PRESSTO

Hi-tech green compactor

A **responsible** choice that makes a difference

by OMCR INDUSTRIAL SOLUTIONS

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OMCR has been the leader in precision mechanical processing for more than 40 years

All OMCR's experience has been channelled into its new **"Industrial Solutions"** division, which has been set up to offer smart-green solutions to optimize production.
These solutions include the briquetting machine, which is a reliable and versatile solution to the problem of collecting and processing metal swarf, to reduce the economic impact and transform the waste into a resource.

Domenico Zentilin
Founder of OMCR

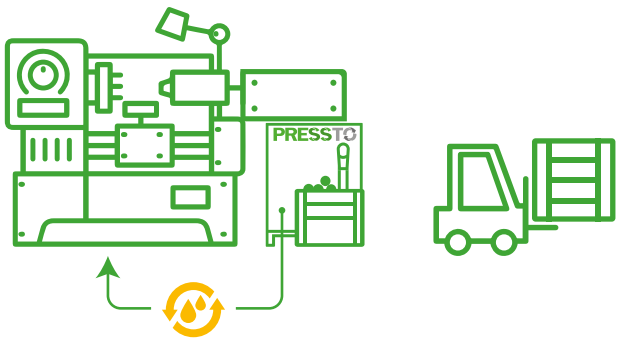
THE BRIQUETTING MACHINE

The management of industrial waste represents an ever-increasing burden for companies. The use of briquetting machines in the management of waste from mechanical processes is a **smart-green** solution to reduce the economic impact and transform the waste into a resource.

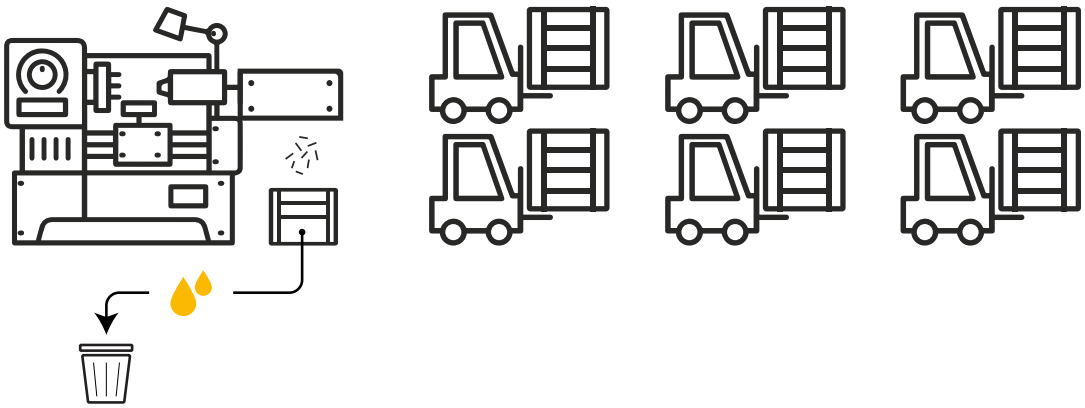
By compacting the swarf into briquettes, the **briquetting machine reduces the volume of the waste up to 8 times**, thus ensuring a considerable saving of space and optimization of swarf bin handling . Due to its compact size and versatility of installation, the briquetting machine can be easily integrated into production lines of those companies that need to make their production process more efficient, with an investment that pays for itself in little more than **24 months**.

It can also be used in automatic mode 24 hours a day with low energy consumption and recovers **up to 90% of the expensive cutting fluids**, thus constituting a truly green choice for companies committed to sustainable innovation.

WITH THE BRIQUETTING MACHINE



WITHOUT THE BRIQUETTING MACHINE



OUR STRENGTHS

VERSATILITY

Different configurations adaptable to specific customer requirements.

EASY MAINTENANCE

Specific measures have made it possible to reduce maintenance time and costs.

LONG-LASTING

Components are made of wear-resistant or heat-treated steels to ensure maximum durability.

ADVANTAGES OF THE BRIQUETTING MACHINE

Swarf volume reduction up to 80%

The swarf is collected in the briquetting machine and fed into a compression chamber where the volume is reduced by up to 8 times.

Cooling lubricant recovery up to 90%

All the expensive liquids used during machining, which would normally be lost, are collected in a tank and fed back into the machining center, thus eliminating waste.

Best solution for unmanned productions

Installing OMCR briquetting machines prevents jamming of conveyors cause by the swarf bins.

Reduction of handlings

The briquetting machine reduces the swarf bin emptying operations up to 8 times with a consequent increase in safety and resource optimization.

Industry 4.0

OMCR BSH briquetting machines are equipped with “BSH Remote Control” management software, with which they are networked and integrated into the company production process. They meet the requirements to access the tax breaks in the countries where it is provided.

Waste valorisation

The compaction of the chip allows to reduce the transport costs and increase the melting yield, thus obtaining a better selling price.

Sustainability and respect for the environment

The transport of compacted swarf eliminates the risk of spillage of liquids harmful for the environment and optimizes transport efficiency, reducing CO2 emissions.

