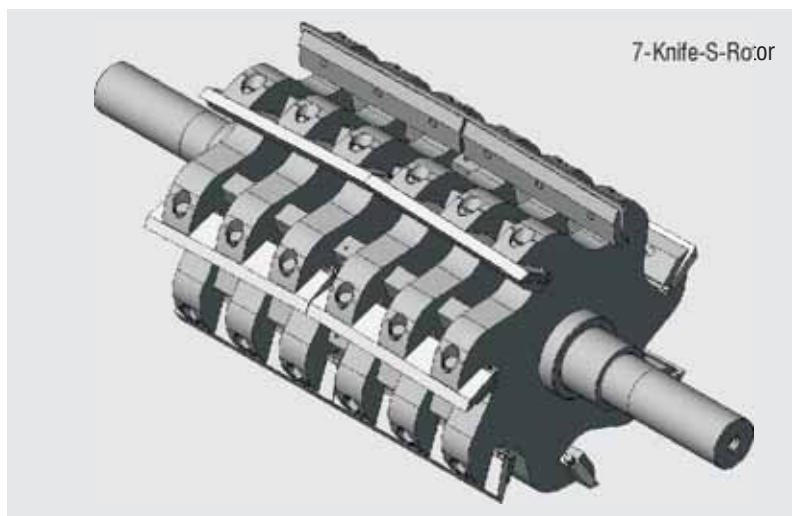


Deflection wedge installed

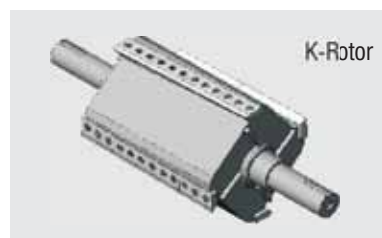
### Superior Chevron “V” Type Cutting Geometry

The GSH series offers a complete range of rotor variations which are all built with the unique chevron “V” type cutting technology. The chevron “V” cut action generates the material concentration around the centre of the rotor and evenly distributes it along the entire rotor length. The typical material conveyance to the cutting chamber side through conventional fully slanted rotor knives is eliminated.

The centred and evenly distributed material prevents cutting chamber side wall material build up and side wall material melt down. The rotor knives are not bolted into the rotor stars as with conventional type rotors but utilize threaded rotor knife backing plates. Therefore eliminating the drill out removal of broken or stripped bolts from the rotor stars.



