OMCR®
INDUSTRIAL SOLUTIONS

BRIQUETTING MACHINES

PASSION FOR THE ENVIRONMENT

CE

CONTENTS

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

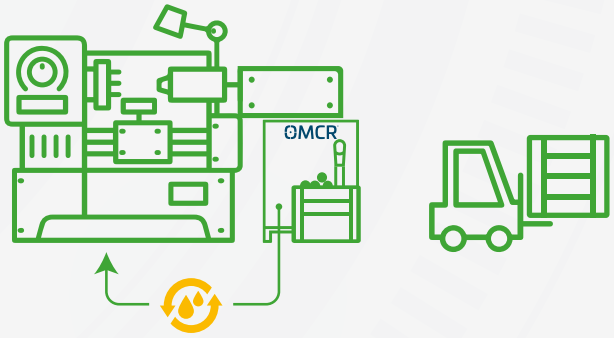
THE BRIQUETTING MACHINE

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.

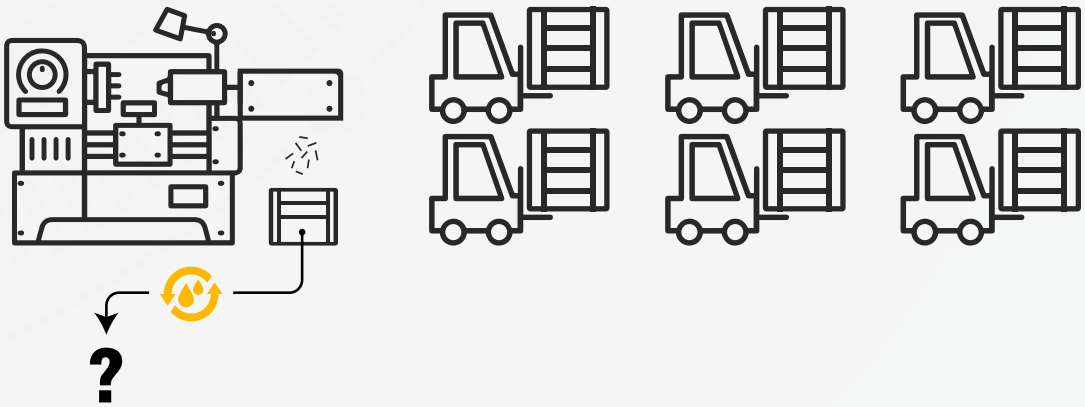
By compacting the swarf into briquettes, the **briquetting machine reduces the volume of the waste up to 8 times**, thus ensuring a considerable saving of space and optimization of swarf bin handling . Due to its compact size and versatility of installation, the briquetting machine can be easily integrated 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



IMPROVE YOUR PRODUCTION PROCESSES

increasing safety in the workplace

REACH YOUR SUSTAINABILITY GOALS

respecting the environment

MAKE CASH SAVINGS

by recovering cutting oils and cooling lubricants

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 production

Installing OMCR briquetting machine prevents jamming of conveyors caused by the swarf bins.

Reduction of handling and transport costs

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 certification

The briquetting machine meets the requirements for Industry 4.0 technology tax relief.

Energy saving

To obtain maximum energy saving, the briquetting machine is designed to enter standby mode automatically when it detects no material to be compacted.