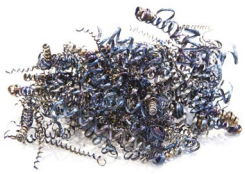
REDUCTION OF THE VOLUME OF SWARF AND RECOVERY OF THE RESIDUAL LIQUID

DUCTILE SWARF

Volume reduction ***80%***

Liquid recovery ***90%***

TOUGH SWARF



Volume reduction ***50%***

Liquid recovery ***90%***

BSH briquetting machines can compact a wide range of **metals**. Customized test can be performed to evaluate compaction results.

COMPACTION RESULTS

TESTING ROOM

In the testing room, customers' chips are subjected to compaction tests in order to identify the solution that best meets their needs.

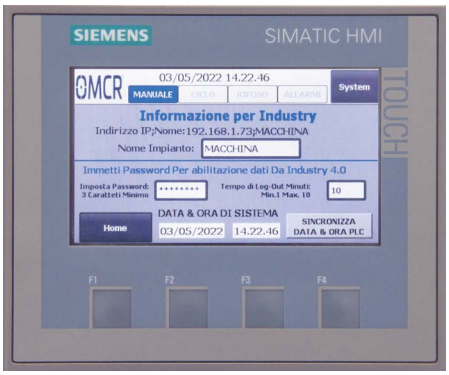
Compaction test execution

Cataloguing compaction tests

INDUSTRY 4.0

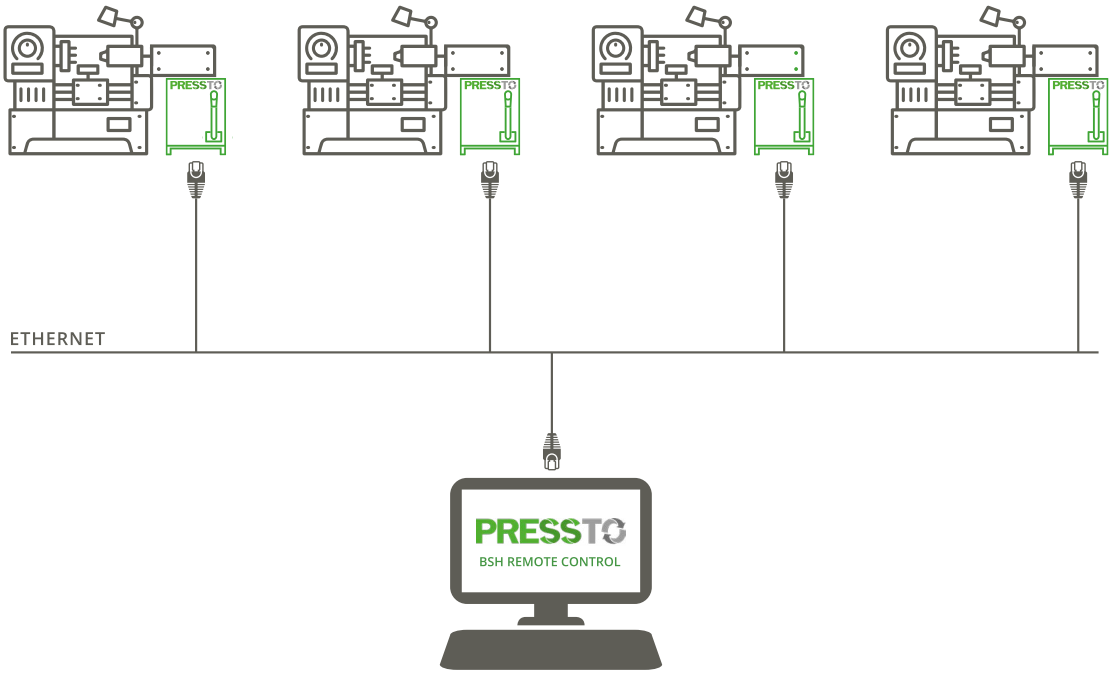
OMCR BSH briquetting machines meet the requirements to access the tax breaks in the countries where it is provided.

The OMCR briquetting machines have a user-friendly Siemens control panel that enables the operator to modify the machine parameters, check the diagnostics, view the production status, plan shutdown and manage the control of full swarf bin.



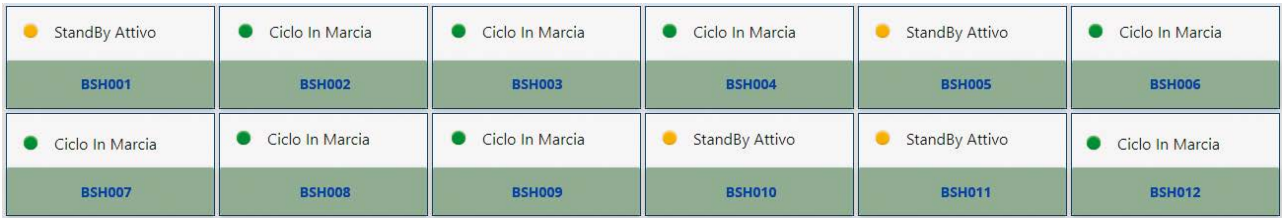
Control panel - detail

With our **"BSH Remote Control"** management software, the briquetting machines can be connected in a network so that it's possible to check the operating status and to monitor the briquetting machines installed in the company, all at the same time.



