

MACKMA®



Supporting the World one briquette at a time

BRIQUETTING MACHINES

It's time to move away from the **take-it-or-leave-it** dynamic.
The Italian company Mackma helps turn waste into briquettes of recoverable material.

100%
MADE IN ITALY



Machine Presentation





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Mackma is an Italian company

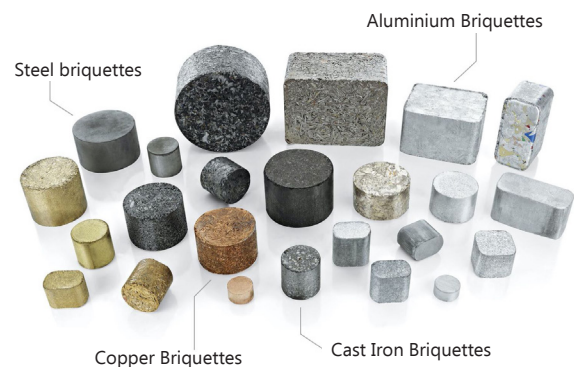
that exports industrial cold metalworking machinery all over the world. Attractive design, simple, high-performance technology, attention to environmental aspects, silence and reliability make Mackma machines unique in their sector.

The company was founded with the desire to bring innovation to the sector of industrial machines for metalworking and has developed thanks to constant comparison with the market and listening to the needs of its customers.

Mackma's extensive catalogue includes:

bending machines, profile bending machines, mandrel bending, ring roller, plasma cutting machines, horizontal presses, shredders, threaded bar cutters, magnetic drills and briquetting presses.

The new generation's entrepreneurial awareness of sustainability issues has given an impetus to R&D to create machines that help companies control their environmental impact, reducing consumption, waste production and guaranteeing safety for operators.





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With Mackma briquetting machines, you save resources and increase profits



Discover the advantages of **briquetting chips with Mackma briquetting machines**



Volume reduction -90% *

Waste storage space, costs and time are reduced and improve of internal handling and external transport.



Handling and transport -80% *

The volumetric reduction of the product allows for fewer deliveries of the waste or product to specialised waste management companies or directly to the foundry, resulting in cost savings.



Recovery of any internal liquids +20% *

Metal shavings can contain significant quantity of oils and emulsions, which are often very expensive. During the process briquetting process, it is possible to recover approximately up to 98% of liquid inside the swarf. Through the hydraulic circuit inside the briquetting machine, the liquids present will be sent back to the processing centres, resulting in a reduction in product consumption and economic savings.



Increased commercial value and melt yield +70% *

Briquettes intended for foundries have a higher commercial value than shavings because, during melting, they significantly increase the material yield and can be loaded directly into the melting furnaces without prior treatment of the emulsion liquids. They are qualitatively better than swarf, which on the other hand is subject to oxidation, reduction and shrinkage.

In a chip where **20 % liquid is present**, only **2 %** will remain in the chip after briquetting. **The extracted liquid will then be recovered** and sent back to the machining centres.



* Values in percentages refer to tests on a sample of homogeneous material





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Industry 4.0

Mackma briquetting machines meet the requirements



CNC control

Mackma briquetting presses are equipped with a touchscreen PLC control, the work cycles are automatic. The control panel allows you to programme cycles, stop or start the machine, check the operating status, the number of working cycles, the energy saving of the machine, the analysis and level management of the liquid collection pump and the counting of briquettes made.

Interconnection of computer systems and connection to other machines.

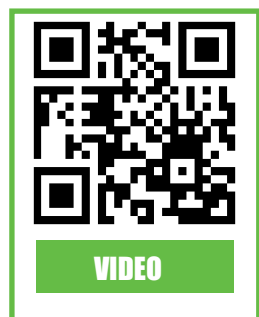
Mackma briquetting presses can be connected to the production lines or conveyor belts present in the company, so that start and stop commands can be sent to the line if the collection tank is full or not. In addition, via an RJ45 network cable and thanks to the management software we supply, you can connect the machine to computer systems that will allow you to program it, set up a work order, check the work progress, configure settings for specific chips, manage the quantity of briquettes produced, monitor the status of alarms, update the software and request remote technical assistance from the Mackma team.

Simple and intuitive interface

The interface used on Mackma briquetting presses is simple and intuitive, the 10" colour touchscreen PLC screen allows the full view of settings, the clear and intuitive graphics enhances user friendliness and speeds up the programming process.

