

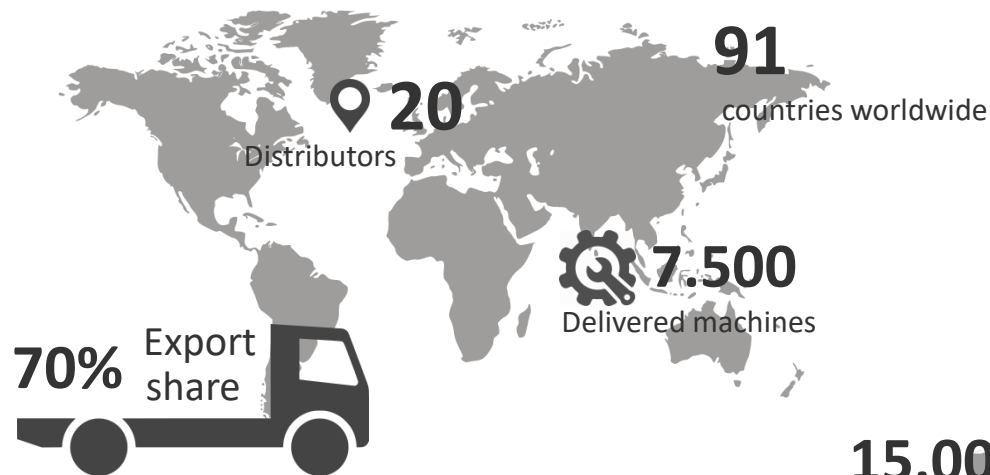


INNOVATION IS OUR STANDARD

Shredder & individual recycling plants

Erdwich Zerkleinerungs-Systeme GmbH

Innovative – Dynamic- Successful



1972

Founding year for drive/conveyor systems business

1981

Rebranding: Erdwich Zerkleinerungs-Systeme GmbH

2010

Construction of an in-house technical center

2017

Relocation to the new company premises in Igling

Product portfolio

Made in Bavaria



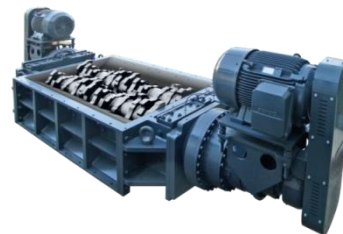
Single-Shaft Shredder



Two-Shaft Shredder



Three-Shaft Shredder



Ripper RM 1350



Ripper RM 1800



Hammer Mill



Cardboard Shredder



Swarf-Shredding-Drum



Rotary Valve

The variety of our applications

The right solution for every application



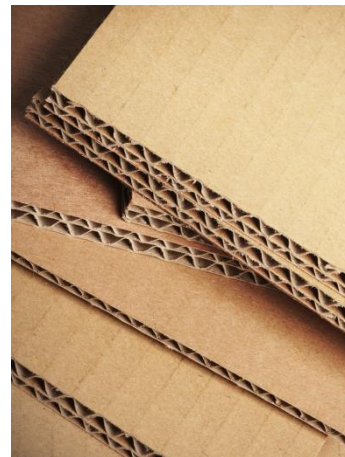
Metal swarfs



E-Waste



Refrigerators



Cardboards



Cast elements

... and many more applications!



SWARF SHREDDER FROM ERDWICH

Central & decentralized single and complete
systems

Metal swarf treatment

Systems for highest process reliability

Daily challenges

- Overflowing swarf containers
- Excessive reductions in the market scrap price due to oil residues
- Unnecessary personnel costs for company-internal swarf movements
- Danger of injury from bulky, barbed bundles of swarf

Benefits of the ERDWICH solutions

- Greater process reliability for the machine tool
- Lower transportation costs thanks to higher bulk weight
- Higher rate of return on scrap sales
- Reclamation of coolants and lubricants
- Significantly reduced personnel costs for swarf handling
- Improved occupational safety



Single-Shaft shredder systems

Precision material breakdown in just a single operation

- Precise rotor/stator cutting system
- Individually fitted, replaceable cutter discs
- Integrated perforated disk to sort piece sizes
- Bulkhead seals to protect the shaft bearing
- Application-specific drive and cutter element models
- PLC unit featuring automated reverse and power down



M400/1

The all-rounder for universal applications!



