

HAMMER MILL HA600 / HA800

Application areas:

- E-Waste
- Metal swarf
- Refrigerators
- Fuel surrogates
- Cardboard
- Hazardous waste
- and many more

Innovation is our standard!

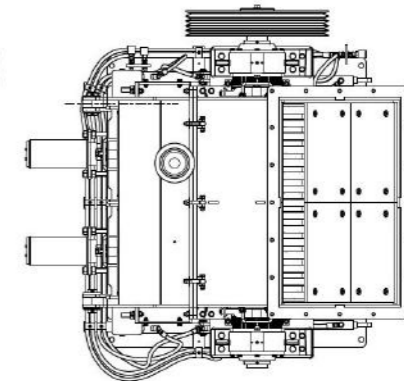
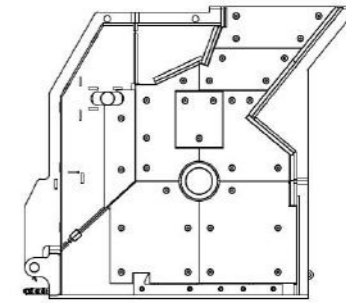
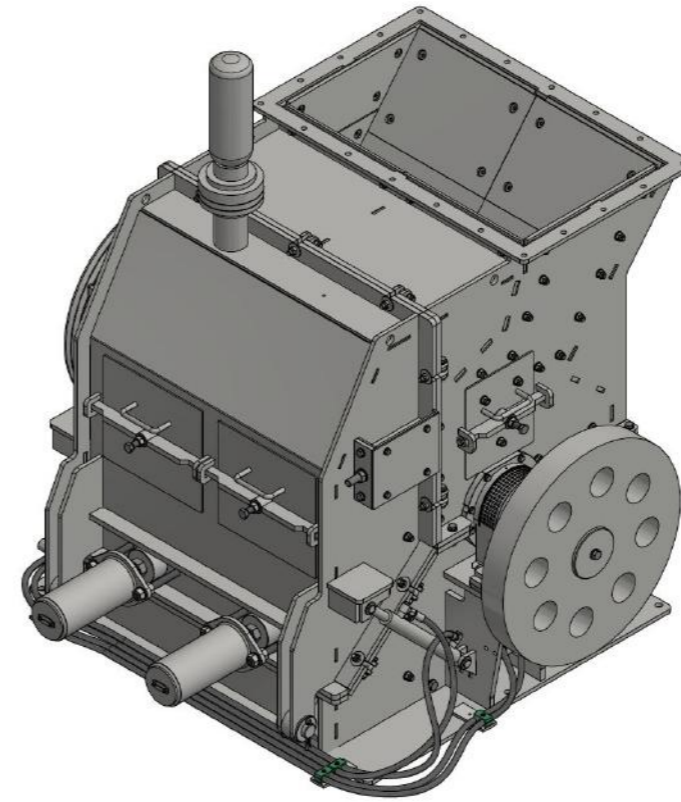
As a highly specialized engineering and production company, ERDWICH offers exceptional services in recycling and shredder technology with over 30 years of experience. Shredding machines, special solutions, complete recycling systems and global service are our core competencies, which our team is enthusiastic about every day.

Owner-managed, with personal, intensive support, short response times and comprehensive service, we provide you with first-class quality made in Bavaria. Get to know us.

Welcome!

Core competences:

- Shredding machines
- Plant engineering
- Service



Take your chance and test your material without obligation in the ERDWICH test center.

We look forward to you.



TOP TECHNOLOGY FOR THE SELECTIVE PROCESSING OF HARD MATERIALS!

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HAMMER MILL HA600 / HA800

PRACTICABLE.
RESOLVING.
CHANGEABLE.



HA600



HA800



Steel ball from hammer mill HA800 - refrigerator recycling plant, diameter 48mm from grate 50mm

Shred hard, brittle materials selectively and efficiently!

The development of our own hammer mill technology is based on many years of experience in various applications and the knowledge gained from this.

Many materials can only be unlocked with great difficulty or with high wear using conventional technology. By using different tools, we are able to process a very wide range of different materials.

With the use of different sieve baskets and grinding bars, we can both determine the size of the output fractions and spherical composite materials. Different rotor speeds can be adjusted to the material to be processed.

The sophisticated welded construction and the separable machine housing enable quick and easy access to the tools. The additionally built-in hydraulic system enables the housing to be opened without great effort.

The installation of different baffle plates allows us to precisely define the grain size of the materials to be processed.

With the automatic overload protection device, we achieve a high level of security against foreign substances in the material, so that the impact wall can automatically evade if the load is too high.

The shredding specialist ERDWICH produces the hammer mill in two sizes:

- HA600
- HA800

These two basic sizes are built with different cutting lengths.