Remote assistance

Mackma briquetting presses can receive remote assistance. If connected to the network, through the control panel, it will be possible to enable entry to the Mackma team to provide assistance on programming and viewing alarms.





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What can be briquetted?

You can make briquettes from almost any material, here are some examples



Waffles



Coffee



Steel



Steel from tires



Aluminum plate



Steel cans



Aluminium shaving



Aluminium caps



Lead



Cast iron chips



Brass shaving



Copper Shaving



Titanium shaving



Paper



Magazin paper



Pallet wood



Vine shoots



Textile fiber



Leather and rubber



Dry shaving



Fiber nylon



Chestnut peels



Fern



Prunings of hazel



Solid waste



PVC plastic



Plastic bottles



Plastic Tissue



Plastic packaging



Polystyrene EPS



Hologram



Wood dust



Charcoal

And more...

Want to be sure that your material can be briquetted?
Contact us and send us a photo or sample of your material and we will test compaction.



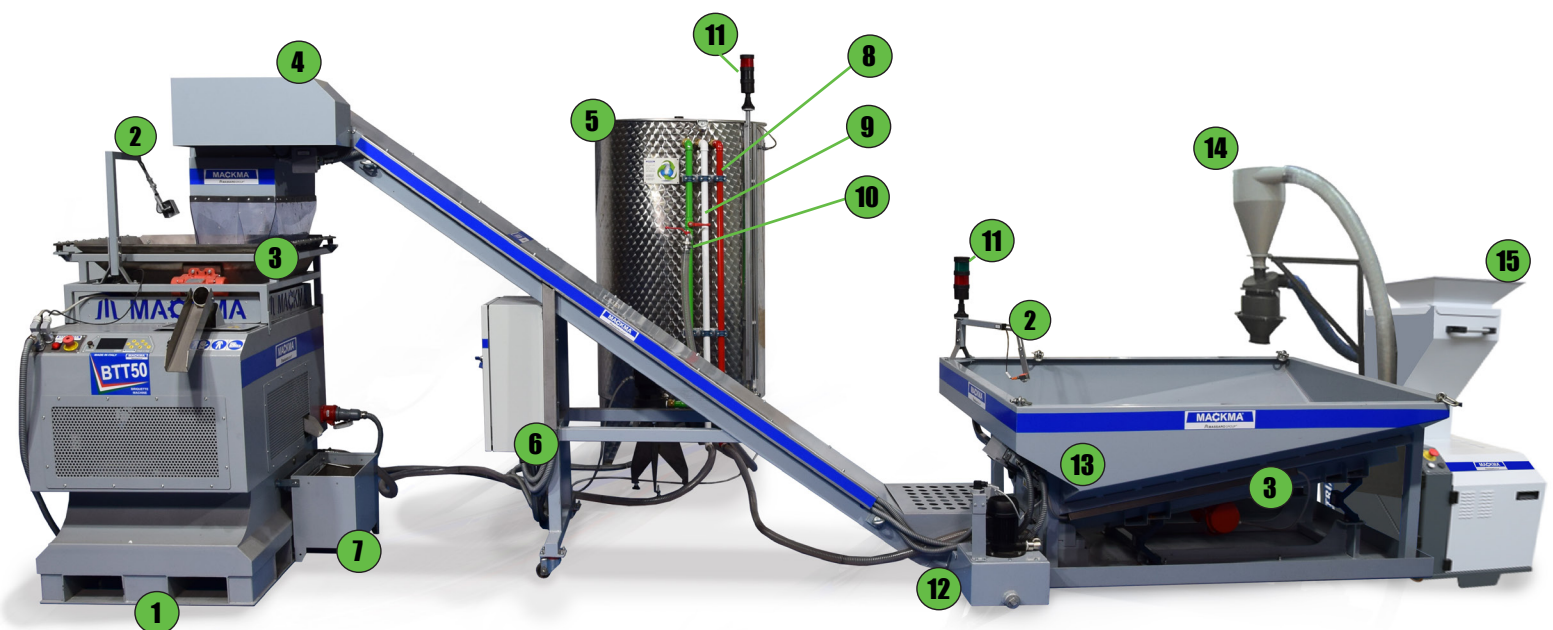
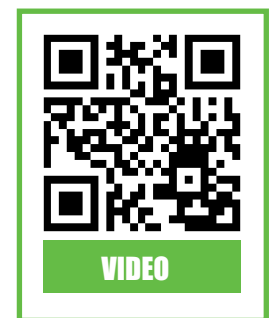


