

The knives of the M400/1-400 and M600/1-600 single-shaft shredders on show at EMO, as with all Erdwich plants, are made of fully hardened steel and can be reground several times, thus enabling long service lives.

Thanks to their higher cutting force, twin-shaft shredders such as the M350/2-410 are suitable for shredding larger quantities of swarf or swarf with large cross-sections.



## Demand-oriented swarf shredding: Single-shaft or twin-shaft shredders for every metallic challenge

**The formation of removal material in the form of swarf is inevitable in metalworking processes such as turning, drilling, milling or grinding. The mostly very long, spiral and sharp-edged metal swarf has to be collected outside the work areas in order to be delivered as scrap to recycling companies for recycling or to be processed in the company's own facilities.**

Due to the large volume of the balls of swarf and the swarf itself, however, intermediate storage requires a lot of space, which can be a problem especially in smaller companies. The recycling specialists at Erdwich Zerkleinerungs-Systeme GmbH have therefore set themselves the task of designing single-shaft and twin-shaft shredders for as many space conditions and metallic challenges as possible.

The portfolio ranges from plants that can be integrated directly into the production process to stand-alone solutions. At the trade fair EMO 2019 in Hanover, Germany, Erdwich will present a selection of its portfolio of single-shaft shredders M400/1-400 and M600/1-600 as well as twin-shaft shredders M350/2-410 in the field of demand-oriented swarf shredding.

“According to our experience, it is primarily the volume that poses the greatest problem during storage and further processing of the balls of swarf,” explains Harald Erdwich, Managing Director of Erdwich Zerkleinerungs-Systeme GmbH. “The space requirement for the installation of a suitable shredding plant, which must meet the local conditions both in terms of dimensions and in terms of throughput and the material to be shredded, ranks directly in second place”.

Since both the operational floor space and the swarf itself represent valuable resources, it is necessary to find the optimum solution for each application. The range of applications extends from small wastes in laboratories, which have to be shredded in interval operation, to 24/7 continuous use in the automotive industry with correspondingly high throughput quantities. “The plants can be configured either for pure volume reduction or perfect breaking-up of materials, so that the metal swarf can be further processed by briquetting or oil separation in a centrifuge,” explains Erdwich.

### Single-shaft solutions for “everyday swarf”

“Our single-shaft shredders are suitable for processing the metal swarf that accumulates in everyday operations during machining,” explains Erdwich. „Due to the special pressure angle, the swarf and metal pellets are drawn in and shredded at the stator by the individually inserted, removable knife disks on the cutting rotor.”

As with all Erdwich systems, the knives of the M400/1-400 and M600/1-600 single-shaft shredders shown at the EMO are made of fully hardened steel and can therefore be reground several times, which significantly increases their service life.

Replacing individual knives is thus also possible in a short time. The particle size and the throughput of the machines are determined by the various possibilities of inserting the knives on the cutting rotor as well as individual perforated sieve geometries.

Depending on the type of swarf and appearance, throughputs of 70 to 1,650 kg/h are possible with the single-shaft shredders from Erdwich. With the help of individual cutting gear variants and various drive concepts, Erdwich is in a position to adapt the machines to the spatial conditions of the clients in order to develop customer-specific machine concepts even in confined spaces.

### Greater cutting force due to twin-shaft design

Thanks to their higher cutting force, twin-shaft shredders such as the M350/2-410 are suitable for shredding larger quantities of swarf or swarf with large cross-sections. “In the case of special chip geometries, the force of a single-shaft shredder may not be sufficient to achieve the desired result,” says Erdwich. “Twin-shaft machines are also better suited for continuous throughputs of large volumes and quantities of up to 4,000 kg/h,” Erdwich explains.

The higher throughput capacity results from the narrowest cutting gaps, which guarantee reliable shredding without jamming effects. Depending on the material, the cutting gear geometry of the twin-shaft shredders can also be perfectly configured using adapted blade shapes and individual knife insertion options on the hexagonal shafts.

# ERDWICH Zerkleinerungs- Systeme GmbH

Erdwich Zerkleinerungs-Systeme GmbH was founded by Johann Erdwich sen. in 1972 as a machine and metal construction company.

Currently there are 40 employees. The company's three core businesses for machine and plant engineering are divided into the areas of reprocessing and recycling of reusable materials, destruction of hazardous waste of all kinds and shredding of waste for volume reduction.

In the segment of recycling plants for refrigeration devices, Erdwich GmbH is one of the top 3 companies in the world.

## **VARIABILITY OF THE CUTTING GEAR**

Due to the variability of the cutting gear, the optimum feeding behaviour is generated for each material in order to achieve the highest performance. In addition, a specially developed stripping system with self-cleaning effect ensures that the metal swarf does not wrap itself around the shaft making it necessary to interrupt operation to remove the swarf. A PLC control with automatic reverse and cut-out control protects all single- and twin-shaft shredders from Erdwich from damage due to overload or massive parts.



At this year's EMO in Hanover, Erdwich will be presenting the M400/1-400 and M600/1-600 single-shaft shredders and the M350/2-410 twin-shaft shredder as examples of its entire portfolio. The Erdwich sales team will be available to interested trade visitors for initial discussions and specific questions in Hall 7, Booth D43.

<b>What:</b>	EMO 2019
<b>When:</b>	Monday 16 to Saturday, 21 September 2019
<b>Where:</b>	Hanover Fair, Hall 7, Booth D43
<b>Contact person:</b>	Harald Erdwich (Managing Director)
<b>Further information:</b>	<a href="http://www.erdwich.com">www.erdwich.com</a>