The following machines are available:

- HA600/1-500
- HA600/1-700

- HA800/1-1000
- HA800/1-1500

There is no technical difference between the two versions. The only differences lie in the size and the throughput that can thus be achieved. Our HA600 is the smaller, cheaper alternative to the HA800 with lower throughput requirements.

For the selective challenges in life.
ERDWICH Hammer mills.

Highly practical for a wide range of applications!

Hammer mills are particularly suitable for the size reduction of metal chips, hard, brittle waste, mixed fractions, E-waste, aluminum scrap, for slag processing, but also for other materials. And thanks to the easy adjustability during operation, the balling of non-ferrous metals is also no problem. The result is variable and can be changed during operation. This product property in particular is the best example of its high practical suitability.

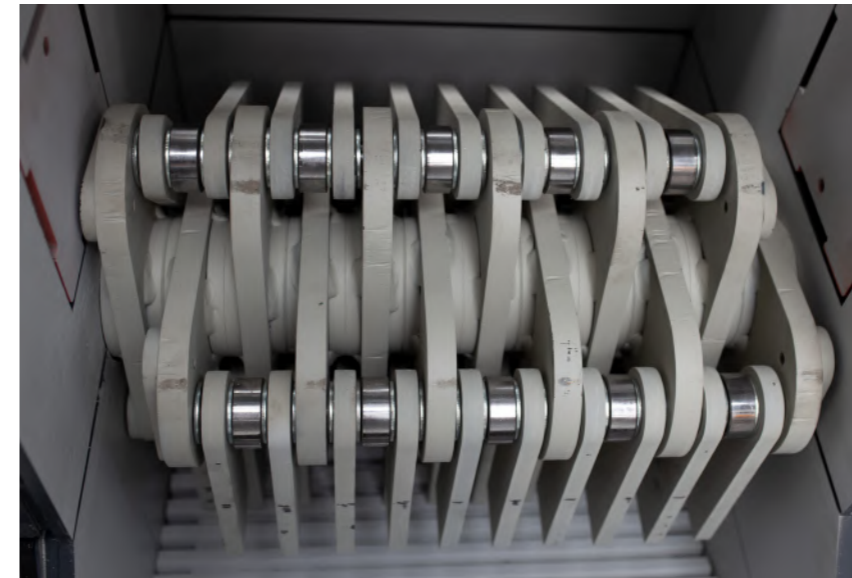
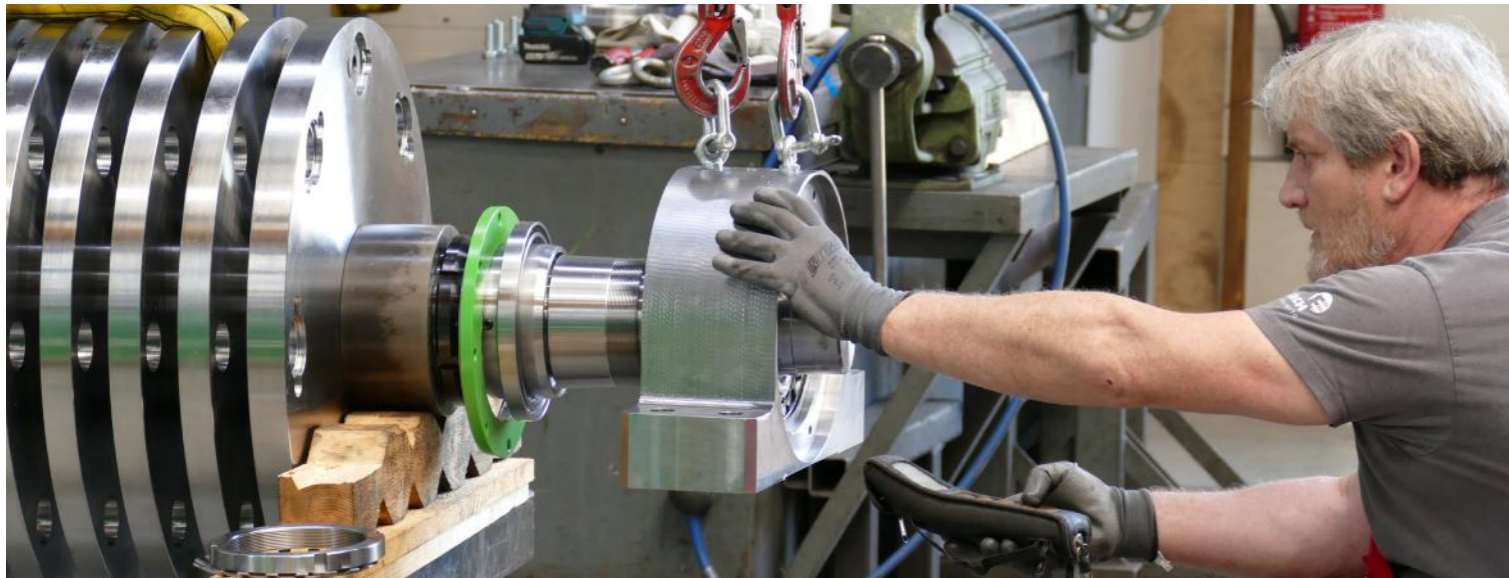
When used in the recycling industry, the focus is on low-wear shredding through „breaking up“ and at the same time cleaning of material mixtures. The advantage here lies in the comminution of the various material mixtures, as a preliminary stage to a subsequent separation of types. For example, a material mixture of plastic and non-ferrous metals (aluminum, copper) can be broken up in such a way that it can then be separated on separating devices according to its specific weight.