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Linea completa di bricchettatura



- 1 BTT50 briquetting machine
- 2 Level sensors
- 3 Vibration Hopper
- 4 Conveyor belt
- 5 Collection tank 1000 Lt
- 6 General electric panel
- 7 Drainage tank
- 8 Red pipe, liquid input from collection pump (12)
- 9 White pipe, liquid input from drainage tank (7) and briquetting machine (1)
- 10 Green pipe, liquid handling inside collection tank (5) and liquid carry-over bypass in work centres
- 11 Level alarms
- 12 Liquid collection pump with float switch
- 13 Collection tank with internal chip separator
- 14 Suction system for plastics (Optional)
- 15 Plastic mill (Optional)



Mackma's high-quality briquetting machines give new life to waste material by turning it into cylindrical briquettes, easily reusable. The briquetting line 01 is designed for companies with a large number of machining centres, who need to discharge waste into a single collection tank.



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BTT/BTF SERIES Machines

Discover all models of briquetting presses made by Mackma, if you need more information or details do not hesitate to contact us.

Sludge is processing waste from sharpening, mirror polishing or grinding operations, consisting of hard metal powder mixed with oils or emulsions of oil and water. They are classified as hazardous waste and must be managed appropriately.

Metal and non-metal chip briquetting machines

BTT50	Ø Briquettes	Kg/h Aluminium	Kg/h Iron	Kg/h Copper	Kg/h Cast iron
	55 mm	25/30	60/70	96	113

BTT65	Ø Briquettes	Kg/h Aluminium	Kg/h Iron	Kg/h Copper	Kg/h Cast iron
	65 mm	60/70	120/140	164	194

BTT75	Ø Briquettes	Kg/h Aluminium	Kg/h Iron	Kg/h Copper	Kg/h Cast iron
	75 mm	90/100	180/200	252	297

BTT85	Ø Briquettes	Kg/h Aluminium	Kg/h Iron	Kg/h Copper	Kg/h Cast iron
	85 mm	180/200	360/400	367	433

BTT95	Ø Briquettes	Kg/h Aluminium	Kg/h Iron	Kg/h Copper	Kg/h Cast iron
	95 mm	360/400	720/800	513	604

BTT105	Ø Briquettes	Kg/h Aluminium	Kg/h Iron	Kg/h Copper	Kg/h Cast iron
	110 mm	720/800	1400/1600	940	1108

Sludge briquetting machines

BTF-C 50	Ø Briquettes	Kg/h sludge
	35 mm	18

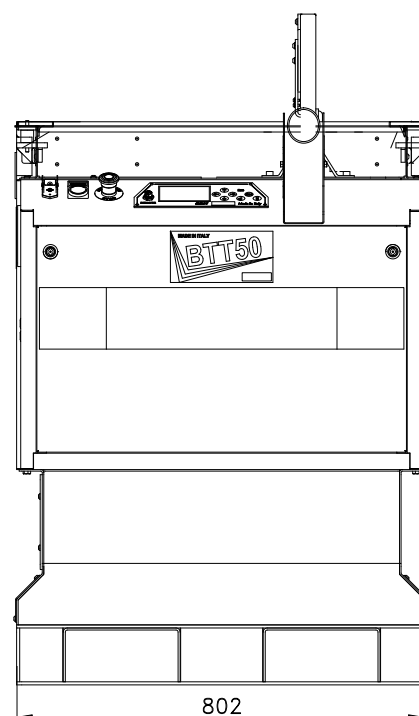
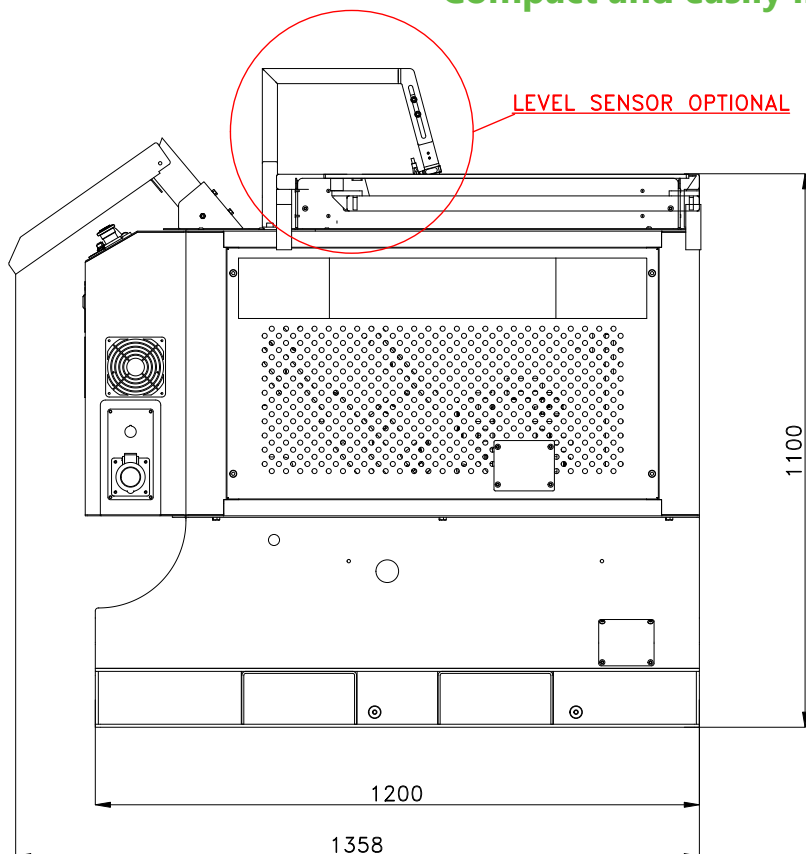
BTF-C 65	Ø Briquettes	Kg/h sludge
	45 mm	29

