



BUSINESS PRESENTATION

**ENERGY SAVING
ON BLOW-MOLDING
MACHINES**



TARGETED STRATEGIES TO SAVE ENERGY

In the last period, the costs of electricity and gas supply have doubled, **while in the first days of January 2022 the cost of the energy component alone has quadrupled compared to 12 months ago**. A real drain on companies. It's important to adopt strategies to limit energy consumption in production facilities.

**BBM HAS INVESTED IN THE RESEARCH AND DEVELOPMENT OF SOLUTIONS TO GUARANTEE ENERGY AND COST SAVINGS IN THE BOTTLING SECTOR.
HOW?**

Thanks to a combination of upgrades designed for blow molding machines, you can save on energy consumption and achieving the same results



AIR RECOVERY

**PRESSURE
REDUCTION**

**CERAMIC
PANELS**

AIR RECOVERY

The possibility to reuse the blowing air for the machine utility

Without replacing the original blower manifold, an integrated wirelessly connected system for managing air recovery can be installed.

The system allows for automatic adjustment of the machine in operation, based on format and speed. It is possible to manage the auto check-up of the sensors and the diagnostics of each valve directly from the panel.

An upgrade that can be done on machines of the main manufacturers.

We guarantee a certain return on investment and an intervention tailored to your needs.



PRESSURE REDUCTION

Precise and meticulous adjustment of the pressure required to blow the bottle to the right size

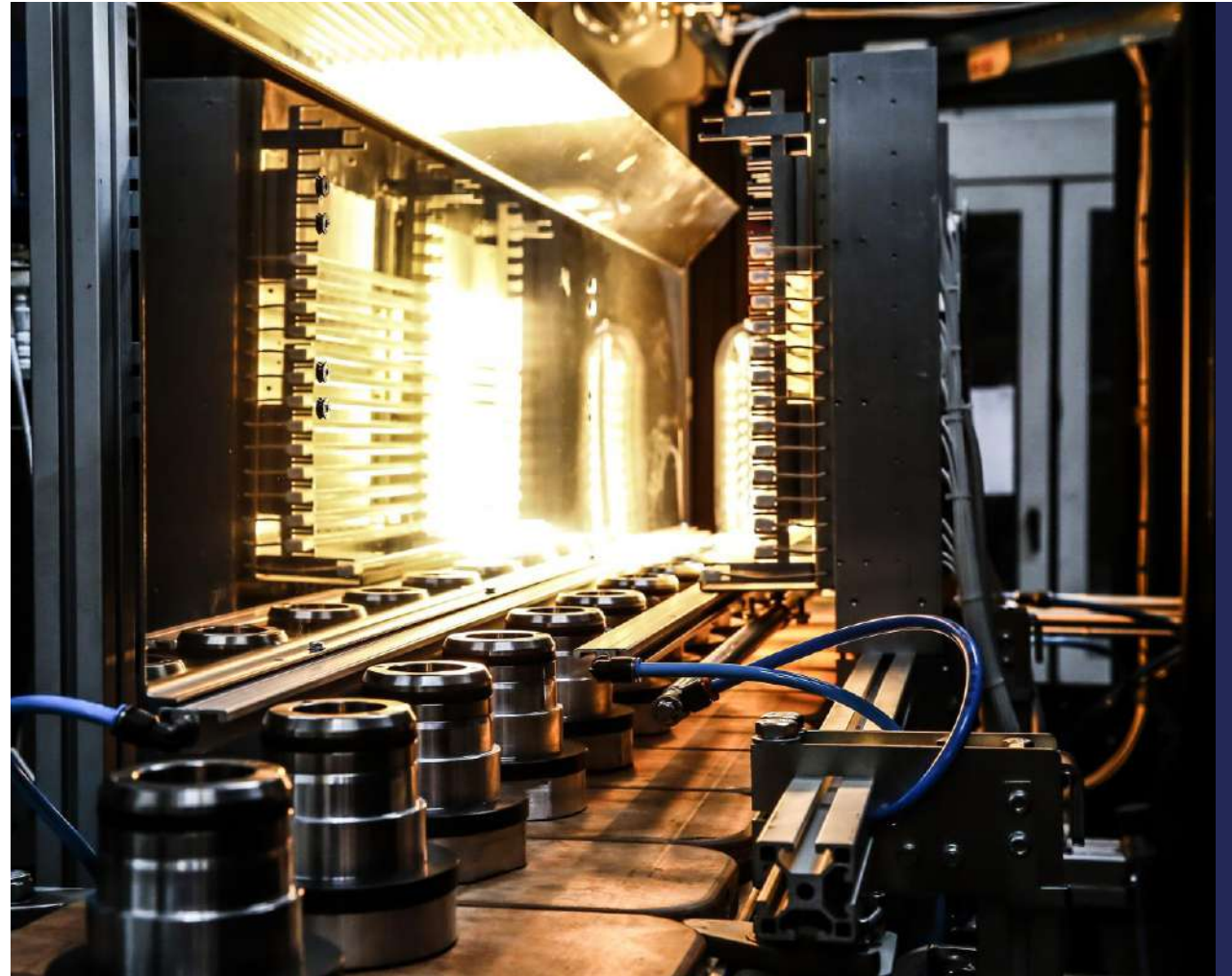
Thanks to this modification made by BBM Service, your blowing plant can work at the required pressures and no higher, while maintaining the quality of the blown bottle unaltered