The flexible design of the impact principle, adapted to the different materials to be reprocessed, can be built for both material opening and for balling machines and thus offers a wide range of applications:

- Refrigerator processing as well as electrical and electronic scrap processing as a pre- or post-stage using standard ripping technology
- Processing of aluminum profiles and composites, materials
- Processing of shredder light fraction for subsequent separation
- Recycling of circuit boards, IC modules and small electronic equipment
- Milling of non-ferrous composite materials with subsequent balling
- Processing of large-volume metal chips
- Processing of tire wire for subsequent separation of rubber and iron
- Slag processing
- and many more

HAMMER MILL HA600 / HA800

OPTIMUM SHREDDING



The shredding principle of hammer mills

The hammer mills HA600 and HA800 are used for the size reduction of brittle, hard or tough materials. The grinding material is crushed by kinetic breaking and impact crushing.

The shredding material is crushed by kinetic impact and impact crushing. A rotor rotates in a metal housing, on the outer circumference of which an application-specific number of movable steel hammers are attached, which can reach circumferential speeds of up to 80 m/s. The rotor is driven directly by a motor and V-belt and is housed with the hammers in a housing that contains a sieve or a grinding path extension inside (see Fig. 1).

When entering the perimeter of the rotor, the ground material hits the rotating hammers. The greatest crushing effect is achieved through the impact of the hammers. The hammers also dash the pieces against the flake-shaped grinding wall, where they are further broken by the impact.

Further crushing takes place by impact in the lower area between the rotor and the grinding wall.

The ground material remains in the grinding chamber until it is so small that it fits through a perforated sieve and / or the set discharge gap of the machine. This sieve has the function of limiting the upper grain size; the maximum grain size can be set by replacing the sieve. A separation into several fractions is not possible here.