BSH REMOTE CONTROL

The OMCR software can manage up to thirty briquetting machines in the network, showing the status of each individual unit on a user-friendly control panel.

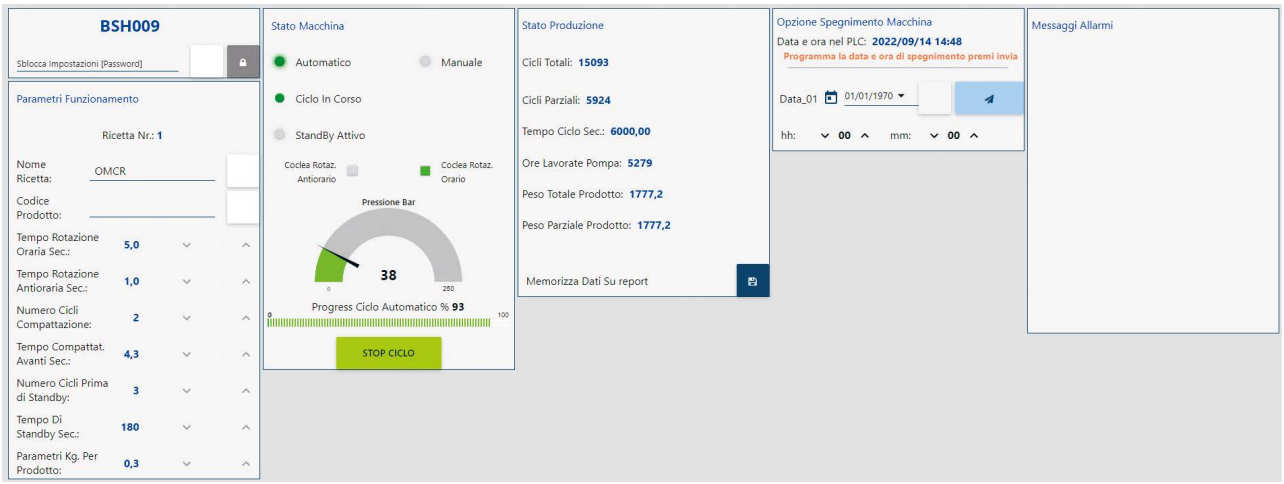


Control panel - operating status of the briquetting machines

From the control panel, the operator can access each individual machine to view and personalize the operating parameters.

The available functions are:

- check the diagnostics, view production status, plan shutdown and manage control of full swarf bin;
- update the working parameters by loading personalized “recipes” on each individual machine;
- export production reports;
- plan scheduled shutdowns;
- obtain an instant diagnosis of the status of the briquetting machines and notify autonomously, via e-mail, in the event of a full swarf bin or malfunction.