BTF-C 75	Ø Briquettes	Kg/h sludge
	55 mm	71

BTF-C 85	Ø Briquettes	Kg/h sludge
	65 mm	120

BTF-C 75	Ø Briquettes	Kg/h sludge
	75 mm	179

Compact and easily inspected



BTT50 Machine



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✓ Including

✓ Optional upon request

	BTT50	BTT65	BTT75	BTT85	BTT95
Motor power	5 KW	5 KW	8 KW	10 Kw	15 KW
Power - Voltage	380/400	380/400	380/400	380/400	380/400
Energy consumption per hour	0,6kW	0,8kW	11,3kW	11,8 kW	22 kW
Power frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Briquette diameter	55 mm	65 mm	75 mm	85 mm	95 mm
Max. briquette length	55 mm	65 mm	75 mm	85 mm	95 mm
Double-acting hydraulic piston	✓	✓	✓	✓	✓
Work cycles per minute	3	3	3	3	3
Machine length in mm	1200	1200	--	--	--
Machine width in mm	802	802	--	--	--
Machine height in mm	1100	1200	--	--	--
Machine weight in kg	800	1000	1300	--	--
Oil collection capacity inner tank	50 Lt	80 Lt	100 Lt	--	--
External oil drainage and recovery tank	✓	✓	✓	✓	✓
Double oil temperature control radiator	✓	✓	✓	✓	✓
Internal hydraulic pump with a capacity of Lt per minute	40Lt	50 Lt	80 Lt	--	--
Built-in vibrating hopper	✓	✓	✓	✓	✓
Built-in shredder for long chips	✓	✓	✓	✓	✓
Hopper capacity	300 Lt	400 Lt	700 Lt	1000 L	1400 L
Machine opened on 3 sides for internal inspections	✓	✓	✓	✓	✓
Start/stop automatic level sensor	✓	✓	✓	✓	✓
Interchangeable control panel	✓	✓	✓	✓	✓
Provision for external machine power supply	✓	✓	✓	✓	✓
Sensor for communicating with other machines	✓	✓	✓	✓	✓
Internal oil filter	✓	✓	✓	✓	✓
Pressure control manometer	✓	✓	✓	✓	✓
Touch screen with software for remote control	✓	✓	✓	✓	✓
USB port for Web Cam handling	✓	✓	✓	✓	✓
Ability to enable Mackma remote assistance	✓	✓	✓	✓	✓
Noise level	72db	72db	72 db	72 db	72 db

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BTW Series Machines

The Volumetric Briquetting Machine is suitable for the most tenacious material. The material is loaded by gravity and the briquettes made will all be the same size with millimeter precision. The Volumetric Briquetting Machine ejects two briquettes at a time, thus doubling the speed and amount of production per hour.

