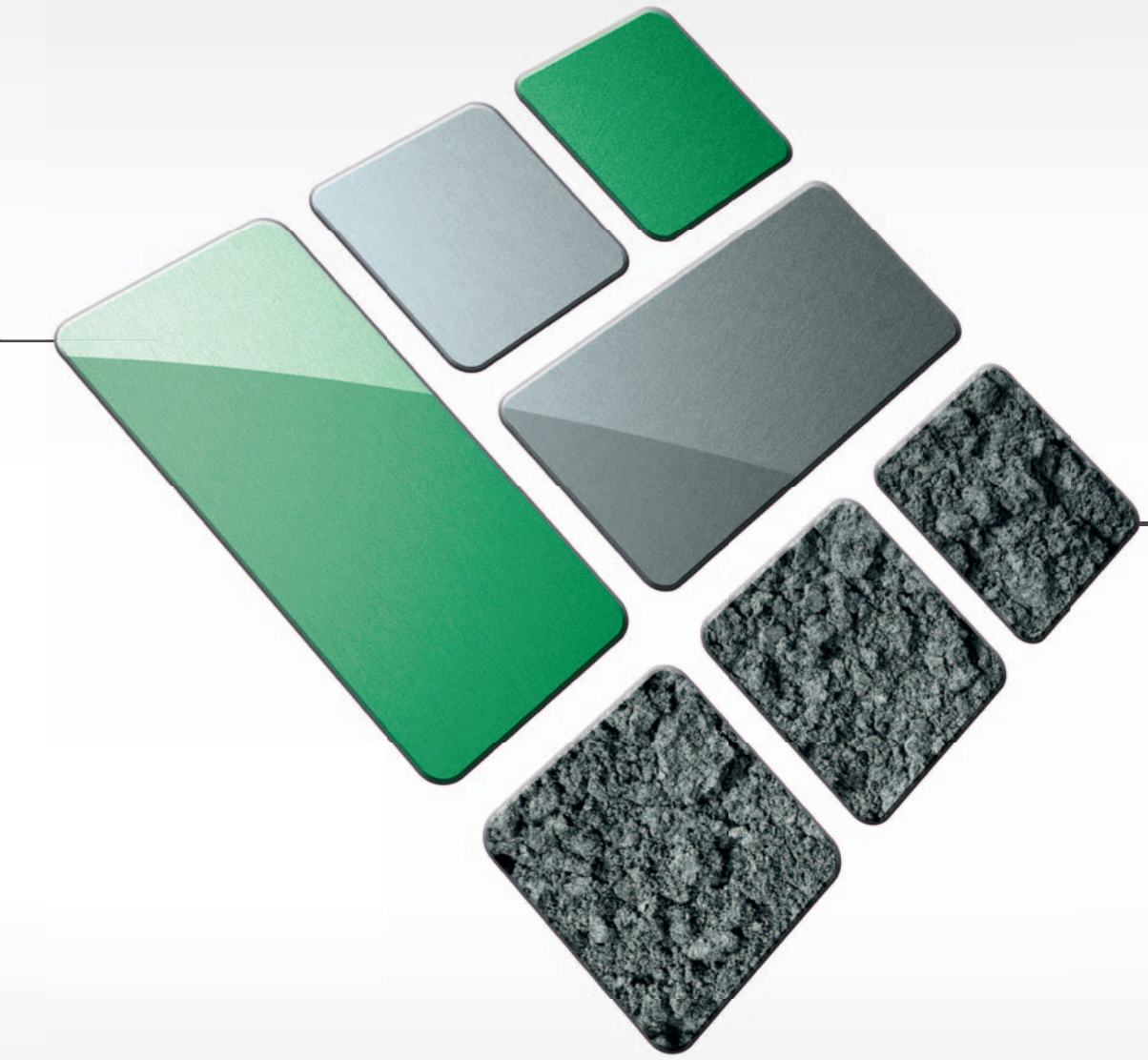
RUF
BRIQUETTING SYSTEMS



GRINDING

CHIPS

RUF BRIQUETTING SOLUTIONS

EFFICIENCY IN GRINDING

Material

Grinding chips are created by the grinding of metal components. It is a mixture of metal and corundum abrasion in combination with the cutting fluids being used.

The briquetting solution by RUF makes it possible to dispose of or recycle grinding chips cost-effectively.

By briquetting, the waste is reduced significantly and the briquettes possess a defined residual moisture. Thus, the disposal costs are reduced and depending upon the alloy, there is even the opportunity to sell the briquettes with a profit.

In most cases, the expensive oil contained in the cutting fluid can be reused. The briquetting system can already payoff for itself within less than 12 months by processing about 10 to 30 tons of the expensive oil contained in the cutting fluid per year.

Formats

With grinding chips, rectangular briquettes in the format of 60x40mm and round briquettes with a diameter of 60 to 120mm are possible. The briquette length is variable within predefined limits.

Advantages

- Recovery of expensive cutting fluids
- Reducing the volume and weight of the material disposed of; thus, reducing the disposal costs
- Defined residual moisture of briquettes
- Potential profit of selling briquettes
- No classification of briquetted grinding chips as "hazardous waste"
- Optimized storage without dripping containers and development of bacteria
- No water and soil contamination caused by overflowing of cutting fluids

Machines

Depending on the requirements, our briquetting systems for grinding chips are equipped with hydraulic motors ranging from 4kW to 22kW, and reach a specific pressure of up to 3,800 kg/cm^2.

It is important that the grinding chips are slowly compressed, allowing the escaping cutting fluid to flow off, before the maximum pressure is reached in the compression chamber.