Control panel - working parameters

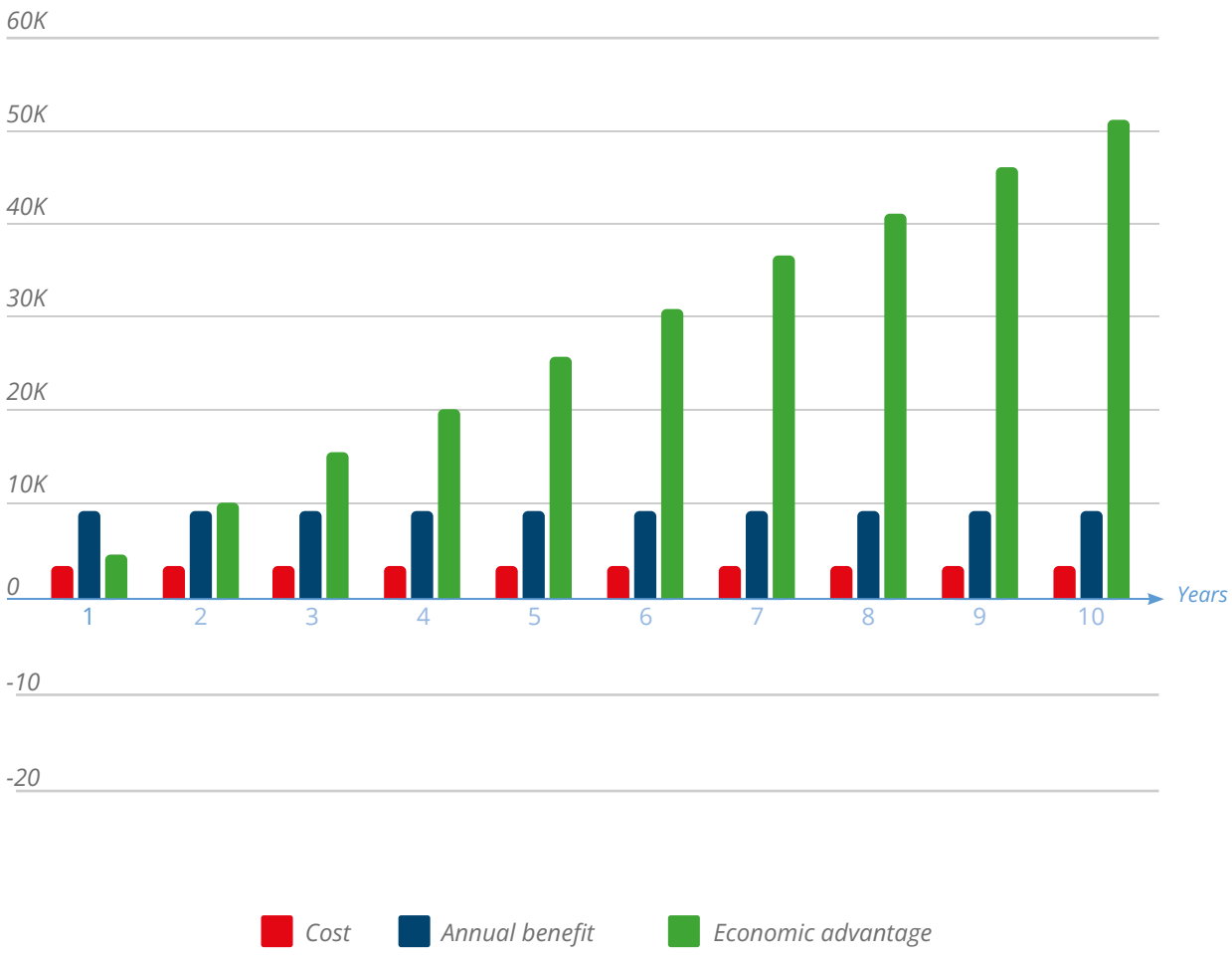
FINANCIAL GRAPHS

Economic benefit

We have calculated the economic benefit of the briquetting machine taking, as an example, a horizontal machining center, considering two work shifts, steel material, mixed drilling and milling processes using cooling lubricant .

In this example, we can see the economic advantage calculated over 10 years, net of costs for less maintenance and the machine cost spread over the years.

The graph shows how the economic advantages due to the saving of cooling lubricant recovered and the reduced swarf bin handling result in **cumulative savings of more than €50.000 in 10 years.**