Each 1 bar reduction in pressure can decrease consumption by 5%
Why would you wait?

Compressed air pressure reduction

Intervention in a short time

Safe and immediate savings



CERAMIC PANELS

The new Ceramic Panels for Oven are panels with reflective ceramic walls, which result in faster heating of the preform.

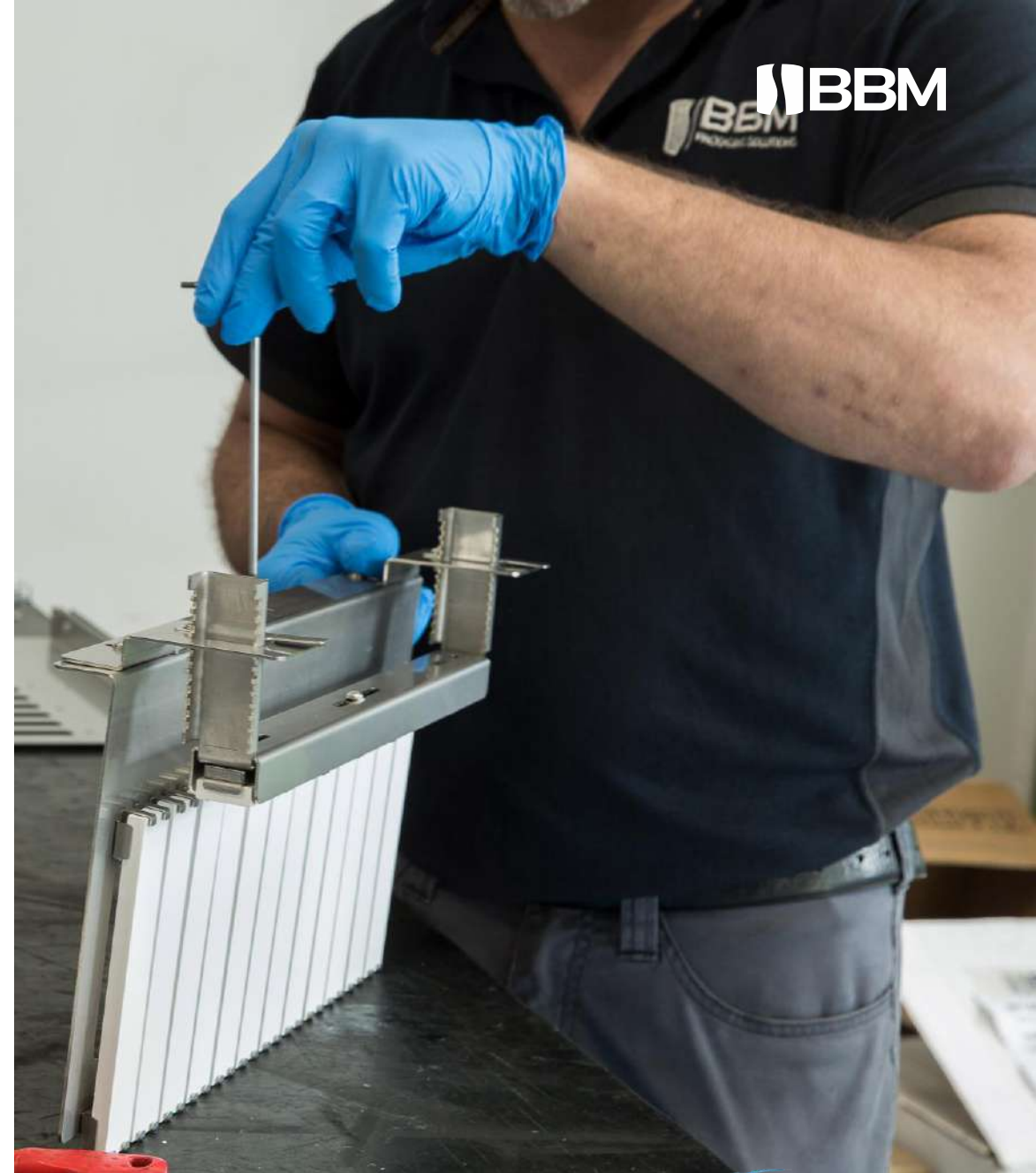
By reducing the operating power of individual lamps, **the installation of BBM ceramic panels allows up to 35% less power consumption, resulting in cost savings.**