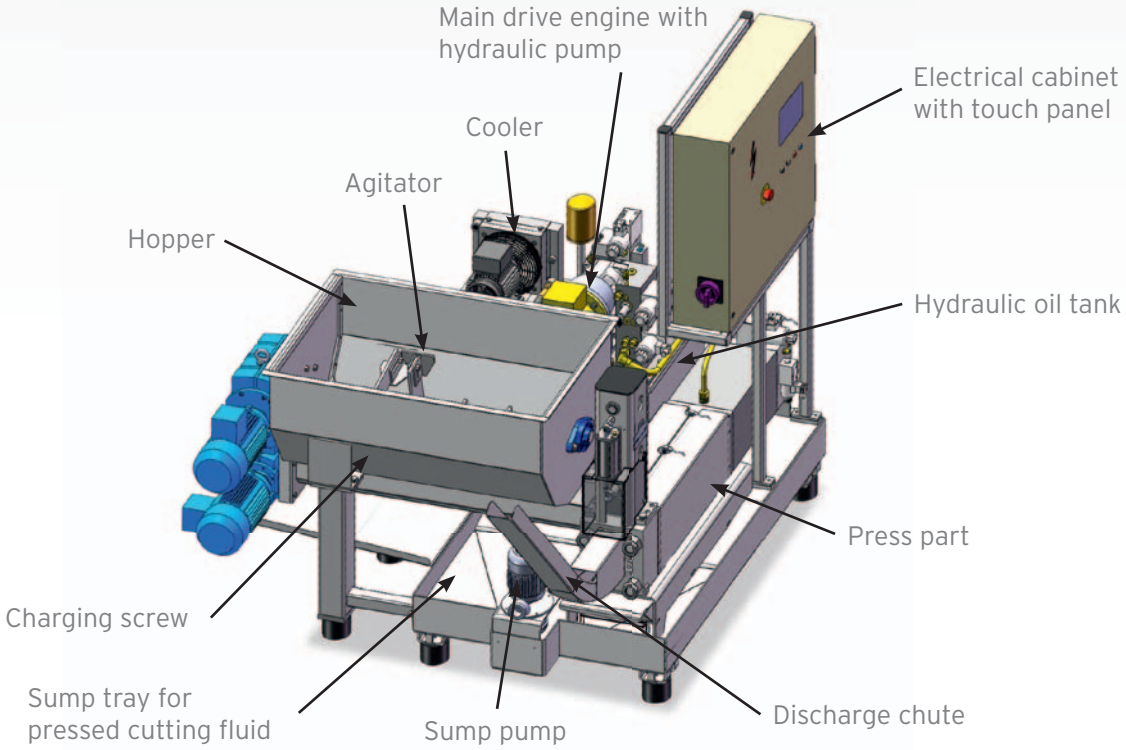
The composition of grinding chips varies differently. We therefore recommend to all of our customers to have their special material tested free of charge in our technical center. In this way, we can adapt each briquetting system individually to customer requirements.

The throughput of the RUF briquetting systems - especially for grinding chips - range from 40 to 350 kg/h.

TECHNICAL SPECIFICATIONS

RUF BRIQUETTING SYSTEMS

PROCESS AND FEATURES



Grinding Chips					
Mechanical		**Hydraulic**		**Electrical**	
Compact footprint	●	Hydraulic power unit	●	Electrical cabinet	●
Hopper with agitator and charging screw	●	Hydraulic oil tank with oil cooler (RAP without cooler)	●	PLC control with touch panel	●
Pre-charger with volume control	●	Recirculation filter	●	Level sensor in hopper	●
Press part	●	Ventilation filter	●	Electrical cabinet heater	❍
Main pressing ram	●	Low oil level and high temperature detection	●	Electrical cabinet cooler	❍
Sump tray for pressed cutting fluid	●	Hydraulic oil	●	Signal light	❍
Discharge chute	●	Hydraulic oil tank heater	❍		
Briquette conveyor	❍	Water cooler	❍		
Multiple screw conveyor	❍	Volume controlled pump	●		
Hydraulic lifting and tipping unit	❍				
Sump pump	●				
Grinding chip design	●				
Sump tray flushing system	●				
Level sensor cleaning device	●				
Special wear resistant execution of parts	●				

Legend: ● = Standard ❍ = Option

MACHINE TYPES

BRIQUETTE FORMATS

GRINDING CHIPS	RAP	RUF 4	RUF 7,5 - 22
Max. throughput rate (kg/h)	40	80	150 - 350
Power (kW)	4	4	7,5 - 22
Spec. pressure, max. (kg/cm²)	3800	2300	2000 - 3000
Briquette formats (mm)	60 x 40	Ø60	Ø80 Ø100 Ø120
Briquette length (mm)	40	40	100
Size (m) length x width x height	1,3 x 1,0 x 1,6	1,3 x 1,5 x 1,9	3 x 2 x 2
Weight (t)	1	1,3	3,3 - 3,7

Subject to technical modifications.
The throughput capacity depends upon the machine design as well as the type and form of the material used.

Info

Grinding chips are classified as being "hazardous waste" in Europe. They comply with the waste key numbers:

- 120118* Metal sludge (grinding, honing and lapping sludge) containing oil
- 120114* Machining sludges containing dangerous substances

By being briquetted - in coordination with the locally responsible authorities - they can be turned into "non-hazardous waste".
In its briquetted shape the material comes under:

- **1912** Waste from mechanical treatment of waste (e.g. sorting, shredding, compressing, pelleting) not specified anywhere else.

Explained more plainly, they are now considered as:

- 191202 ferrous metal

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