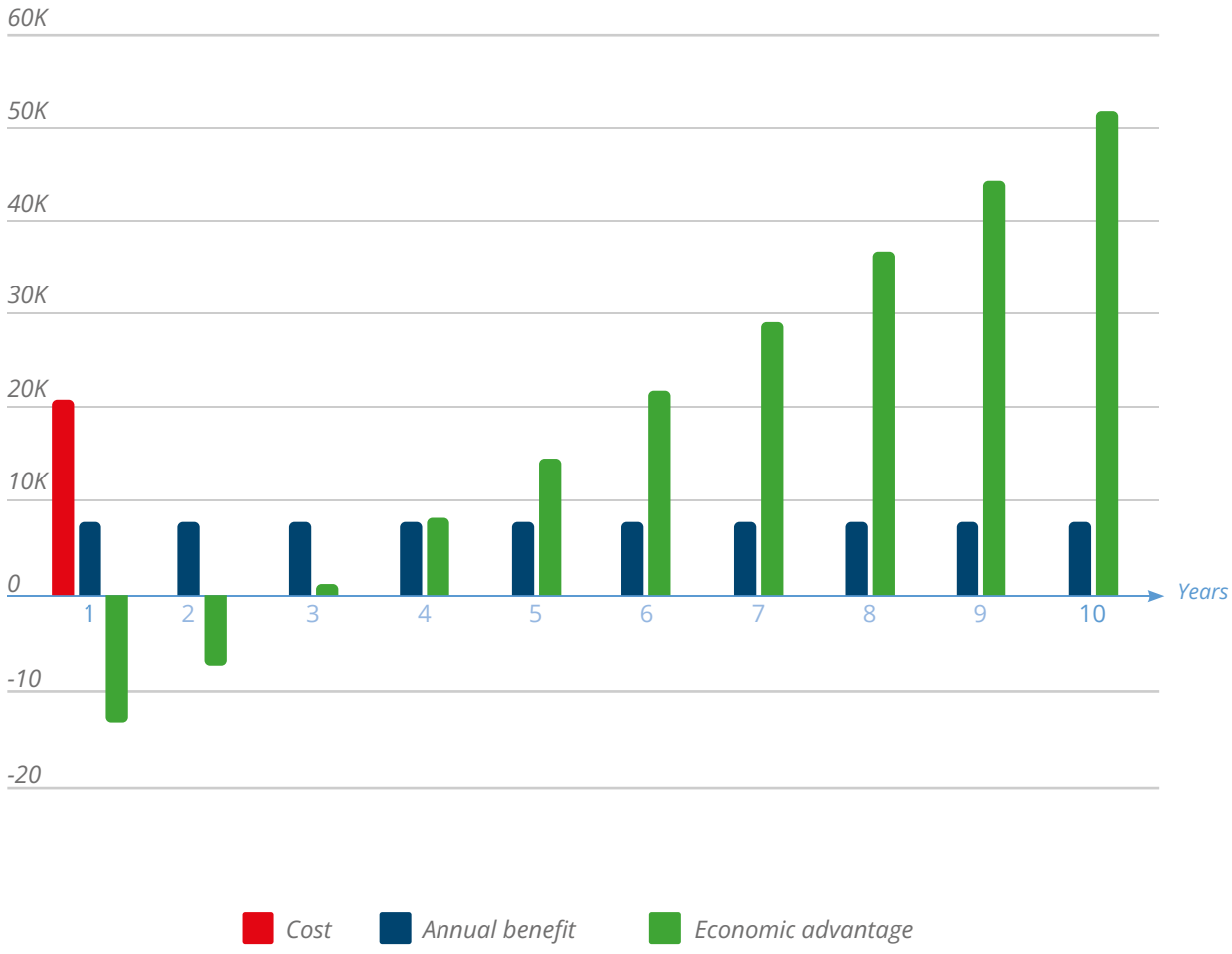


Payback period

In this second graph, on the same machining center, over a period of 10 years, the payback time and the subsequent gain were considered.

The graph shows how the machine pays for itself **within a period of little more than 24 months.**

N.B. in many cases the calculations can be more favourable, depending on the type of material machined, the cost of the cooling lubricant used and the number of hours worked.



TYPES OF INSTALLATION

STAND - ALONE

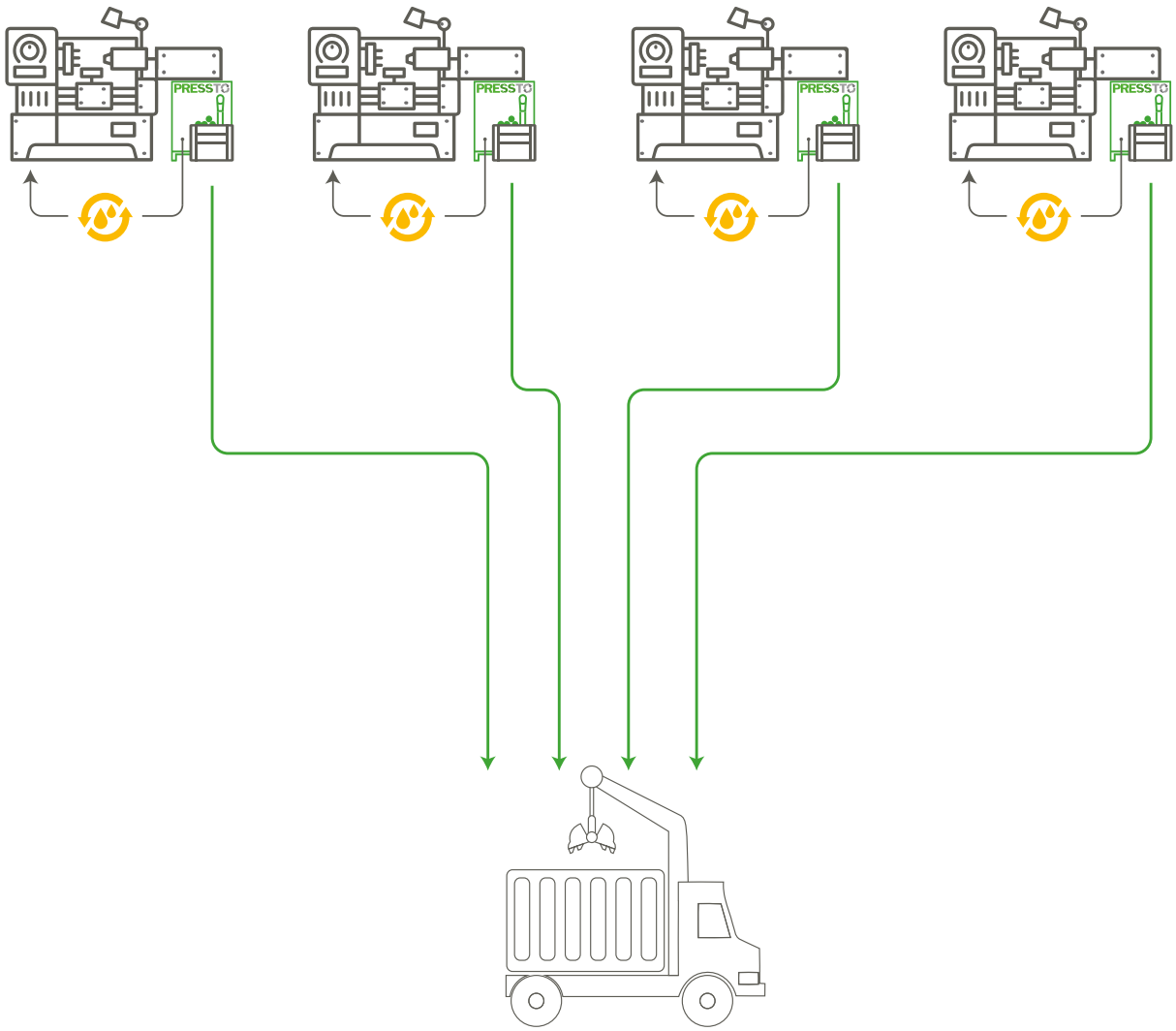
Best solution for machining center with a large daily output of swarf, with economic benefits in the medium term and a radical reduction of swarf bin handling in the factory. It completely eliminates the problem of managing residual cooling lubricant.