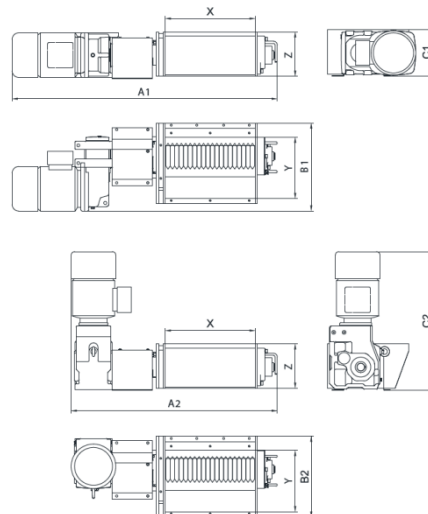
ERDWICH

... SHREDDING UNLIMITED ...

Type	Amount of stator knives	Drive power	Cutting unit size (LxW mm)	Weight (kg)	Diameter of punched sieve (mm)	Width of rotor knife (mm)
M400/1-200	1	2,2 - 3,0 kW	200 x 200	100	15-25	20
M400/1-400	1	2,2 - 3,0 kW	400 x 200	130	15-25	20



Dimensions:			
	Dimension	M400/1-200	M400/1-400
Cutting unit length X	mm	200	405
Cutting unit width Y	mm	215	215
Cutting unit height Z	mm	200	200
Total length A1	mm	985	1185
Total length A2	mm	720	920
Total width B1	mm	398	398
Total width B2	mm	365	365
Total height C1	mm	210	210
Total height C2	mm	626	626



Subject to technical changes.

M600

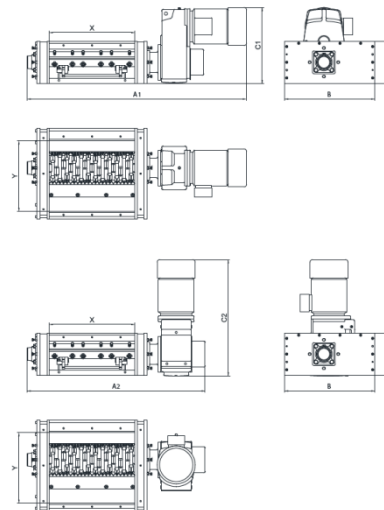
Small and compact!

Type	Amount of stator knives	Drive power	Cutting unit size (LxW mm)	Weight (kg)	Diameter of punched sieve (mm)	Width of rotor knife (mm)
M600/1-400	1	5,5 - 9,2 kW	400 x 500	500	25 -35	25
M600/1-600	1	5,5 - 9,2 kW	600 x 500	600	25 -35	25

Dimensions:

	Dimension	M600/1-400	M600/1-600
Cutting unit lenght X	mm	402	602
Cutting unit width Y	mm	502	502
Cutting unit height Z	mm	298	298
Total lenght A1	mm	1381	1581
Total lenght A2	mm	1062	1262
Total width B	mm	633	633
Total height D1	mm	578	576
Total height D2	mm	792	792

Subject to technical changes.



M700

Exact material preparation in one operation!



ERDWISCH

... SHREDDING UNLIMITED ...

Type	Amount of stator knives	Drive power in kW	Cutting unit size (LxW mm)	Gewicht in kg	Diameter of punched sieve (mm)	Width of rotor knife (mm)
M700/1-600	1	7,5 - 22	580 x 670	1610	10 - 50	30
M700/1-900	1	7,5 - 22	880 x 670	1850	10 - 50	30

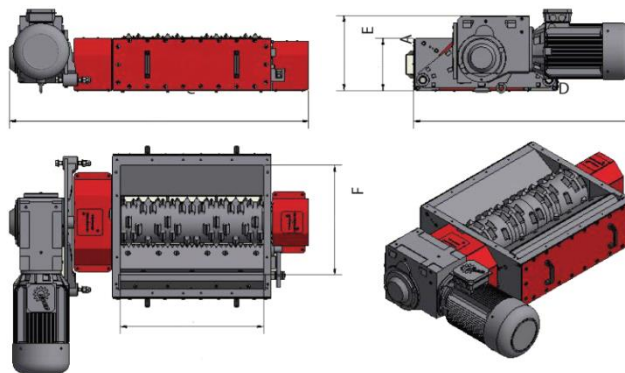


Dimensions

	Dimension	M700/1-600	M700/1-900
Cutting unit lenght B	mm	580	880
Cutting unit width F	mm	670	670
Cutting unit height A	mm	320	320
Total lenght C*	mm	1.544	1.844
Total width D*	mm	1.350	1.350
Total height E*	mm	462	462

Subject to technical changes.