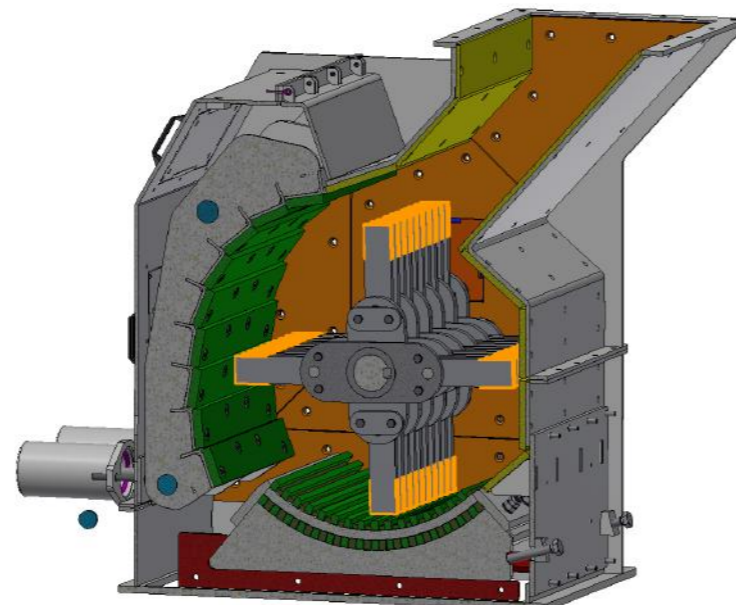


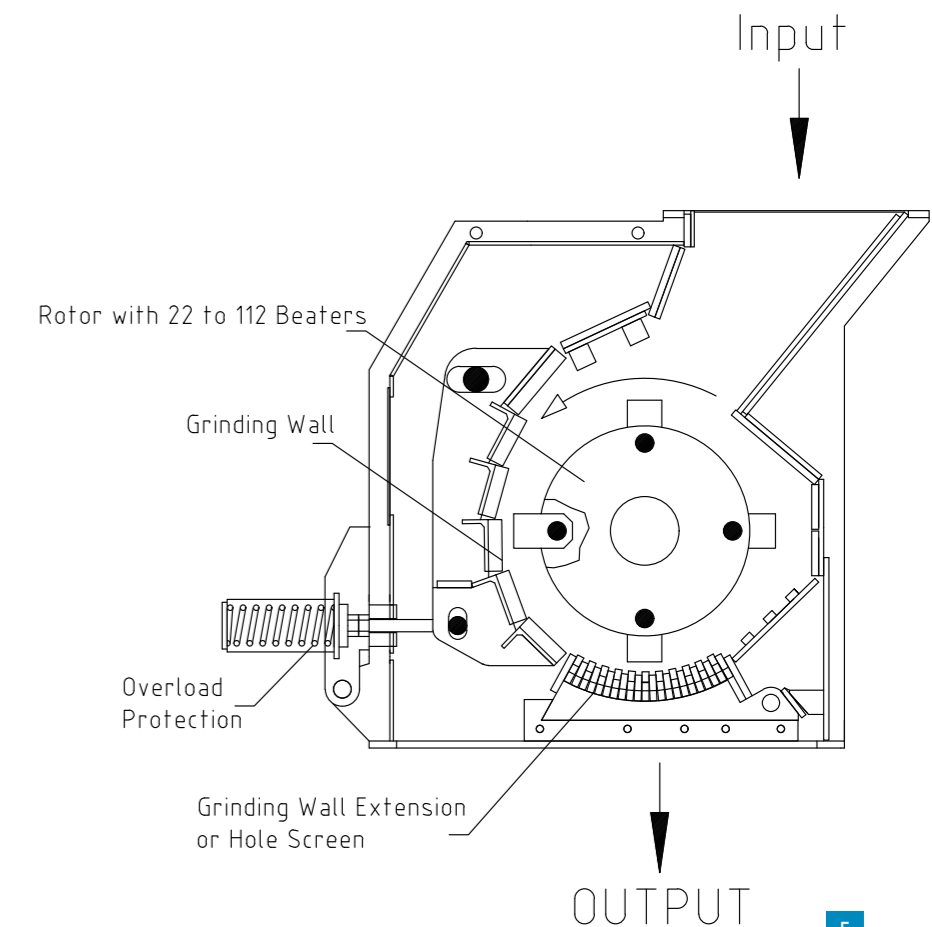
Figure 1 - Cross section Hammer mill

The pendularly suspended hammers and flat beater offer optimum shredding.

They achieve adjustable circumferential speeds between 20 and 80 m/s. The speed can be varied and is selected depending on the material to be ground and the desired throughput.

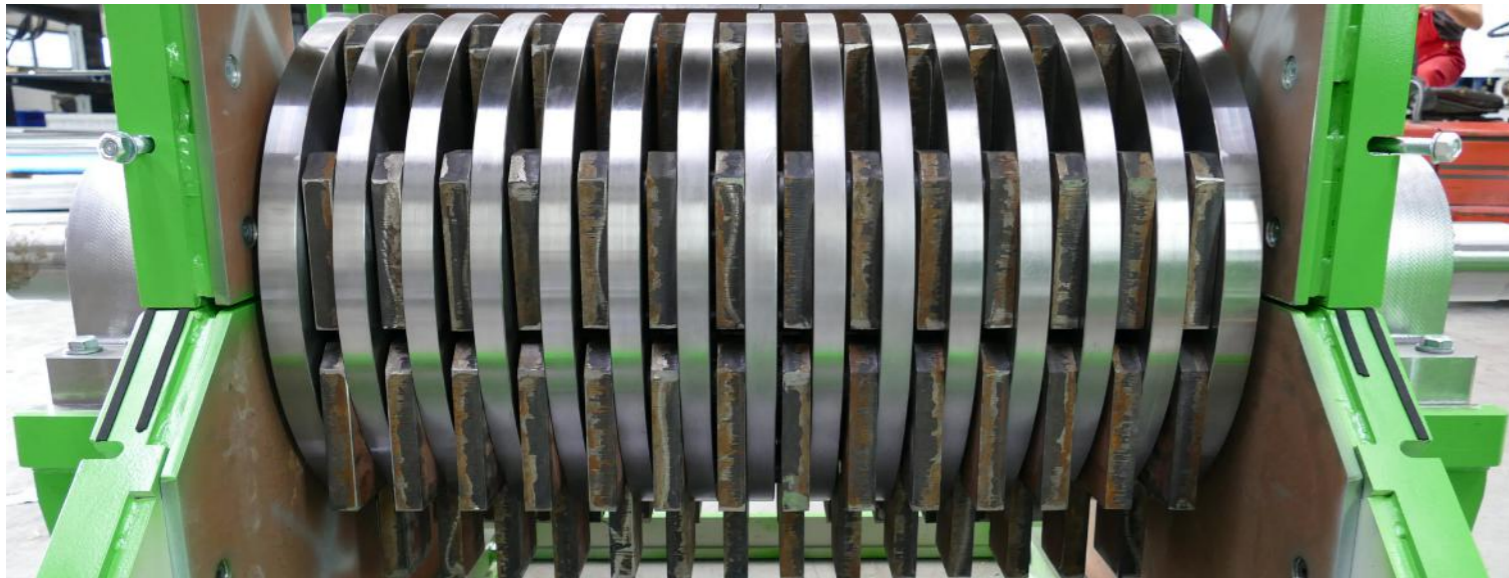
The higher the peripheral speed, the finer the granulation and the higher the energy requirement and the wear and tear on the grinding tools.