Advantages

- Reduction of handling up to 8 times
- Ideal for unmanned automated production
- Elimination of the problem of managing residual cooling lubricant
- Independent solution for greater reliability

Disadvantages

- Higher initial investment
- Greater local space occupation



CENTRALIZED

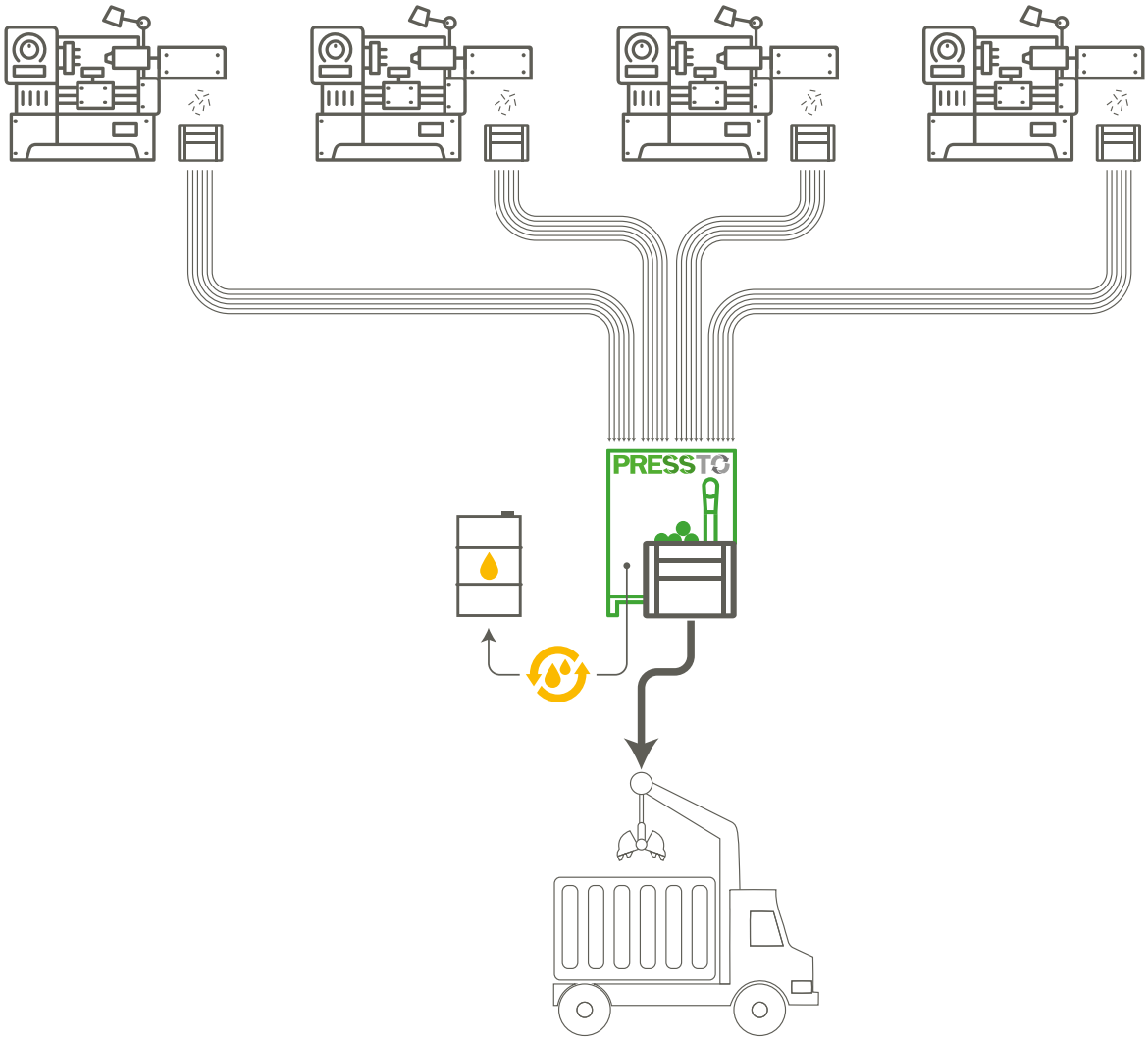
Solution with lower initial investment, ideal for plants with narrow spaces.
Efficient handling of residual cooling lubricant.