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%**

TYPES OF INSTALLATION

STAND - ALONE

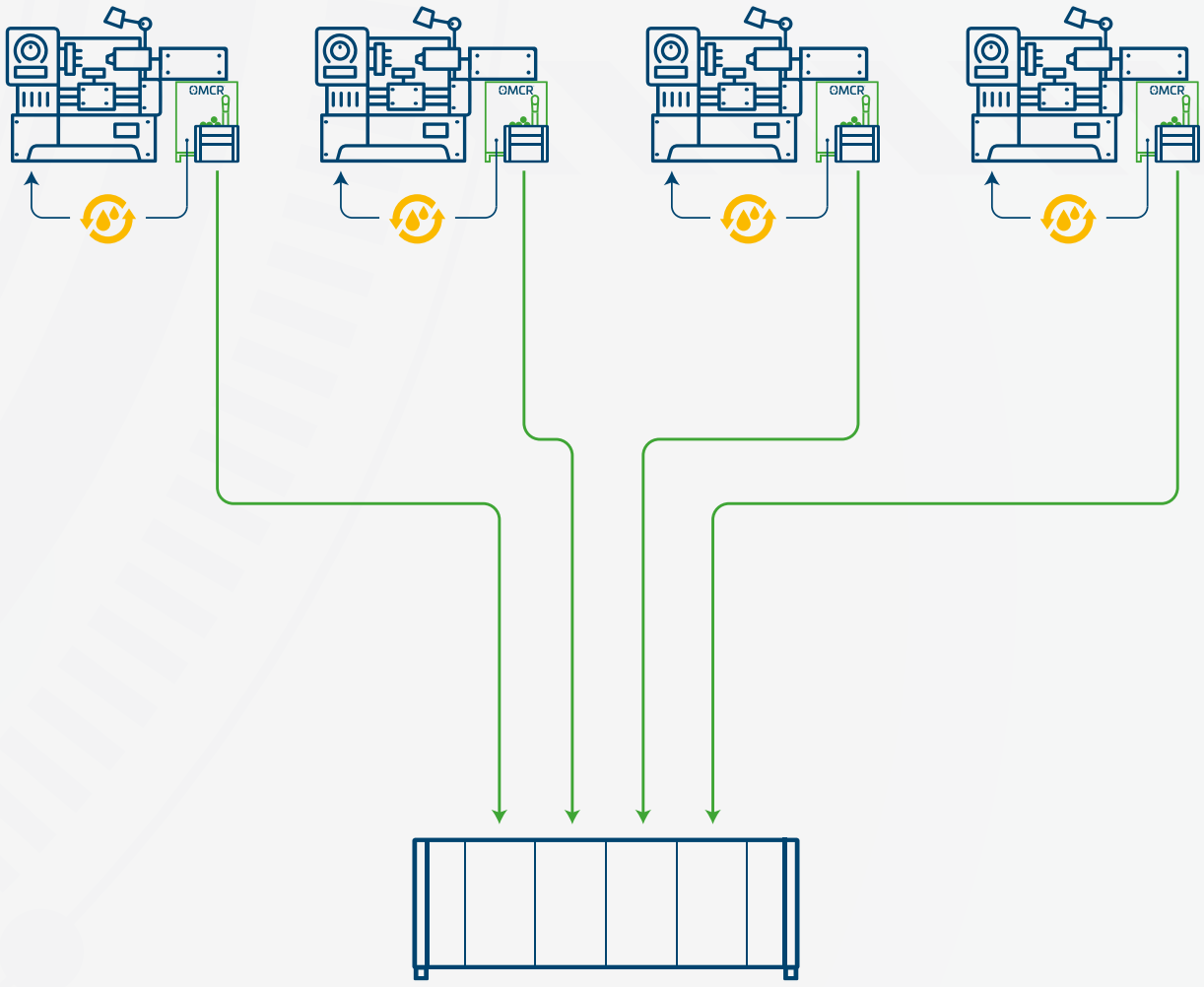
Best solution for machining center with a large daily output of swarf, with economic benefits in the medium term and a radical reduction of swarf bin handling in the factory. It completely eliminates the problem of managing residual cooling lubricant.