*variable, depending on drive concept



M800

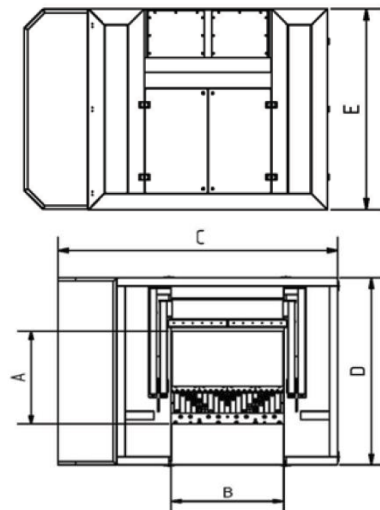
Shredding of large volumes of swarf!

Type	Amount of stator knives	Drive-Power in kW	Cutting unit size (LxW mm)	Weight in kg	Diameter of punched sieve (mm)	Width of rotor knife (mm)
M800/1-1400	1	55 / 75 / 90	1400 x 1400	10.500	30 - 60	50 x 50 x 25
M800/1-1700	1	55 / 75/ 90	1710 x 1400	12.500	30 - 60	50 x 50 x 25
M800/1-2000	1	2 x 45 / 2 x 55	2050 x 1400	16.000	30 - 60	50 x 50 x 25

Dimensions

	Dimension	M800/1-1400	M800/1-1700	M800/1-2000
Cutting unit width B	mm	1400	1400	1400
Cutting unit length A	mm	1400	1710	2050
Total width C	mm	3400	3740	4750
Total length D	mm	2275	2275	2275
Total height E	mm	2250	2250	2250

Subject to technical changes.



M400/2-400 duplex machine

Making more out of swarfs

- Flexible connection of the knives
- Easy screen change
- 80% higher throughput with optimized feed behavior *
- Electro-mechanical drives in different variants

* Depending on material & future tests

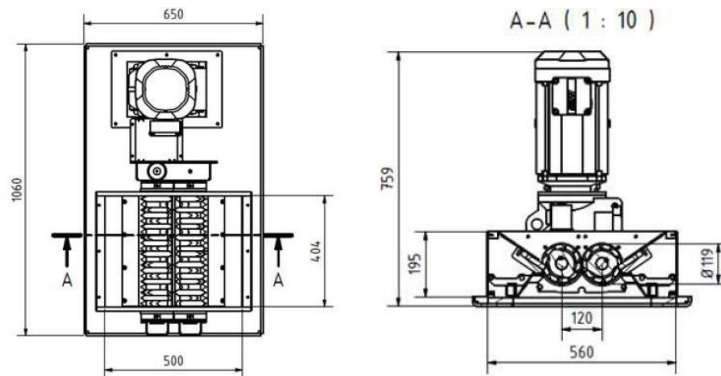
Type	Amount of stator knives	Drive power in kW	Cutting unit size (LxW mm)	Weight (kg)	Diameter of punched sieve (mm)	Width of rotor knife (mm)
M400/2-400	2	2,2 - 4,0	400 x 500	300	6 - 20, 40	20

Dimensions:

	Dimension	M400/2-400
Cutting unit lenght	mm	404
Cutting unit width	mm	500
Cutting unit height	mm	195
Total lenght*	mm	1060
Total width*	mm	560
Total height*	mm	759

Subject to technical changes.

*variable, depending on drive concept



Decentralised individual systems

Instant swarfs shredding directly at the machining center

The advantages at a glance:

- Individually adaptable to existing metal-cutting machines
- Compact, cost-effective entry-level solution for decentralised shredding
- Reduction of the swarf volume to 1/10 of the original volume
- Optimal conditions for further swarf transport by swarf trolley or downstream automation solutions
- No stoppages due to blockage of the swarf conveyor thanks to direct shredding at the processing machine