In addition, the flat clubs offer additional mechanical overload protection for large or very hard materials.



INDIVIDUAL HAMMERS AND BATS

TO KNOW THE SCORE!



Individual hammers - so that each beat fits!

As already mentioned, the ground material hits the rotating hammers when it enters the circle of impact of the rotor. The greatest crushing effect is achieved by the impact of the hammers.

There are three different types of clubs or hammers.

■ Finisher scutcher

In the case of fine comminution / grinding and / or simultaneous „material cleaning“ such as, for example, car / truck tire wire that is contaminated / stuck with rubber particles

■ Flat hammer

For general tasks and for the desired „material balling“ for subsequent sorting using an air separation hearth

■ Hammer

In the case of scrap metal that should / should not be „balled up“ but should remain as flat as possible, because of subsequent sorting using X-ray or eddy current separation technology



Huge choice - depending on the material and the final grain size

Depending on the starting material and the desired final grain size, there are sieves with different sized perforated grain sizes.

Sieves are available in hole sizes from 4 - 100mm, depending on the material and the desired final grain size. The rounded metal sheets, with lasered holes for determining the final grain size, are simply inserted into the hammer mill. This means that they do not require a great deal of maintenance, but only need to be replaced if they are „worn through“ or worn out. The exchange is carried out by means of a hydraulic auxiliary device.

Please note: In some cases, instead of sieves, grinding path extensions are used in combination with an outlet gap (see Fig. 1, page 4).



Troughput

The troughput rates depend on the raw material.

Different troughput rates can be achieved depending on the starting material and the type of hammer mill.

Type	Troughput in kg/h
HA600	50 - 2.000
HA800	500 - 10.000

ADVANTAGES AND TECHNOLOGY

**FLEXIBLE.
INDIVIDUAL.
STRONG.**



Finest material breakdown thanks to compact design

Thanks to the compact design and the constructive structure, ERDWICH Hammer mills shine through maximum economic efficiency and particularly fine material breakdown, which is of central importance for effective further processing.

Technical advantages / features:

- Highly wear-resistant, individual grinding tools
- Mill housing with wear-resistant, replaceable inner lining
- Different hammer and beater shapes
- For HA600: Rotor assembly with 4 rows of blows
- For HA800: Variable rotor equipment from 4 to 8 rows of blowers
- Flapper plate arrangements and number of blow bars can be adjusted
- Closed construction and dust-tight operation thanks to special shaft and housing seals and corresponding extraction points
- Mechanical overload protection with emergency ejection in the case of solid material and contaminants
- Hydraulically pivoting housing wall enables easy access for maintenance, service and inspection work
- Possible inerting with nitrogen or other gases
- Application-specific drive and grinder variants
- PLC control with automatic switch-off and optional frequency- controlled speed control

Options:

- Vibration measurement
- Finely balanced according to DIN ISO 1940
- Extra sifter for extremely light material
- Substructure with screw discharge
- Lock systems
- Atex-version
- Spark detection and extinguishing
- Fire / explosion detection and suppression



Maximum efficiency for effective processing

ERDWICH Hammer mills are the answer to the challenge when the selective comminution of hard, brittle materials is required. But Hammer mills also leaves no room for doubt when it comes to balling tough materials in preparation for subsequent cutting systems.