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

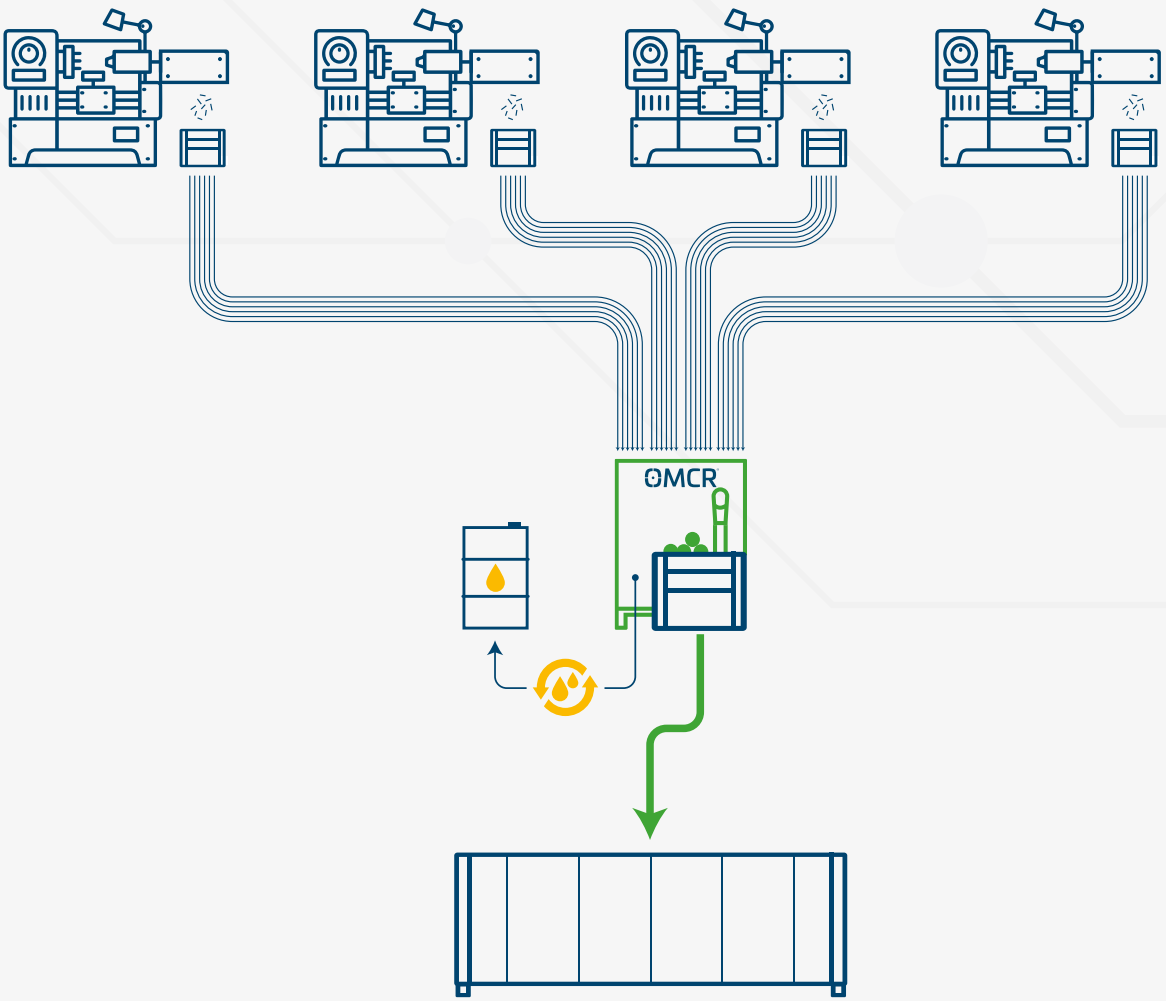
Solution with lower initial investment, ideal for plants with narrow spaces.
Efficient handling of residual cooling lubricant.

Advantages

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

Disadvantages

- Limited efficiency in the reduction of handling
- Parameters not adaptable to the single type of machining