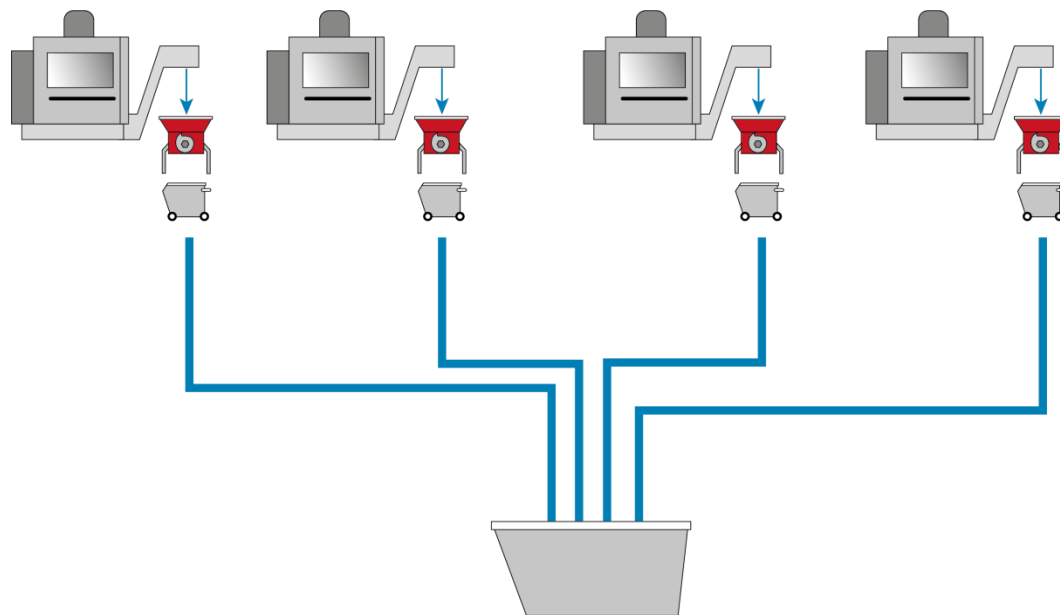


Volume reduction of 1/10 of the original volume

Decentralised individual systems

Instant swarfs shredding directly at the machining center

Schematic diagram of decentralised individual system:



Decentralised solution as an individual shredding system directly at the machine. Removal of swarf by swarf trolley to the swarf container or by optional automation solutions.

Decentralised complete systems

Complete solutions with integrated pump or suction station

This is usually done with the aid of single-shaft shredders. The station filling levels are monitored, and pumped or suctioned out in cycles. This reduces pipeline cross-sections and saves energy costs.

The advantages at a glance:

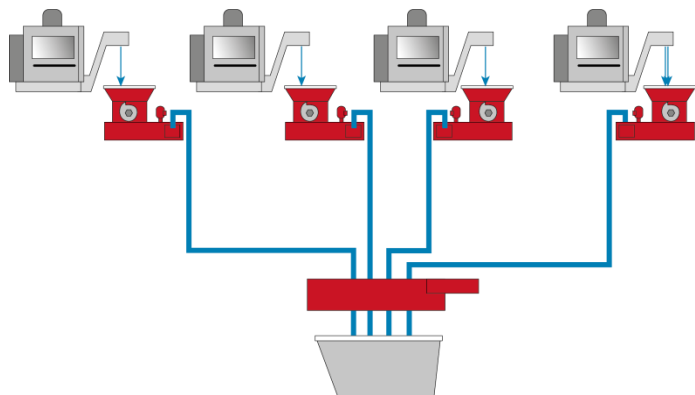
- Technologically perfect complete solutions for decentralised shredding
- Reduction of swarf volume to 1/10 of the original volume
- Optimum conditions for further swarf transport by downstream automation solutions with pumping or suction stations
- For pumping stations: Removal of swarf together with the cooling lubricant



Decentralised complete systems

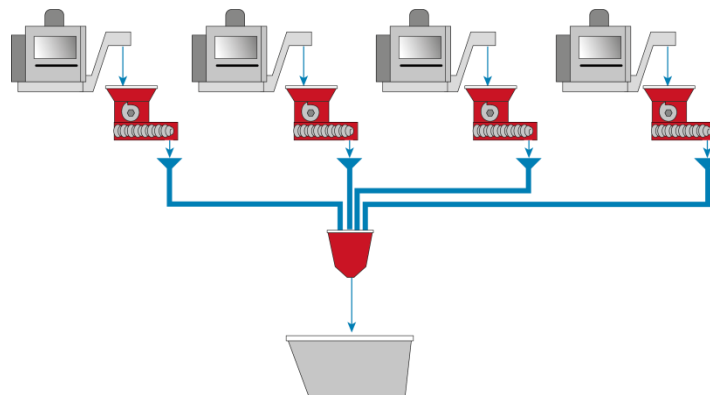
Complete solutions with integrated pump or suction station

Schematic diagram of decentralised solution with pumping station:



Following the shredding process, the swarf is pumped out with the emulsion by energy-efficient pumping stations and transported to the central swarf treatment system. Can be implemented with customer conveyor equipment or as an ERDWICH complete solution.

Schematic diagram of decentralised solution with suction station:



Following the shredding process, the swarf is suctioned out by an energy-efficient blower and transported to the central swarf treatment system. Can be implemented with customer conveyor equipment or as an ERDWICH complete solution.