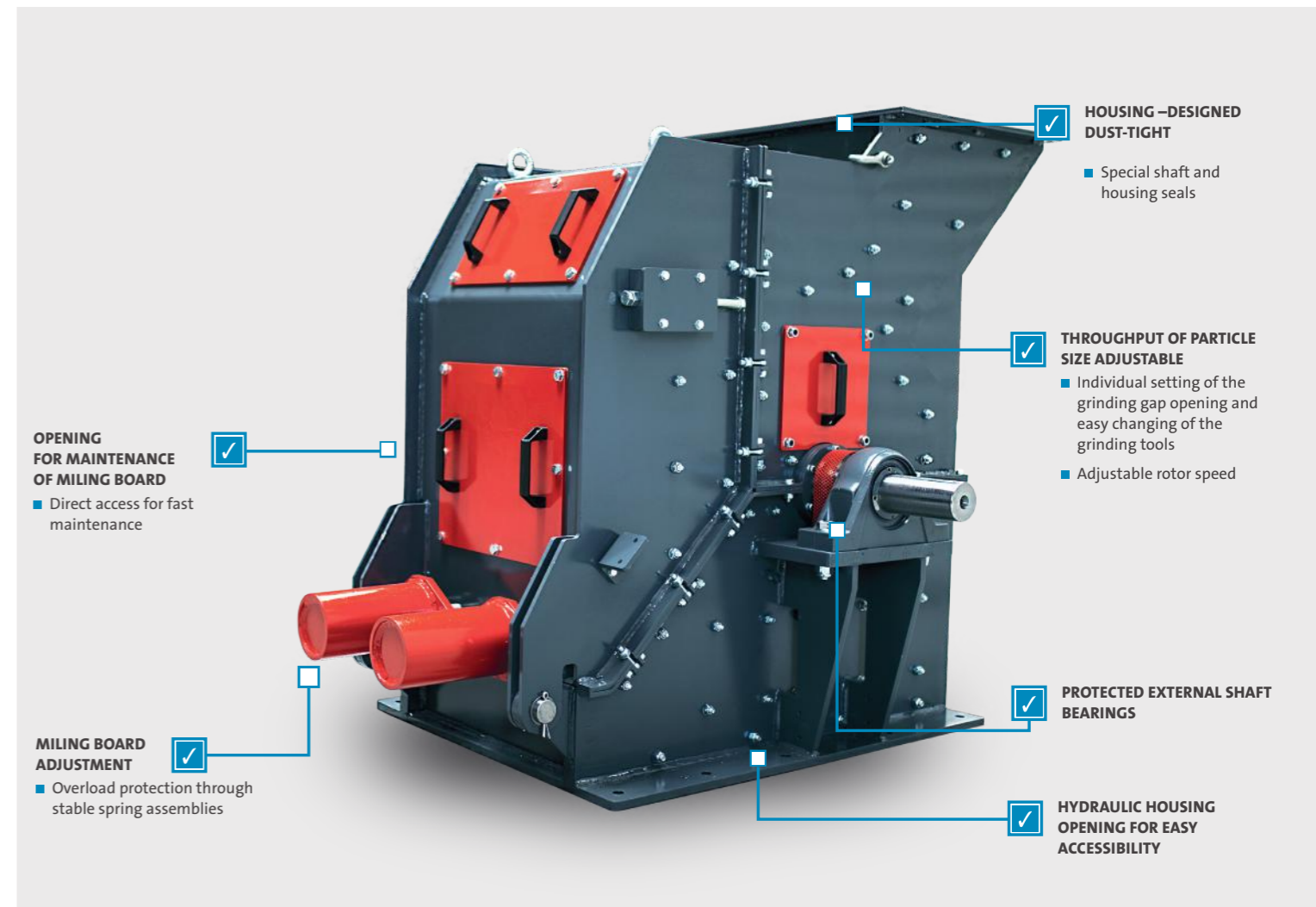
Customer benefits:

- Low energy costs due to optimally designed drives
- Low operating costs due to highly wear-resistant materials in the working area and reusable tools
- Low maintenance costs due to easy access for maintenance and revision work as well as long maintenance intervals
- Versatile due to different configuration options
- Small space requirement due to massive, compact design
- Very long service life due to oversized bearings, massive construction, mechanical and electrical overload protection
- Possible inerting with nitrogen and other gases
- Turnkey system

ERDWICH. Shredding unlimited.

HAMMER MILL HA600

COMPACT.
SMALL.
THE HAMMER.



Advantages and special features

Robust industrial hammer mills in different sizes. Variable screen openings for target grain sizes from 4 to 60 mm. Low wear. For batch operation or continuous charging.

The extremely robust ERDWICH hammer mills HA600/1-500 and HA600/1-700, designed for tough industrial use, are used to shred metal chips or to destroy data carriers such as hard drives, SSDs, etc. Depending on the product properties and the desired shredding result, all types can be equipped with different sieve grate openings. The hammer mills can be used independently or integrated in processing systems.

■ Easy maintenance

Two quick-to-open housing entrances.
Easily exchangeable grinding tools on the beater rotor.

■ Saving of operating costs

Long service life of the reversible grinding tools.
Highly wear-resistant mill motor.

■ Throughput of the particle size controllable

Individual setting of the grinding gap opening and easy change of the grinding tools.
Adjustable rotor speeds.

■ Processing of moist materials possible

Due to the external shaft bearings and special housing seals, no grist or dust can penetrate the bearings.

■ Low noise and dust generation

Optional soundproof housing.
Special shaft and housing seal and corresponding suction point.