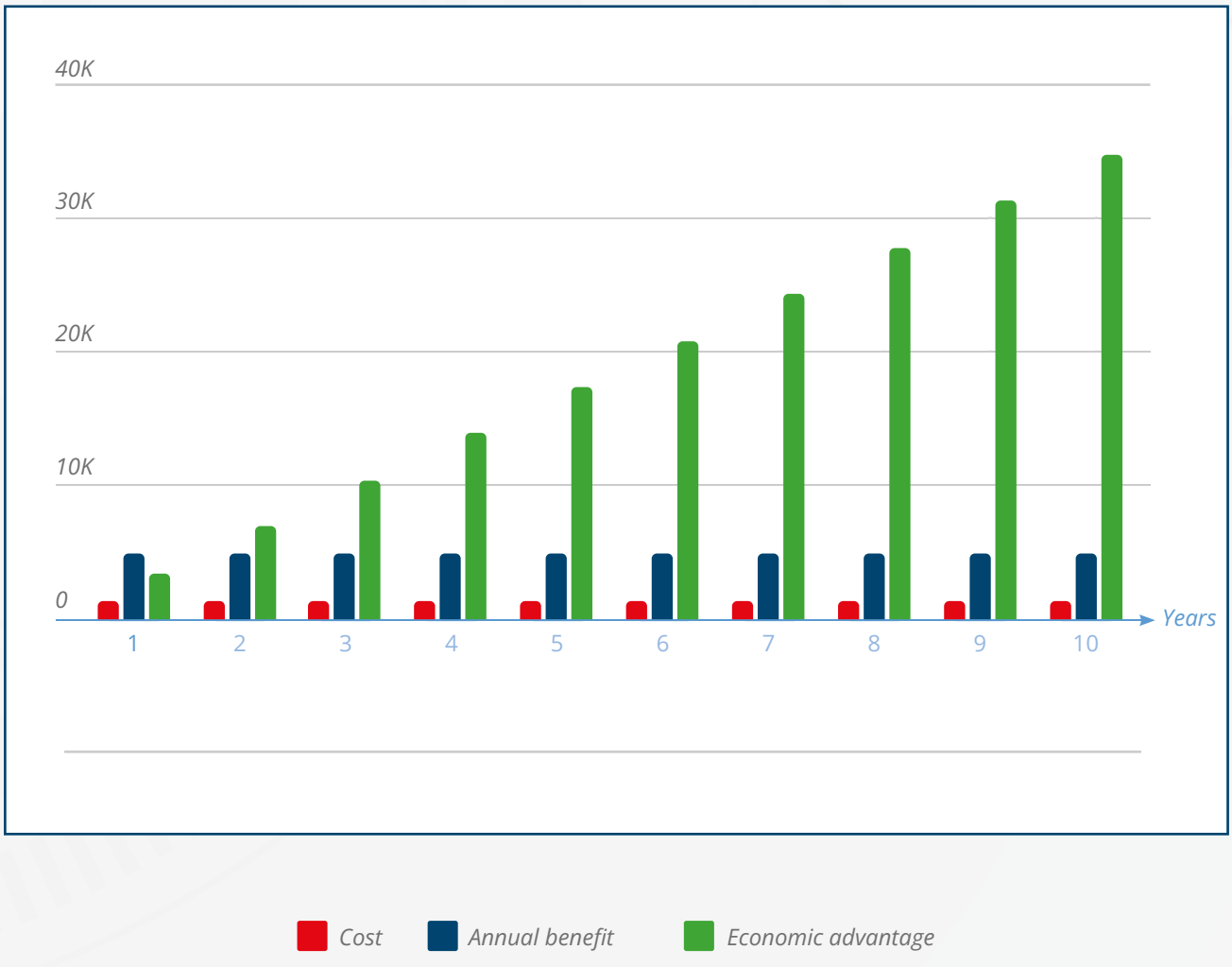
FINANCIAL GRAPHS

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 €30,000 in 10 years**

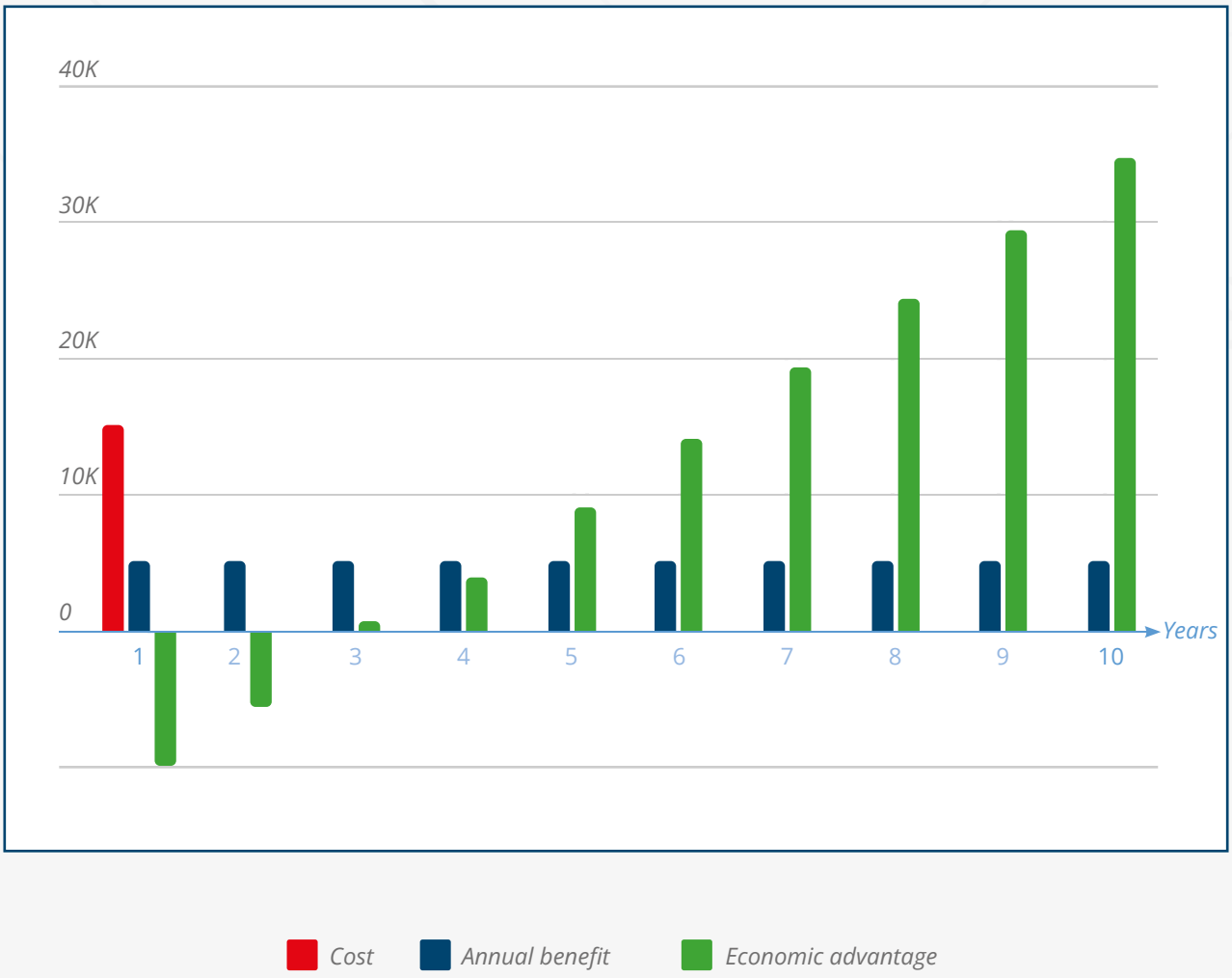


Payback period

This second graph shows the payback period and subsequent savings on the same machining center over a period of 10 years.

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.



BSH100

The small-size BSH100 briquetting machine is ideal for stand-alone use with machining center having an hourly output up to 60 kg/h.