Metal and non-metal chip briquetting machines

BTW50	Ø Briquettes	Kg/h Aluminum	Kg/h Iron	Kg/h Copper	Kg/h Cast iron	Kg/h Brass	Kg/h Wood	Kg/h wood dust
	55 mm	60	140	192	226	270	34	40

BTW65	Ø Briquettes	Kg/h Aluminum	Kg/h Iron	Kg/h Copper	Kg/h Cast iron	Kg/h Brass	Kg/h Wood	Kg/h wood dust
	65 mm	140	280	328	388	460	56	70

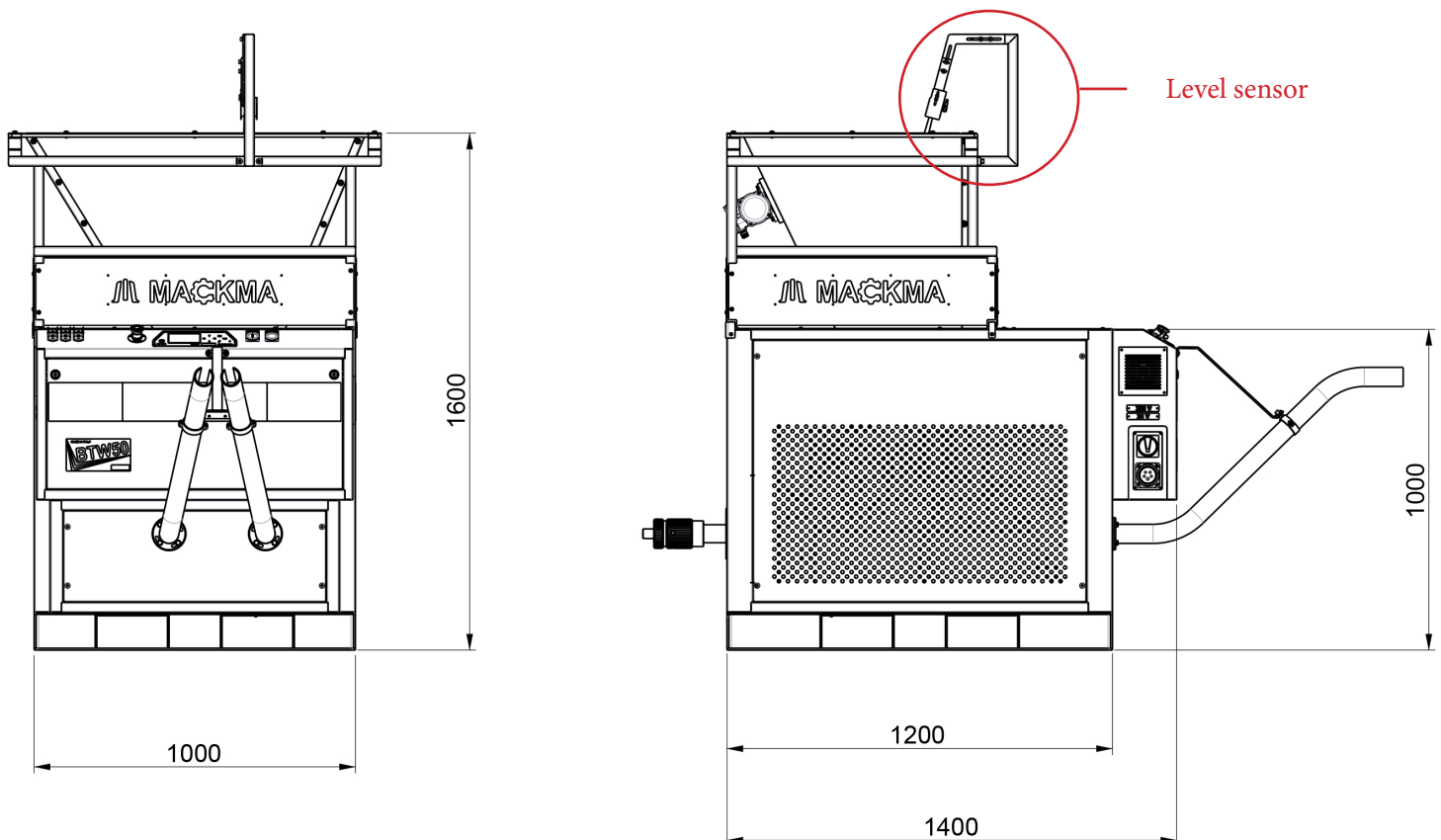
BTW75	Ø Briquettes	Kg/h Aluminum	Kg/h Iron	Kg/h Copper	Kg/h Cast iron	Kg/h Brass	Kg/h Wood	Kg/h wood dust
	75 mm	200	400	500	600	710	88	108