Decentralised complete systems

Complete solutions with integrated pump or suction station



ERDWICH offers complete solutions for automatic filling, efficient material distribution in the hopper, filling level monitoring and transport to the disposal containers (incl. product distribution into individual containers).

The advantages at a glance:

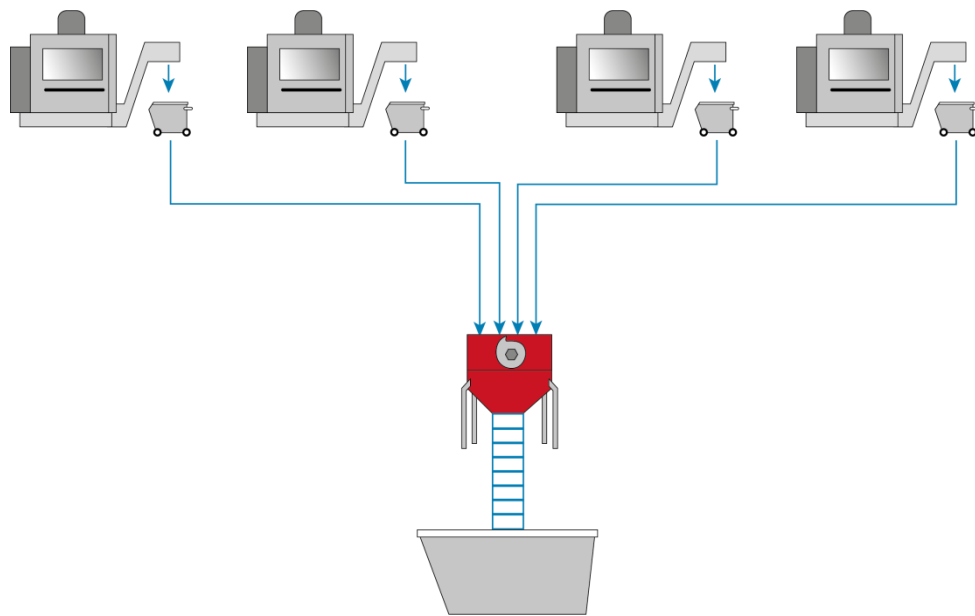
- Turnkey complete solutions for central shredding of metal swarf
- Large range of machines as the basis for the optimum shredding of different types of swarf
- Performance range from 100 kg/h to 4,000 kg/h
- Lower transport volume with resulting lower transport costs
- Special drum-type swarf shredders with ejection of solid parts



Centralised individual systems

Instant swarfs shredding directly at the machining center

Schematic diagram of centralised solution:



The swarf is transported in a swarf trolley to the central shredding system for processing. After the shredding process, the swarf is transported to the swarf container via a hinged-plate belt conveyor.

Centralised complete systems

Drum-type swarf shredder with double impurity ejection flap



The advantages at a glance:

- Ideal solution for smaller to medium swarf levels
- Continual and even feeding of the swarf to the cutting gear by the rotating drum
- Automatic separation of impurities from the material flow into coarse parts containers and transport of the swarf to the swarf conveyor below
- The single-shaft technology with double impurity ejection flap ensures smooth system operation even with a high proportion of solid parts in the swarf
- Intelligent system controls for automatic detection of solid parts, with reversible operation



Centralised complete systems

Drum-type swarf shredder with double impurity ejection flap

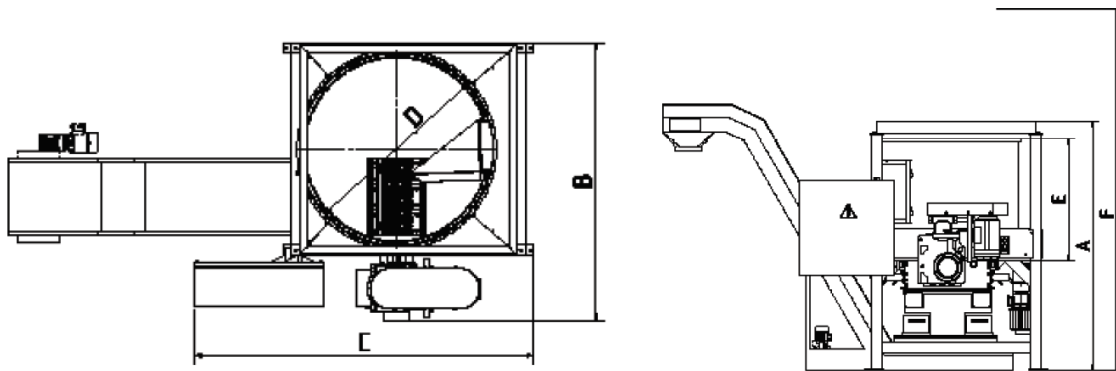
Up to 1,500 liters can be tipped directly into the shredder by means of forklift or lift-tipping device. The rotating feed drum supplies the material slowly and evenly to the cutting gear. It is equipped with two hydraulically driven ejection flaps, which guarantee the reliable removal of more complex impurities.