OPTIONS

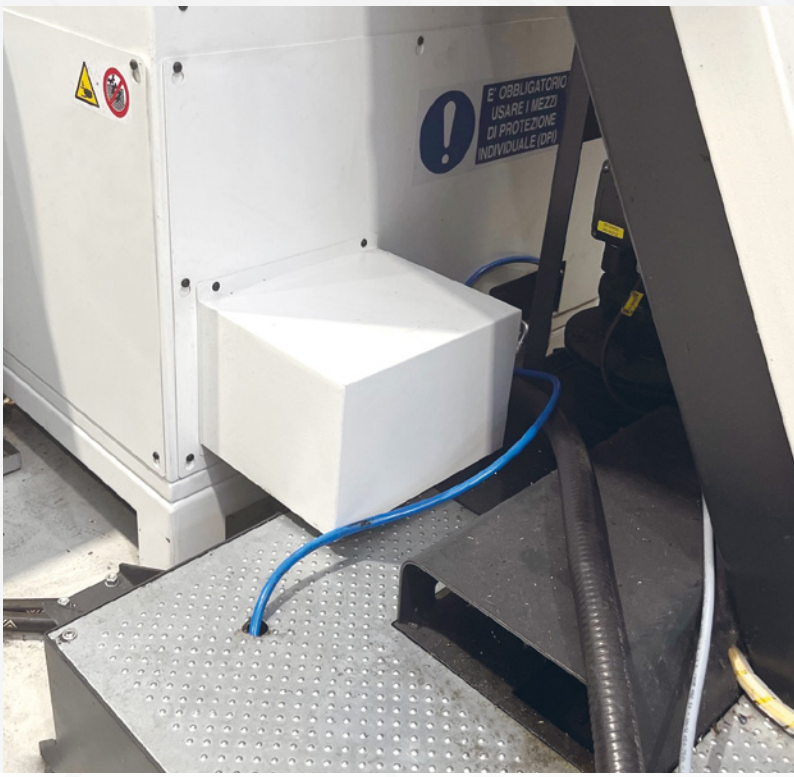
OPTIONAL MANUAL FEEDER

ANTI ACCUMULATION BRIDGE-BREAKER

PERSONALIZED CASINGS

TECHNICAL CHARACTERISTICS

Hourly capacity - Steel / Cast iron [kg/h]	60
Hourly capacity - Aluminium [kg/h]	40
Briquette diameter – Standard performance [mm]	70
Briquette diameter – Enhanced performance [mm]	56
Compression force [t]	24,7
Working pressure [bar]	200
Hydraulic unit capacity [l]	75
Dimensions - l x p x h [cm]	1090 x 630 x 1440
Installed power [kW]	3
Maximum distance between control unit and briquetting machine [mm]	3000
Briquetting machine weight [Kg]	395



BSH120

Due to its large collection hopper, the BSH120 briquetting machine is ideal for standalone use with machining center having an hourly output up to 110 kg/h and centralized installation.

OPTIONS

OPTIONAL MANUAL FEEDER

ANTI ACCUMULATION BRIDGE-BREAKER

PERSONALIZED CASINGS

TECHNICAL CHARACTERISTICS

Hourly capacity - Steel / Cast iron [kg/h]	110
Hourly capacity - Aluminium [kg/h]	70
Briquette diameter – Standard performance [mm]	90
Briquette diameter – Enhanced performance [mm]	70
Compression force [t]	60,3
Working pressure [bar]	150
Hydraulic unit capacity [l]	75
Dimensions - l x p x h [cm]	1200 x 750 x 1660
Installed power [kW]	5,5
Maximum distance between control unit and briquetting machine [mm]	3000
Briquetting machine weight [Kg]	640