Advantages

- Lower investment
- Ideal for plants with narrow space
- Efficient management of residual cooling lubricant

Disadvantages

- Limited efficiency in the reduction of handling
- Parameters not adaptable to the single type of machining
- Preventive shredding may be necessary



STAND - ALONE SOLUTIONS

BSH080 Briquetting machines are designed for chip management in applications with low evacuation heights. OMCR's experience has resulted in a compact design suitable for even the most demanding applications.

OPTIONS

CUSTOMISED EVACUATION TUBE

CUSTOMISED HOPPER

BOOSTER

TECHNICAL DATA

Model	BSH080			
Briquette diameter [mm]	56		70	
Hourly capacity - Steel / Cast iron [kg/h]	30		50	
Hourly capacity - Aluminum [kg/h]	15		30	
Briquette density performance	STANDARD	BOOSTER	STANDARD	BOOSTER
Compaction force [t]	25	37	25	37
Compaction pressure [kg/mm²]	10	16	7	10
Dimensions - l x p x h [mm]	1120 x 630 x 500 (min)			
Electric power installed [kW]	3			
Hydraulic unit maximum distance [mm]	3000			
Weight [kg]	400			

STAND - ALONE SOLUTIONS

Due to their adaptability, BSH briquetting machines are ideal to serve stand-alone machine tools with chip production up to 110 kg/h.
The optional anti-accumulation mixer, with hardened steel blades, ensures high and constant performance over time.

OPTIONS

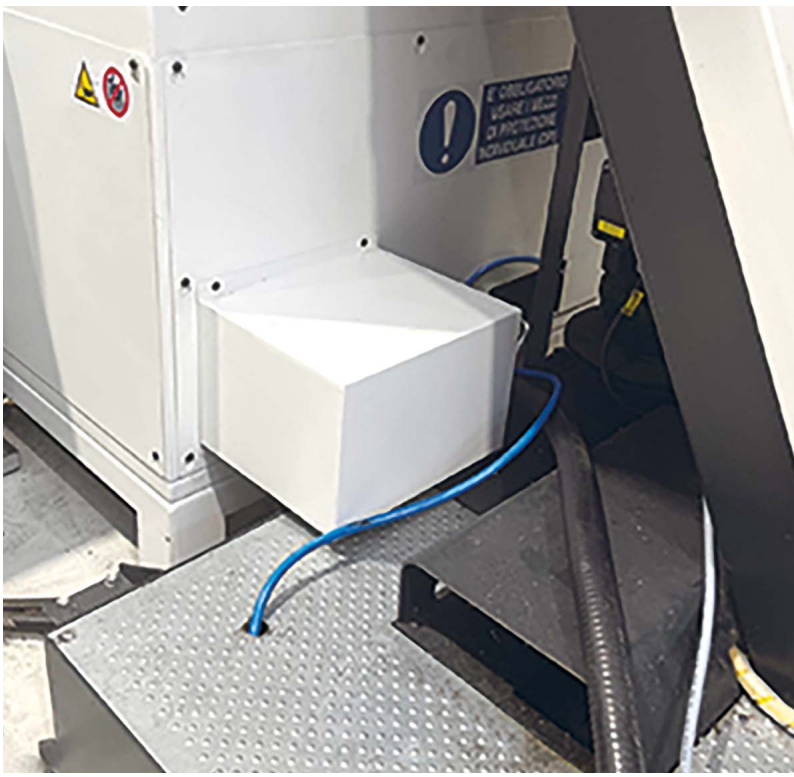
MANUAL LOADING

ANTI- ACCUMULATION MIXER

BOOSTER

TECHNICAL DATA

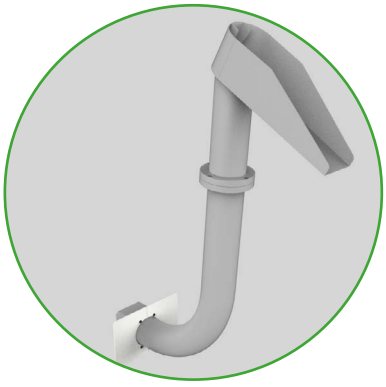
Model	BSH100				BSH120	
Briquette diameter [mm]	56		70		70	90
Hourly capacity - Steel / Cast iron [kg/h]	40		60		60	110
Hourly capacity - Aluminum [kg/h]	25		40		40	70
Briquette density performance	STANDARD	BOOSTER	STANDARD	BOOSTER	BOOSTER	
Compaction force [t]	25	37	25	37	62	
Compaction pressure [kg/mm²]	10	16	7	10	16	10
Dimensions - l x p x h [mm]	1110 x 630 x 1440				1180 x 750 x 1660	
Electric power installed [kW]	3				5,5	
Hydraulic unit maximum distance [mm]	3000				3000	
Weight [kg]	500				890	



CENTRALIZED SOLUTIONS

Centralized BSH briquetting machines allow the processing of small and medium-sized chips, due to the capacity of the hopper up to 1.3 m³.
The optional anti-accumulation mixer, with hardened steel blades, ensures high and constant performance over time.