Independent and self-cleaning

Prevent bottle neck deformation

Applicable on blow molding machines of the main brands

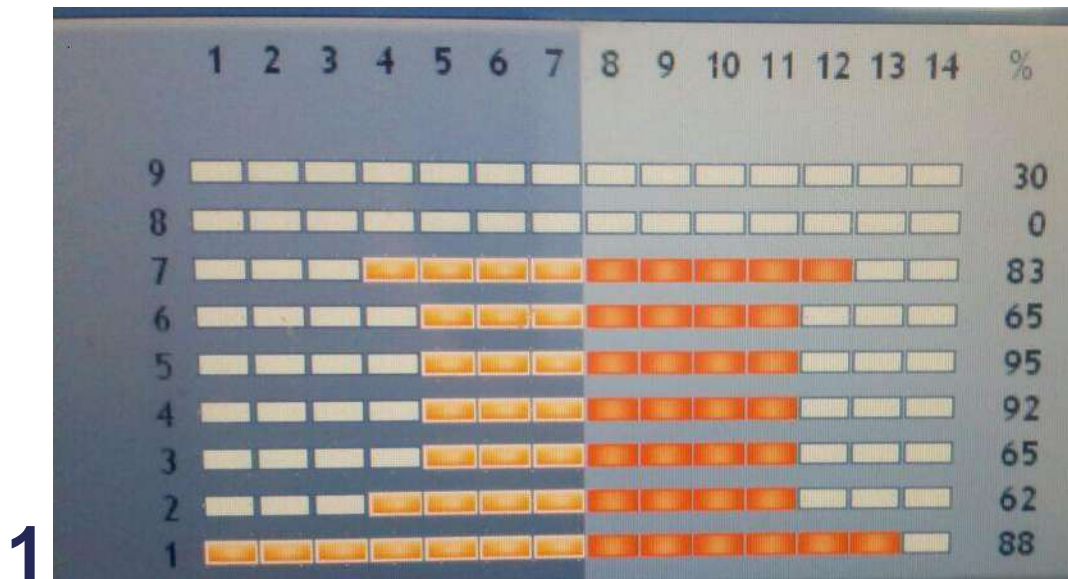
Return on investment in less than 6 months



EVALUATION OF ENERGY SAVINGS FOLLOWING INSTALLATION OF CERAMIC PANELS

We report a real evaluation of energy saving following the assembly by BBM of ceramic panels on a **SIDEL Universal Blow Moulder** with 14 furnace modules, which blew a preform for **1.5 liter** format.