■ Efficient and safe work

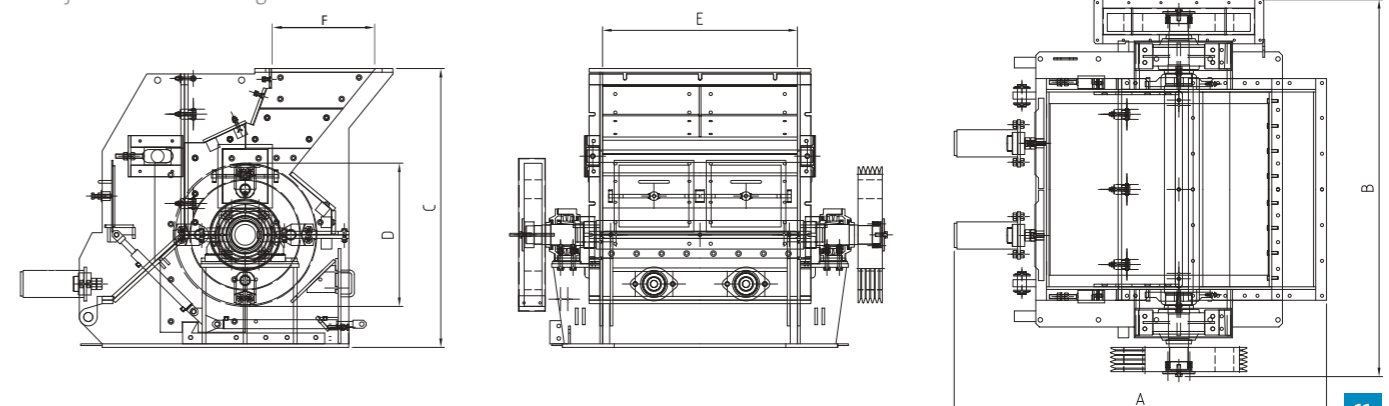
PLC control with overload protection to protect the machine from overfilling or solid parts.

Technical data

Type	Quantity of rotors	Drive power in kW	Rotor diameter in mm	Weight in kg	Sieve grate opening in mm
HA600/1-500	1	11 - 45	150	1.500	4 - 65
HA600/1-700	1	11 - 45	150	1.650	4 - 65

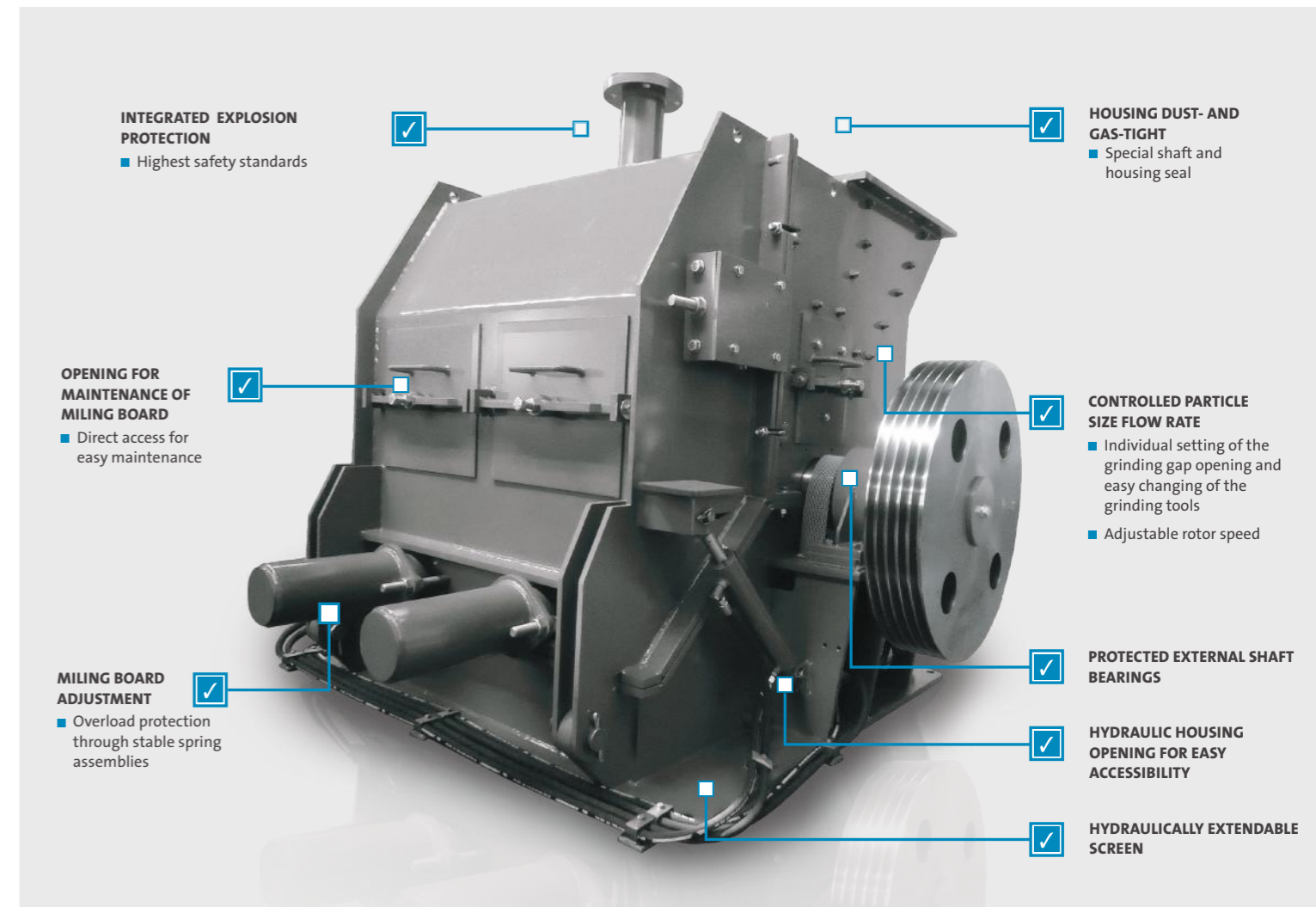
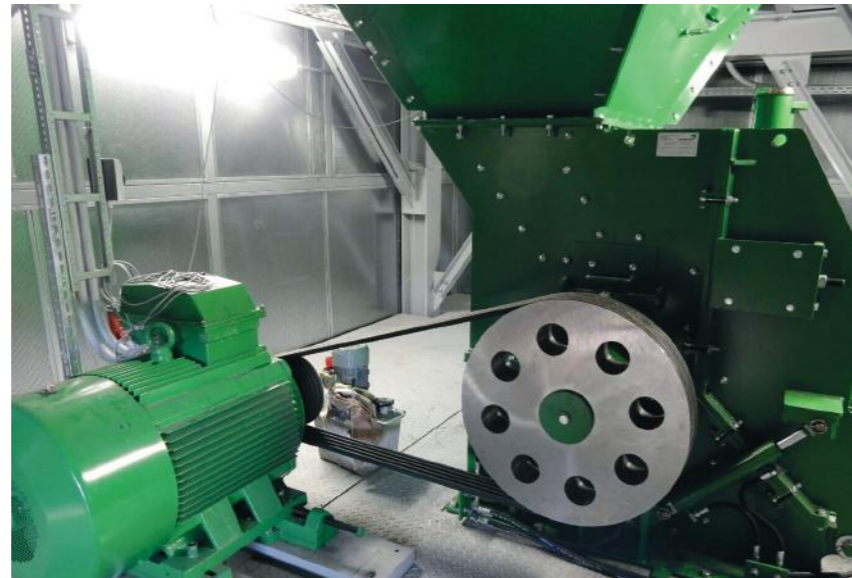
Dimensions:			
	Dimensions	HA600/1-500	HA600/1-700
Total length A	mm	1.480	1.480
Total width B	mm	1.150	1.350
Total height C	mm	1.225	1.225
Beat circle D	mm	630	630
Roto length E	mm	500	700
Inlet openingg F (LxT)	mm	540 x 400	740 x 400