BTW85	Ø Briquettes	Kg/h Aluminum	Kg/h Iron	Kg/h Copper	Kg/h Cast iron	Kg/h Brass	Kg/h Wood	Kg/h wood dust
	85 mm	400	800	730	866	910	112	138

BTW95	Ø Briquettes	Kg/h Aluminum	Kg/h Iron	Kg/h Copper	Kg/h Cast iron	Kg/h Brass	Kg/h Wood	Kg/h wood dust
	95 mm	800	1600	1026	1200	1450	176	218

BTW105	Ø Briquettes	Kg/h Aluminum	Kg/h Iron	Kg/h Copper	Kg/h Cast iron	Kg/h Brass	Kg/h Wood	Kg/h wood dust
	110 mm	1600	3200	1880	2216	2650	324	400

Compact size and easily inspected





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BTW Series Technical Specifications

✓ Including

✓ Optional upon request

	BTW50	BTW65	BTW75	BTW85	BTW95
Motor power	5 kW	6 kW	8 kW	10 kw	15 kW
Power - Voltage	0,6 kW	0,8 kW	1,2 kW	1,8 kw	2 kW
Energy consumption per hour	380/400	380/400	380/400	380/400	380/400
Power frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Briquette diameter	55 mm	65 mm	75 mm	85 mm	95 mm
Max. briquette length	55 mm	65 mm	75 mm	85 mm	95 mm
Double-acting hydraulic piston	✓	✓	✓	✓	✓
Work cycles per minute	6	6	6	6	6
Machine length in mm	1400	1650	1980	2200	2750
Machine width in mm	1000	1100	1210	1650	2090
Machine height in mm	1600	1800	2200	2500	3000
Machine weight in kg	900	1100	1400	1900	2300
Oil collection capacity inner tank	50 Lt	80 Lt	100 Lt	150Lt	190Lt
External oil drainage and recovery tank	✓	✓	✓	✓	✓
Double oil temperature control radiator	✓	✓	✓	✓	✓
Internal hydraulic pump with a capacity of Lt per minute	40	50 Lt	80 Lt	120 Lt	150Lt
Built-in vibrating hopper	✓	✓	✓	✓	✓
Additional chip agitator	✓	✓	✓	✓	✓
Built-in shredder for long chips	✓	✓	✓	✓	✓
Hopper capacity	300 Lt	400 Lt	700 Lt	1000 L	1400 L
Machine opened on 3 sides for internal inspections	✓	✓	✓	✓	✓
Start/stop automatic level sensor	✓	✓	✓	✓	✓
Interchangeable control panel	✓	✓	✓	✓	✓
Provision for external machine power supply	✓	✓	✓	✓	✓
Sensor for communicating with other machines	✓	✓	✓	✓	✓
Internal oil filter	✓	✓	✓	✓	✓
Pressure control manometer	✓	✓	✓	✓	✓
Touch screen with software for remote control	✓	✓	✓	✓	✓
USB port for Web Cam handling	✓	✓	✓	✓	✓
Ability to enable Mackma remote assistance	✓	✓	✓	✓	✓
Noise level	72db	72db	72 db	72 db	72 db