Type	Amount of stator knives	Drive power in kW	Rotor length / diameter (mm)	Weight kg	Blades thickness* mm
TSZ 1500	1	9,2	575 x Ø 242	1.380	25
TSZ 1500S	1	5,5	575 x Ø 242	1.590	25

Dimensions		
	Dimensions	TSZ 1500(S)
Total length C	mm	2.000
Total height A	mm	2.620
Total width B	mm	2.275
Drum diameter D	mm	1.500
Drum height E	mm	1.300
Max. drum-filling level	litre	1.200
Minimum building inside height F	mm	4.200

Subject to technical changes.

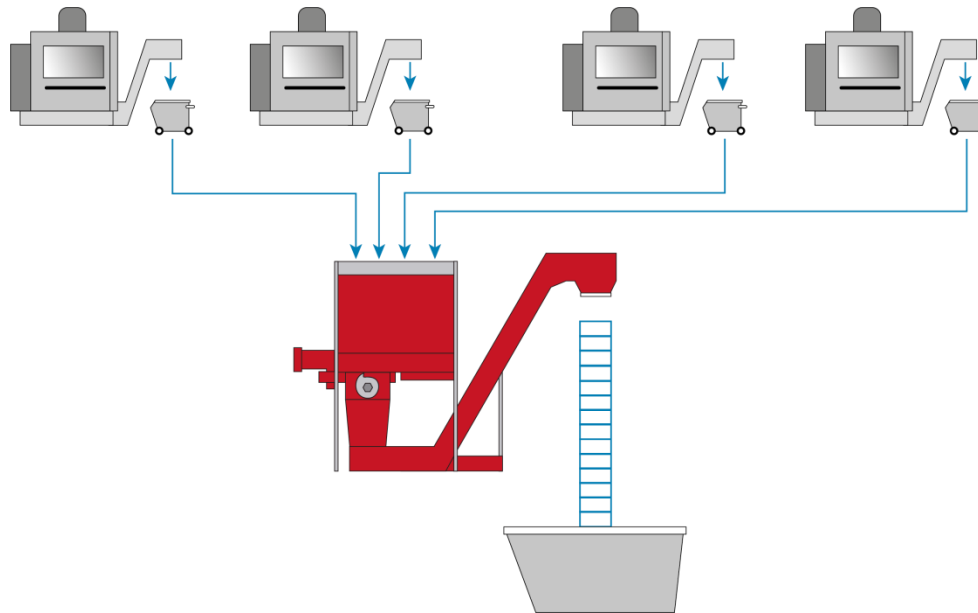
*Standard version



Centralised complete systems

Drum-type swarf shredder with double impurity ejection flap

Schematic diagram of centralised solution with drum-type swarf shredder:



The swarf is transported in a swarf trolley to the central drum swarf shredding system for central processing. After the shredding process the swarf is transported via a hinged-plate belt conveyor to the swarf container or downstream treatment interface (centrifuge, briquetting press).

Centralised complete systems with centrifuges

Shredding systems with economic oil recovery

Oil as an operating material represents a significant cost factor for metal-cutting businesses. The aim therefore is to recover the oil as efficiently as possible from the swarf and feed it back into the process cycle.

ERDWICH systems connected with existing customer centrifuges or complete solutions with centrifuges supplied by ERDWICH meet this requirement in an efficient and economic way.

The advantages at a glance

- Recovery of valuable oil for the production cycle
- Latest technology with connection to existing or new centrifuges
- Reliable exceeding of the limit values of max. 2–3 % cooling lubricant residual moisture

Oil is reliably removed from the swarf waste.



Centralised complete systems with briquetting presses

Systems with briquetting presses for volume reduction

With many types of swarf, the recycling and handling process is optimised by pressing the swarf into briquettes, which also reduces the volume. At the same time, increased revenue can be obtained when selling the briquettes to smelting businesses.

ERDWICH systems connected with existing customer briquetting presses or complete solutions with briquetting supplied by ERDWICH meet these requirements in an efficient, reliable and economic way.