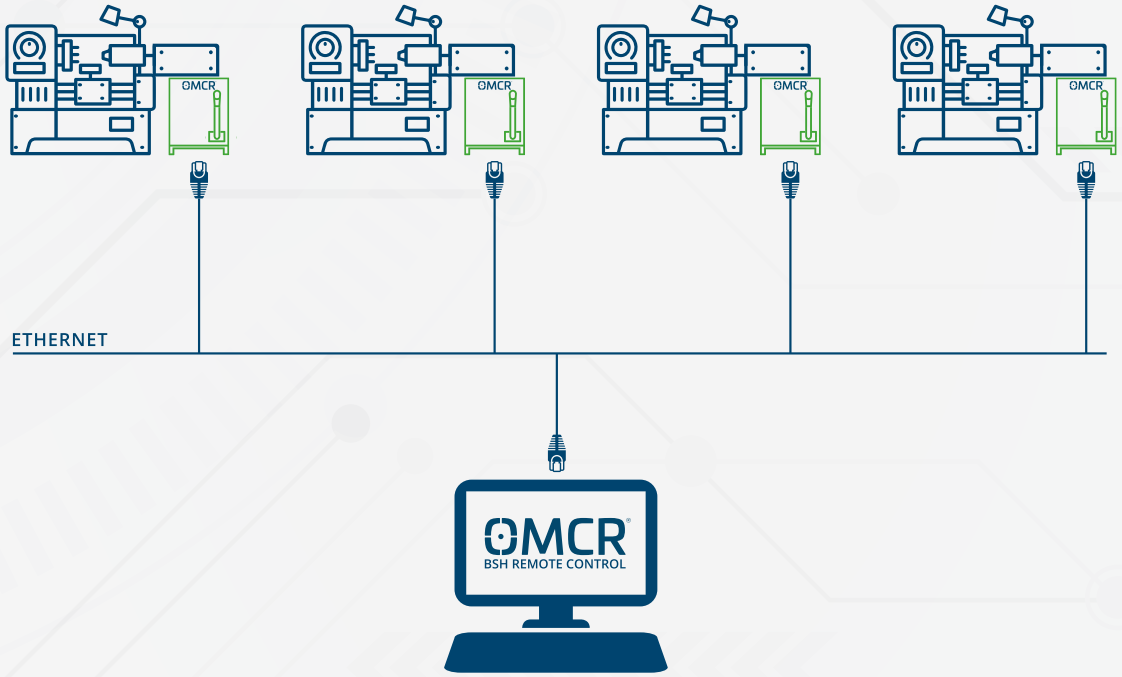
INDUSTRY 4.0

The OMCR briquetting machine meet the requirements for Industry 4.0 technology tax relief

The OMCR briquetting machine 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

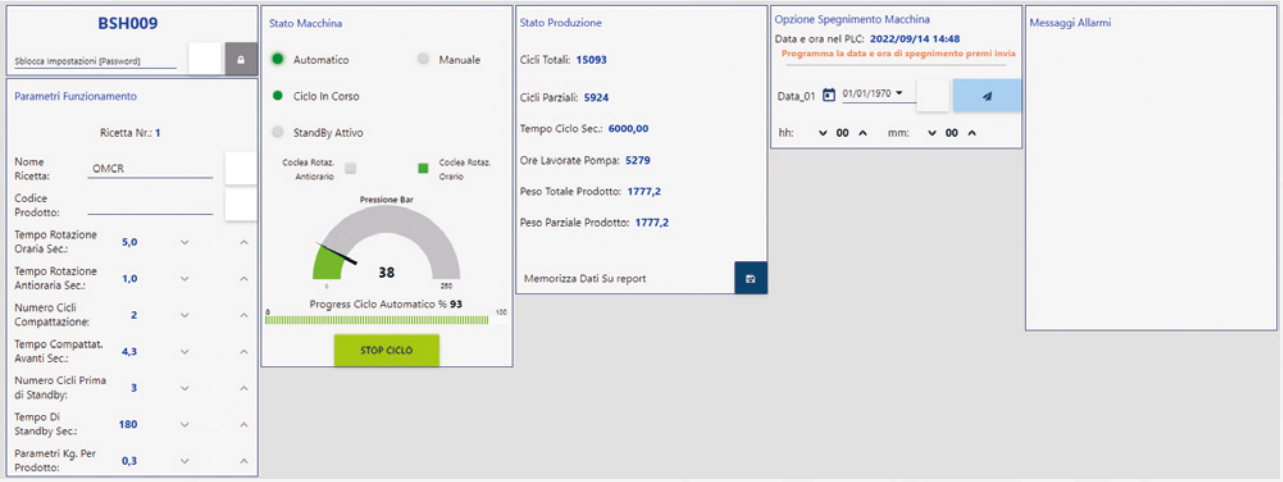
The OMCR software can manage up to thirty briquetting machines in the network, showing the status of each individual unit on a user-friendly control panel.

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 instantaneous diagnosis of the briquetting machines status and autonomously signal a full swarf bin or a breakdown by means of an e-mail.



Control panel - working parameters

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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