In situation (1), corresponding to a phase in which the BBM ceramic panels have not yet been installed, considering that the first row is 3000W and the subsequent 2500W, the lamp absorption, thus calculated*, is equal to **135,115 W**.



Lamp absorption calculation*	
Row 9	0 W
Row 8	0 W
Row 7	$2500w \times 4 + 2500 \times 5 \times 0.83 = 20375w$
Row 6	$2500w \times 3 + 2500 \times 4 \times 0.65 = 14000w$
Row 5	$2500w \times 3 + 2500 \times 4 \times 0.95 = 17000w$
Row 4	$2500w \times 3 + 2500 \times 4 \times 0.92 = 16700w$
Row 3	$2500w \times 3 + 2500 \times 4 \times 0.65 = 14000w$
Row 2	$2500w \times 4 + 2500 \times 4 \times 0.62 = 16200w$
Row 1	$3000w \times 7 + 3000w \times 6 \times 0.88 = 36840w$

1

CERAMIC PANELS

The next image (2) shows the new absorption of the lamps, following the installation of BBM ceramic panels, which made it possible to rework a new format recipe.

The result is a total absorption of 83.175w lamps.



Energy saving calculation*	
Row 9	0 W
Row 8	0 W
Row 7	$2500w \times 2 + 2500 \times 2 \times 0.65 = 8250w$
Row 6	$2500w \times 3 + 2500 \times 3 \times 0.65 = 12375w$
Row 5	$2500w \times 2 + 2500 \times 2 \times 0.8 = 9000w$
Row 4	$2500w + 2500 \times 0.78 = 4450w$
Row 3	$2500w + 2500 \times 0.8 = 4500w$
Row 2	$2500w \times 4 + 2500 \times 4 \times 0.64 = 16400w$
Row 1	$3000w \times 5 + 3000w \times 5 \times 0.88 = 28200w$

THE RESULT

Accounts in hand: the total energy saving of the SIDEL Universal blow moulder under consideration, expressed in Kw is: **$135115w-83175w/1000= 51.9 Kw$** .

Considering the current cost of energy, equal to **0.24 €/Kwh** and a use of the blow moulding machine over a period of **24 hours for 5 days a week**, the weekly energy saving corresponds to

$$51.9Kw*0.24€/Kwhx24hx5= 1494,00 €.$$

This figure is equivalent to about **€ 5,980.00 saved in a month**; THE ROI (return on investment) is achieved within three to four months of the initial investment.

1,5 | liters: the processed format
5.980 | €: the actual savings over a month
3 | months: the return on investment



HOW WE WORK

At the service of your saving project



The ideal mix

The combination of the three upgrades on the blow molding machines guarantees effective and consistent energy savings, to avoid waste in this period of rising energy bills



Fast Interventions

Don't waste time: our specialized BBM technicians can reach your plant quickly and safely



Certified Savings

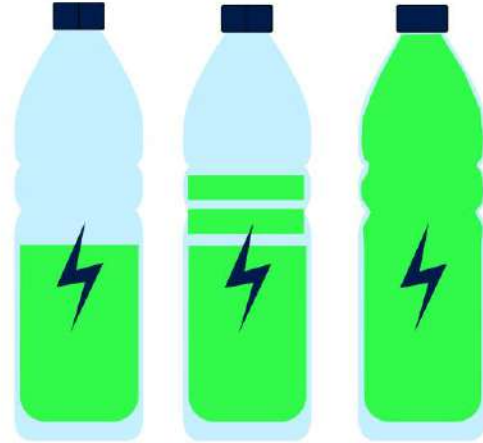
We can put at your disposal a certification body, to have your savings quantified and be able to access calls for tenders and funding



Assistance

BBM offers not only immediate technical support services, but also preventive maintenance programs to maintain the performance of your equipment over time





SAVE ENERGY

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