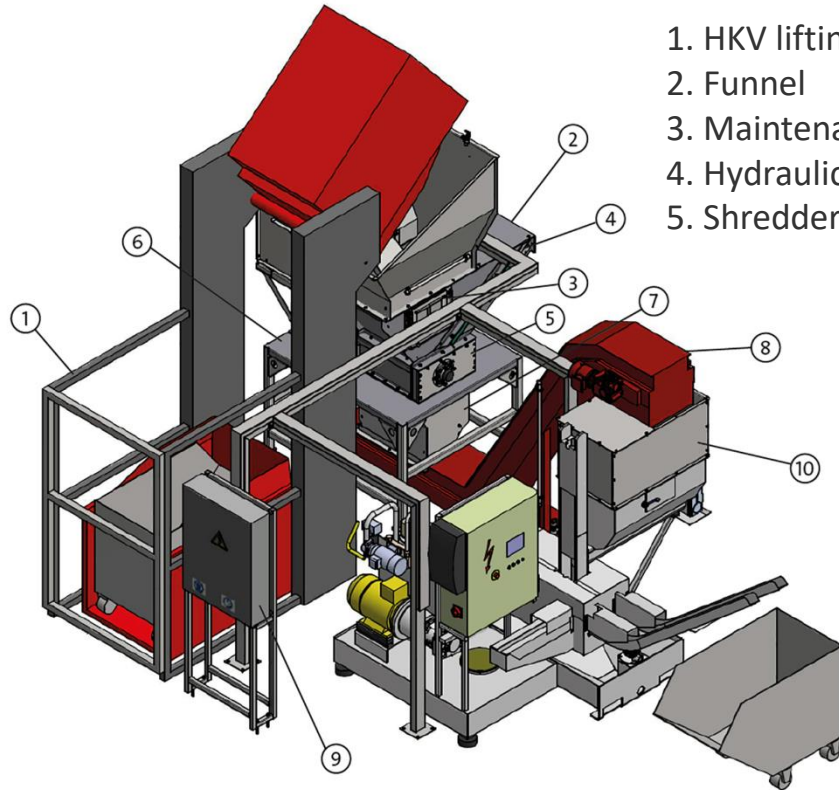
The advantages at a glance

- Briquetting of metal swarf for volume reduction and optimum handling
- Latest technology with connection to existing or new briquetting presses
- Proven solutions for maximum process reliability
- Shredded and compacted swarf increases the combustion efficiency when smelting
- Increased revenue from sales to smelting businesses



Pressing of the shredded swarf into handy briquettes.

Example – swarf treatment



1. HKV lifting and tipping device
2. Funnel
3. Maintenance door
4. Hydraulic pusher
5. Shredder

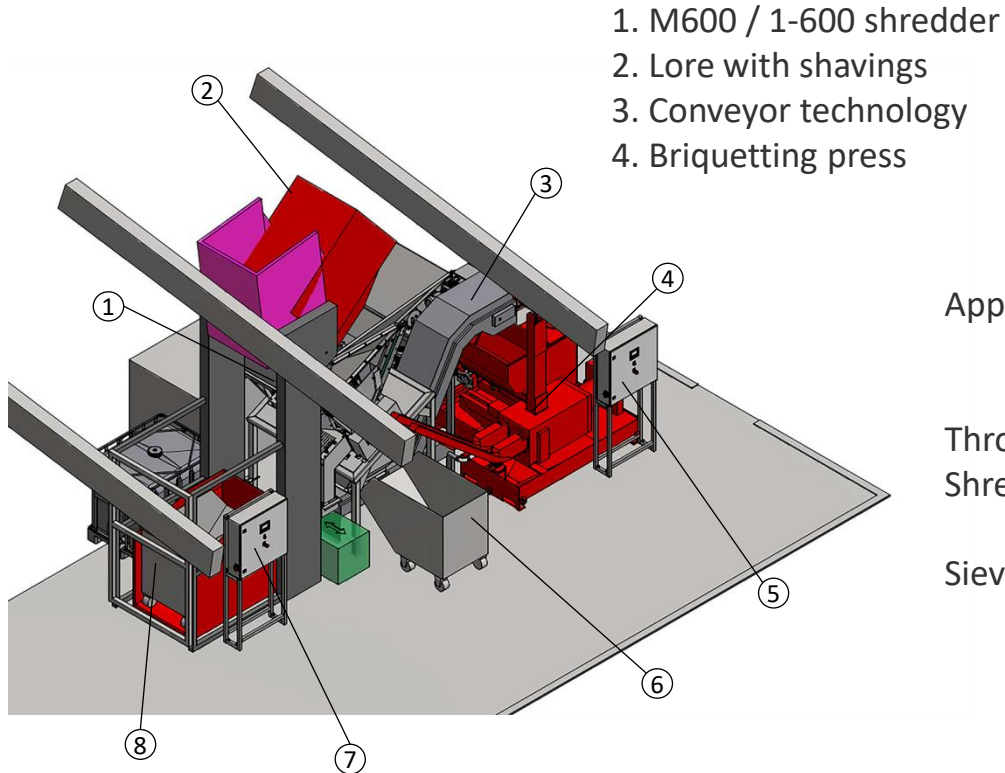
6. Machine frame open
7. Intermediate funnel
8. Hinge plate conveyor
9. Control
10. Briquetting system