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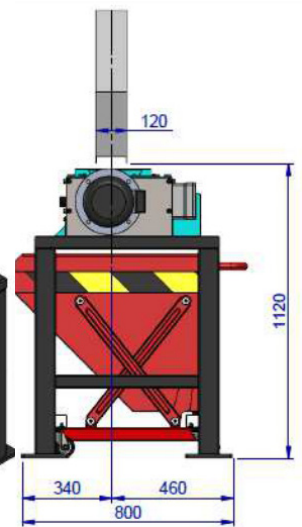
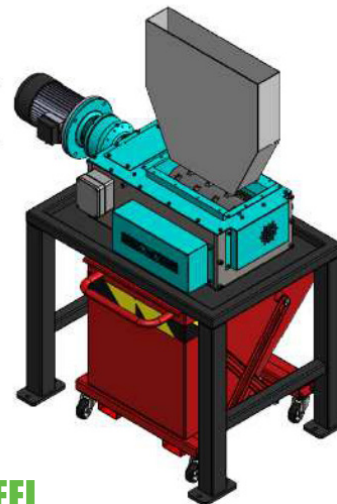
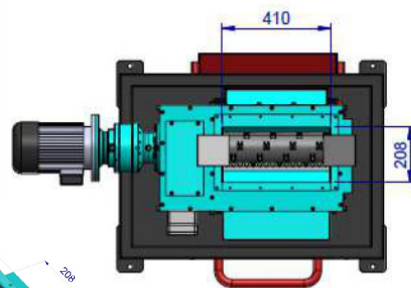
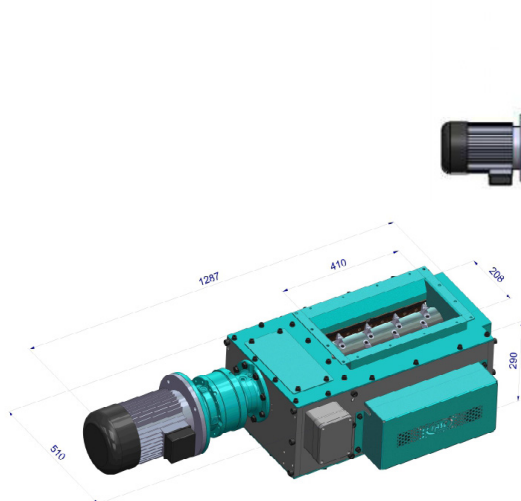
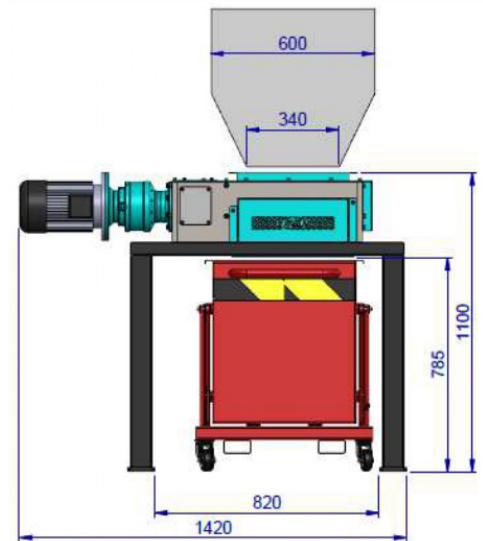


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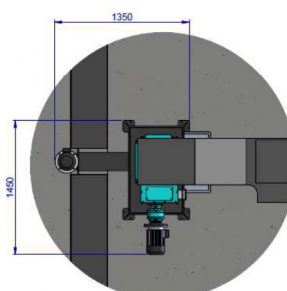
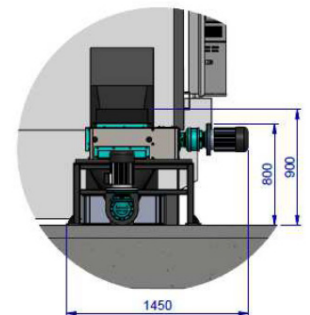
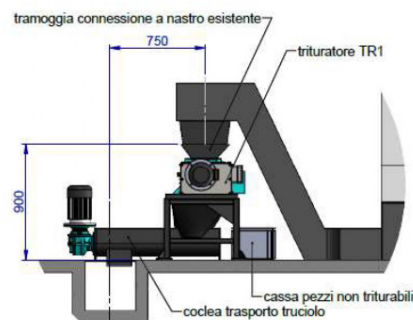
TR1000 SINGLE-SHAFT SHREDDER FOR LONG METAL SCRAP, WITH BULKY PARTS SEPARATOR

Description:

- Machine frame consisting of c45 steel plates milled and fastened by means of hardware with high strength class 12.9.
- Tool holder roller made of hardened material, hardened wear-resistant steel tools with threaded slats for easy replacement.
- Patented non-shreddable bulky parts separation system from the output channel shredded scrap, fully automatic sequence.
- Air cylinders for comb module movement with cradle release for material screening.
- 2.2 kw gear motor with motor lock sensor and bumper engagement.
- Waste inlet hopper dimensions 470 x 290.
- Base with drip tray and chute to discard nonshreddable pieces.
- Airtight screw conveyor to carry shredded scrap from under the shredder to the transport area under the floor.
- Electric control box complete with solenoid valves for air cylinder control and drawer cleaning pulses.
- Fully automatic clog removal cycle.