7-Knife-S-Rotor



K-Rotor

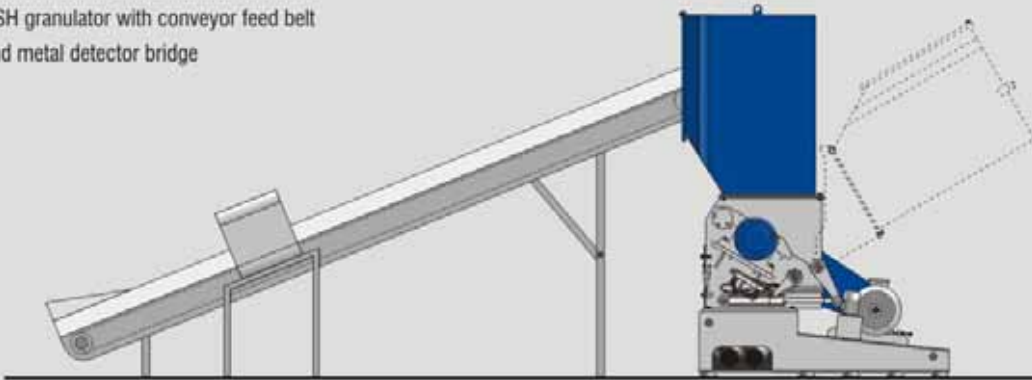


9-Knife-H-Rotor

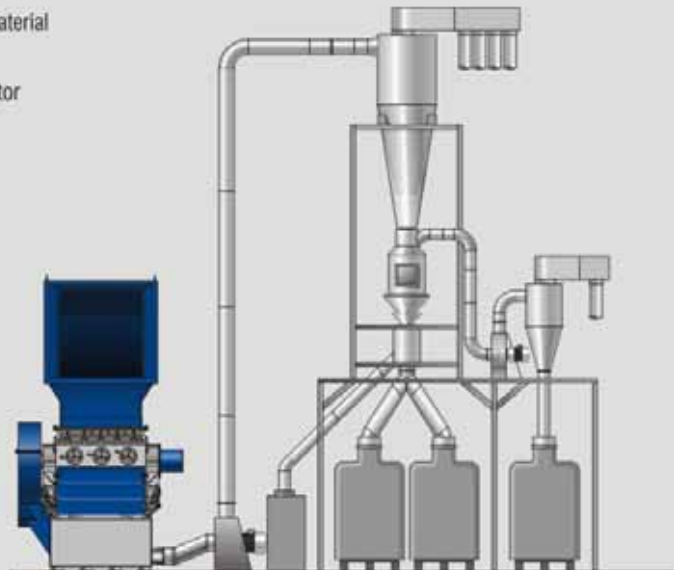


# System Installation Examples for the GSH Series

GSH granulator with conveyor feed belt and metal detector bridge

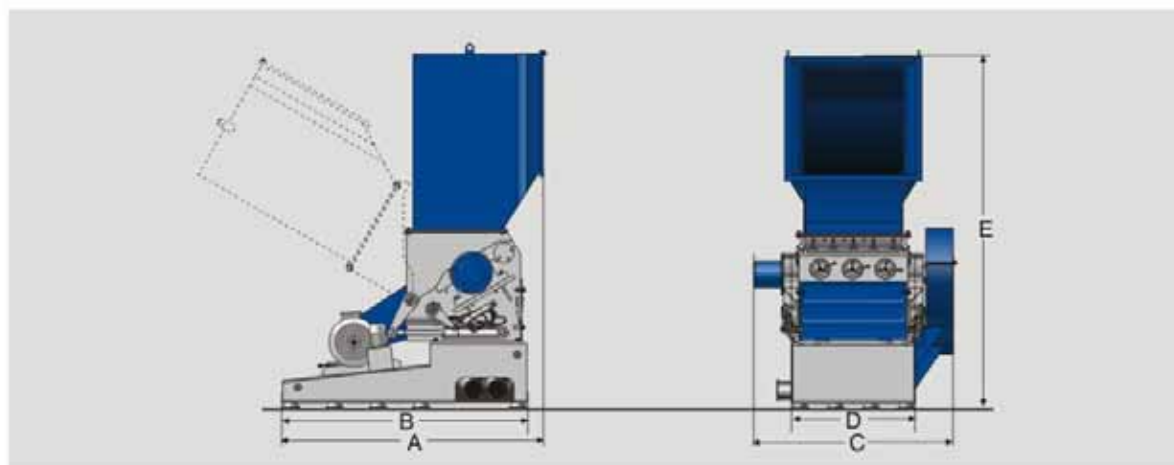


GSH granulator with material transport system, integrated fines separator and metal separator



Type GSH	350/500	350/1000	500/600	600/800
No. rotor knives	5 x 2	5 x 2	5 x 2	5 x 2
No. of stator knives	2 / 3	2 / 3	2 / 3	2 / 3
Rotor diameter (mm)	350	350	500	600
Rotor length (mm)	500	1000	600	800
Cutting chamber cross section (mm x mm)	516 x 462	985 x 462	636 x 591	788 x 695
Drive motor (kW)	22 - 30	30 - 37	37 - 55	55 - 90
Dimensions(standard machine):				
Length A (mm)	1800	1870	2080	2300
Length B (mm)	1600	1650	1850	2100
Width C (mm)	1250	1700	1530	1850
Width D (mm)	770	1270	940	1120
Height E (mm)	2500	2600	2620	3000

Type GSH	500/1000	700/1000	800/1200	800/1600
No. rotor knives	5 x 2	7 x 2 / 9 x 2	7 x 2 / 9 x 2	7 x 4 / 9 x 4
No. of stator knives	2 / 3	2 / 3	2 / 3	2 / 3
Rotor diameter (mm)	500	700	800	800
Rotor length (mm)	1000	1000	1200	1600
Cutting chamber cross section (mm x mm)	985 x 591	985 x 804	1150 x 915	1572 x 915
Drive motor (kW)	55 - 90	90 - 132	110 - 160	132 - 200
Dimensions(standard machine):				
Length A (mm)	2230	2800	3100	3140
Length B (mm)	2000	2500	2800	2800
Width C (mm)	1860	2060	2360	2800
Width D (mm)	1350	1290	1530	1960
Height E (mm)	2860	3420	3820	4250



**ZERMA**

# ZERMA Recycling & Granulator Technology



ZERMA, with more than 60 years of experience, is one of the leading manufacturers of high quality granulators. Our product range begins with the small slow, speed granulators and reaches the large high performance granulators, including special machines such as the front entry granulators for pipes and profiles or the pulveriser systems for fine grinding applications. Using drive motors ranging from 2,2 kW to 200 kW, the ZERMA line of machines covers the complete spectrum of plastics size reduction applications.

[www.zerma.com](http://www.zerma.com)

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