OPTIONS



EVACUATION TUBE CLOSED

ANTI-ACCUMULATION MIXER

BOOSTER

TECHNICAL DATA

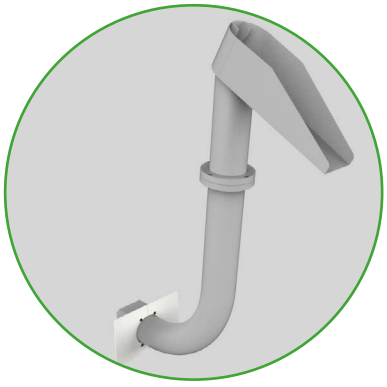
Model	BSH100				BSH120	
Briquette diameter [mm]	56		70		70	90
Hourly capacity - Steel / Cast iron [kg/h]	40		60		60	110
Hourly capacity - Aluminum [kg/h]	25		40		40	70
Briquette density performance	STANDARD	BOOSTER	STANDARD	BOOSTER	BOOSTER	
Compaction force [t]	25	37	25	37	62	
Compaction pressure [kg/mm²]	10	16	7	10	16	10
Accumulation volume [m³]	1				1,3	
Dimensions - l x p x h [mm]	1800 x 1350 x 1380				1900 x 1450 x 1590	
Electric power installed [kW]	3				5,5	
Hydraulic unit maximum distance [mm]	3000				3000	
Weight [kg]	500				890	

CENTRALIZED SOLUTIONS

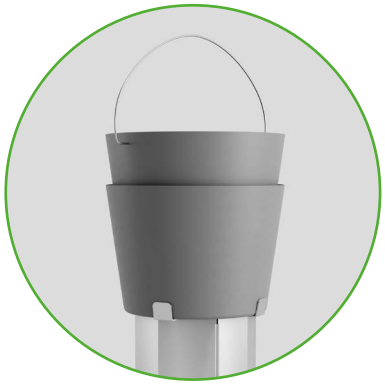
The BSH compaction area is an innovative solution which allows waste management in compliance of the environment; ideal solution for machine tools with low chip production. Solution designed for ergonomic manual loading.

OPTIONS

OPENABLE BOTTOM BOX



EVACUATION TUBE CLOSED



HIGH/LOW SWARF UNLOADING KIT

TECHNICAL DATA

Model	BSH100			
Briquette diameter [mm]	56		70	
Hourly capacity - Steel / Cast iron [kg/h]	40		60	
Hourly capacity - Aluminum [kg/h]	25		40	
Briquette density performance	STANDARD	BOOSTER	STANDARD	BOOSTER
Compaction force [t]	25	37	25	37
Compaction pressure [kg/mm²]	10	16	7	10
Dimensions - l x p x h [mm]	1370 x 910 x 960			
Electric power installed [kW]	3			
Hydraulic unit maximum distance [mm]	3000			
Weight [kg]	500			

CENTRALIZED SOLUTIONS

The BSH SD grinder sludge compactor enables the recovery of a large part of the liquid absorbed by the sludge with a reduction in the weight of the material to be disposed of, by more than 50%, significantly lowering disposal costs and reducing environmental impact.

ACCESSORIES INCLUDED

PHOTOCELL

ANTI-ACCUMULATION MIXER

WHEELS

TECHNICAL DATA

Model	BSH100 SD
Briquette diameter [mm]	56
Hourly capacity - Sludge [kg/h]	35*
Coolant recovery [l/h]	25*
Pressed sludge obtained [kg/h]	10*
Residual humidity [%]	3÷5
Dimensions - l x p x h [mm]	1370 x 910 x 1050
Electric power installed [kW]	3
Hydraulic unit maximum distance [mm]	3000
Weight [kg]	540

*: average values depending on the initial humidy conditions of the sludge fed into the compactor.

SUSTAINABLE DEVELOPMENT GOALS

The 2030 Agenda for Sustainable Development is a plan of action for people, the planet and prosperity that comprises 17 Sustainable Development Goals that tackle a wide range of economic and social development issues: poverty, hunger, the right to health and education, access to water and energy, work, inclusive and sustainable economic growth, climate change and protection of the environment, urbanization, production and consumption patterns, social and sexual equality, justice and peace.

OMCR's daily commitment to sustainability is reflected in the following goals:

To build resilient infrastructure, to promote inclusive and sustainable industrialization and promote innovation

To guarantee sustainable production and consumption patterns

The use of ecofriendly methods of production and reduction of the waste that we produce are included in goal no. 12. Starting from 2030, the national recycling rates indicated by the tonnes of material recycled should increase. Companies should also adopt sustainable business practices and publish sustainability reports.

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Contact us:

www.omcr-industrialsolutions.it

+39 011 996 46 11

info@omcr-industrialsolutions.it

Via Quarantelli 8
10077 San Maurizio C.se (TO) - Italy

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