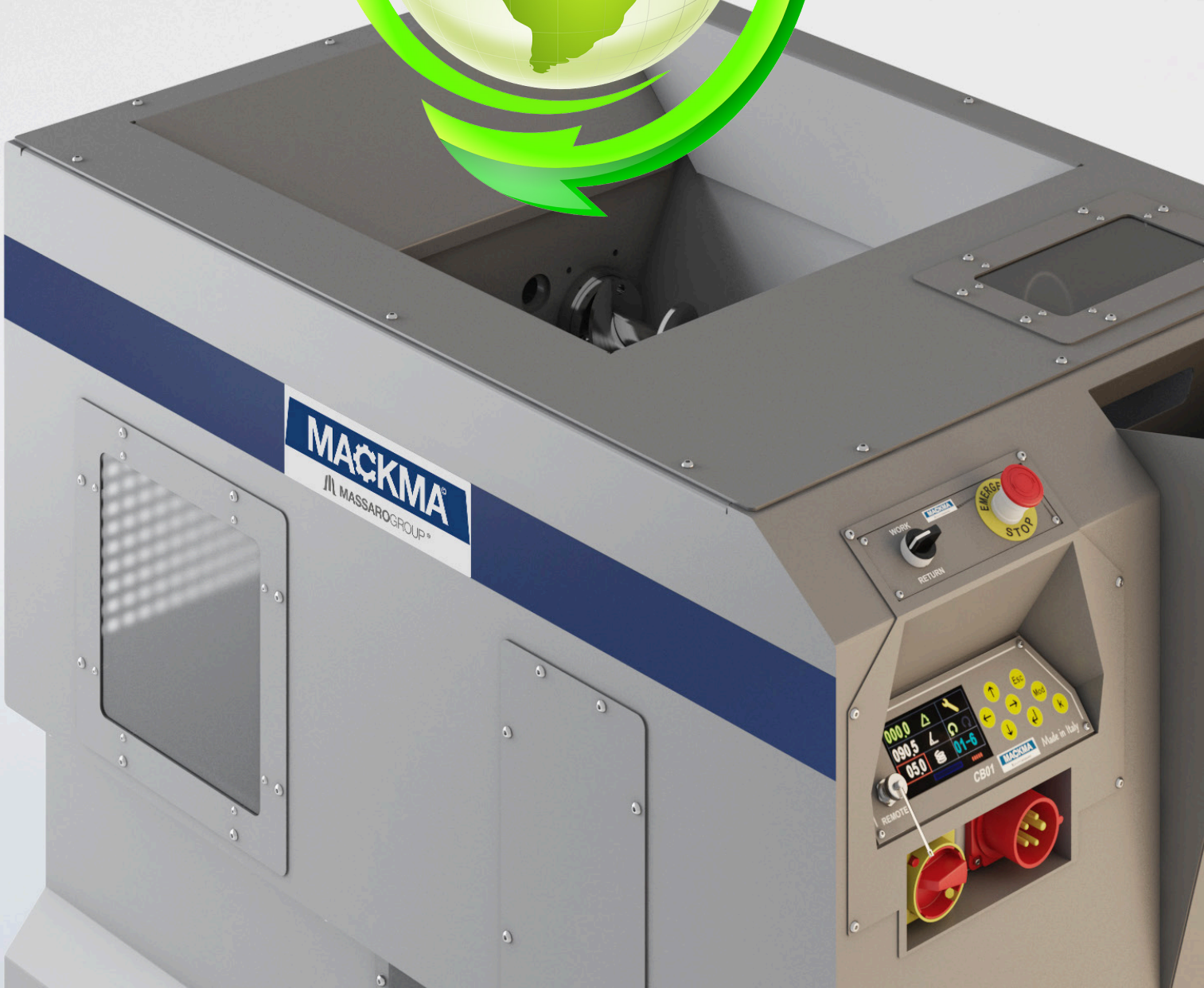
HOURLY CAPACITY ABOUT 130/150 KG/HOUR OF STEEL.



The Tr1000 shredder is capable of ejecting pieces up to $\varnothing 33 \times 150$ mm. Three-phase voltage 400v 50 hz, compressed air supply 6 bar.



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