Application: Steel chips with emulsion, free of solid parts
250 kg/h
Throughput: M600/1-600, 5.5kW, with radial pusher
Shredder: and linear pushers
25mm
Sieve:

Example – swarf treatment



Example – swarf treatment



1. M600 / 1-600 shredder
2. Lore with shavings
3. Conveyor technology
4. Briquetting press

5. Control briquetting press
6. Collecting lore for contaminants
7. Control of HKV + shredding + conveyor belt
8. HKV lifting and tipping device

Application: Aluminum chips with an emulsion with contaminants
Ø 14mm; Length: 20-25mm

Throughput: 100 kg/h

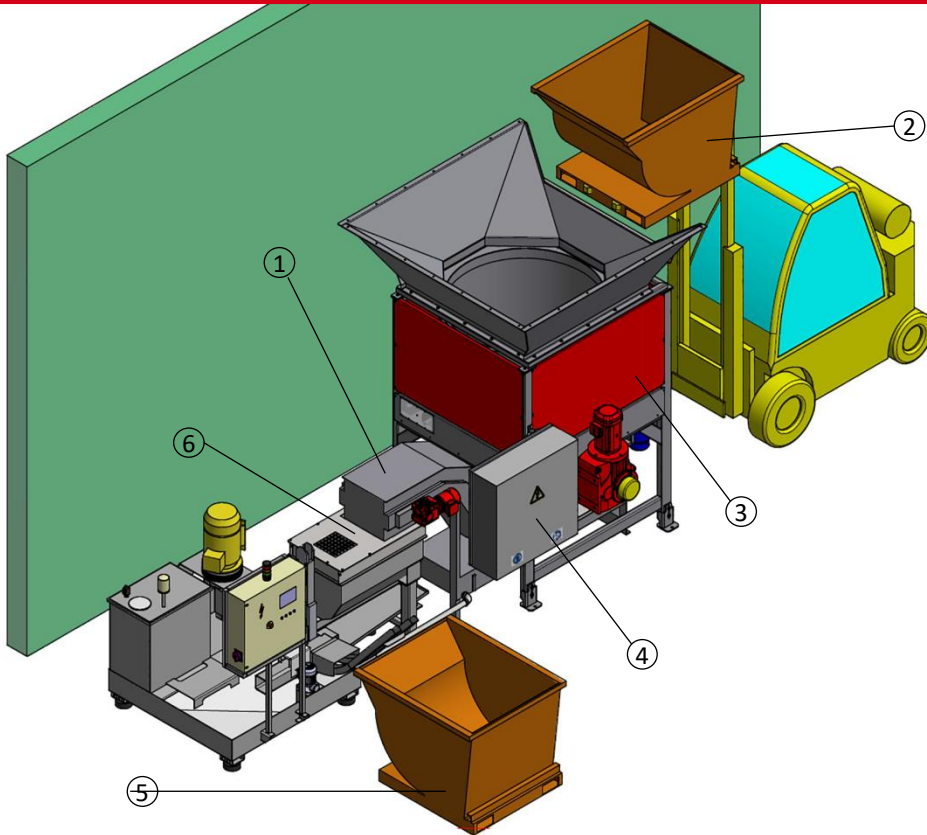
Shredder: M600/1-600, 5.5kW, with radial pusher and linear pushers

Sieve: 20mm

Example – swarf treatment



Example – swarf treatment



- 1. Conveyor technology
- 2. Lore with shavings
- 3. TSZ1500

- 4. Control of shredder + conveyor
- 5. Collecting lore
- 6. Briquetting press

Application: Aluminum chips, free of solid parts
Throughput: 100 kg / h
Shredder: Drum chips shredder TSZ1500
Sieve: 30mm

Example – swarf treatment



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