Subject to technical changes.



HAMMER MILL HA800

TOP-TECHNOLOGY FOR THE SELECTIVE PROCESSING.



Advantages and special features

Robust industrial hammer mills in different sizes. Variable screen openings for target grain sizes from 8 to 100 mm. Low wear. For batch operation or continuous charging.

The extremely robust ERDWICH hammer mills HA800/1-1000 and HA800/1-1500, designed for tough industrial use, are used for shredding pre-shredded electronic scrap, cooling devices, electric motors, compressors etc. Cooling devices, transformers, slag as well as for crushing metal chips or for the destruction of data carriers such as hard drives, SSDs, etc. Depending on the product properties and the desired shredding result, all types can be equipped with different sieve grate openings. The Hammer mills can be used independently or integrated in processing systems.

- Easy maintenance**
 Two hydraulically opening accesses to the housing. Easily exchangeable grinding tools on the beater rotor
- Saving of operating costs**
 Long service life of the reversible grinding tools. Highly wear-resistant mill rotor.
- Throughput of the particle size controllable**
 Individual setting of the grinding gap opening and easy change of the grinding tools. Adjustable rotor speeds.

- Processing of moist materials possible**
 Due to the external shaft bearings and special housing seals, no grist or dust can penetrate the bearings.
- Low noise and dust generation**
 Optional soundproof housing. Special shaft and housing seal and corresponding suction point.
- Efficient and safe work**
 PLC control with overload protection to protect the machine from overfilling or solid parts.

Technical data

Type	Quantity of rotors	Drive power in kW	Rotor diameter in mm	Weight in kg	Sieve grate opening in mm
HA800/1-1000	1	45 - 132	610	9.000	8 - 100
HA800/1-1500	1	45 - 132	610	13.000	8 - 100

Dimensions:			
	Dimension	HA800/1-1000	HA800/1-1500
Total length A	mm	2.100	2.100
Total width B	mm	2.100	2.600
Total height C	mm	1.560	1.560
Beat circle D	mm	800	800
Rotor length E	mm	1.000	1.500
Inlet opening F (LxT)	mm	1.060 x 585	1.560 x 585

Subject to technical changes.

