



# Cutting-edge cheddar blockforming solutions

Tetra Pak® Blockformer system 6

 **Tetra Pak**®  
PROTECTS WHAT'S GOOD

# Tetra Pak® Blockformer system 6 – the benefits

- Excellent and uniform product quality
- Proven high capacity
- High and consistent weight accuracy
- Minimal product losses
- Robust, durable construction
- Simplified, reliable operation
- Designed for safety
- Open, easy-to-clean design
- Low maintenance cost
- Reduced environmental impact
- Future-proof investment





# Highest quality – greatest efficiency

Thanks to their delicious flavour and excellent melting properties, cheddar cheeses are growing in popularity and becoming first-choice cheeses among consumers in many parts of the world. This growth is in part driven by the ability to achieve consistently high product quality at the lowest possible cost, and much of this efficiency margin is thanks to the latest cutting-edge developments in blockforming.

# Highest quality – greatest efficiency

## Knowledge and experience

Tetra Pak's knowledge of cheddar cheese and cheddar production is something we share with our customers. We offer everything you need for first-rate production of first-choice cheddar. This covers individual, innovative, vats, blockformers and other top-performance machines, such as the Tetra Pak® Cheddaring machine 5. It also covers complete lines for continuous or batch production.

For more than 30 years, we've been setting the standards of quality in cheddar block-forming, with nearly 600 installations worldwide. Our Tetra Pak® Blockformer system 6 has become synonymous with outstanding quality. And now we've made it more cost-efficient than ever.

## More than a machine

A Tetra Pak Blockformer system 6 is much more than a machine. It's an entire, customized, prefabricated and validated blockforming solution, including all the engineering, piping, valves etc. Our solutions are backed by long-term technical support, as well as by written performance guarantees – which we honour.

Our blockformers are the product of continuous development and improvement, supported by solid scientific research and food technology. Moreover, our design approach is to enable upgrading of existing equipment with the improvements of each new generation, in order to assure you a sound, future-proof investment.

## Innovative, cost-cutting and customized

At the heart of every blockforming solution is a Tetra Pak Blockformer system 6, and our latest version comprises a number of significant innovations that assure high performance while cutting costs considerably.

Each blockforming solution is configured to your plant layout and capacity needs. Your solution may include conveyors, automatic bag-loading, a check-weigh system, vacuum sealer, metal detector etc – as required to give you the optimum results. Our experts will gladly review your needs together with you, including how to enable future expansion at minimal cost.

We can even offer different block sizes, solutions for other cheddar-type cheeses, round blocks etc. Your needs and wishes dictate the solution.





## How it works

The main components of Tetra Pak Blockformer system 6 are base units, towers, vacuum pumps and a control system. A blockforming solution typically comprises several towers, as well as the piping and other connections, all depending on your capacity requirements. Note that the towers themselves are available in three different sizes – Standard, Extended and Twinvac – so your line footprint can be modified accordingly.

## How it works

“ Everything you need for efficient production of first-choice cheddar, from individual machines to complete lines. ”

### Main process steps

- 1 The curd is fed into the tower by means of vacuum-induced airflow.
- 2 The curd is compacted in a series of vacuum and pressure relief cycles, gradually removing air and whey as the curd column moves down the tower by gravitational force.
- 3 The fused curd is cut into blocks and ejected, and new curd is added to the top of the tower. (This can be done in parallel in the Tetra Pak Blockformer system 6 TV model.)

### Inner tower

The Tetra Pak Blockformer system 6 uses a thicker, more robust stainless steel sheet that is fully welded to reduce wear and assure a sturdy construction with a long life-time. This simplifies maintenance and cuts downtime. The con-ical perforations enable faster, more thorough cleaning. A special surface treatment in the tower gives a uniquely smooth block with lower risk of breakage.

### Integrated interceptor

Thanks to a major technology breakthrough, we've been able to integrate the interceptor in the top of the tower, in a way that achieves the same functionality with fewer parts. There's no need to clean the valves, as there's no need for valves! And both investment and operational costs are significantly reduced!

### Base unit

The base unit is made from a single sheet of stainless steel that is folded to maximize the number of seamless radii. The other edges are welded, giving the unit excellent hygiene, stability and low maintenance. The base unit is placed on an open frame for greater cleanability.

A unique, simplified and smart guillotine system offers outstanding hygiene and reliability. It also reduces maintenance time, e.g. replacement time has been cut from a full day's work to just 20 minutes! It's much safer, as there's no need to remove the tower, use hoisting devices etc.





### Door system

The new and unique double-action drop-down door system, with separate lifting and closing actions, assures smooth, gentle transition of blocks to the conveyor, with less product loss. The high closing force creates a tight seal against the chamber, which is especially important during CIP.

### Elevator cylinder

The Tetra Pak Blockformer system 6 features an easy-to-operate simple, reliable, fully pneumatic lowering and portioning system, based on a unique elevator cylinder. The height adjustment has been made even more reliable and accurate, and as there is almost no wear and tear on the surfaces or contact points, there is no change in the stop point due to wear. The result is long-term precision, year after year.

### Vacuum pumps with frequency controllers

In conventional systems, the vacuum pumps run at full power at all times, even when not

needed. By adding frequency controllers, our pumps consume only the energy required at any given moment, which means considerable savings – and reduced environmental impact.

### Hygienic design

The Tetra Pak Blockformer system 6 is built on the principles of hygienic design and fast, thorough cleaning. This approach is seen in everything from the fully welded tower and the open space between the liner and jacket, to the conical perforations in the liner and the open construction of the base unit. More-over, the high-efficiency rotary CIP spray balls do the job while minimizing the consumption of water and detergent.

### Environmental indicators

A very important objective for our development work is to design solutions that combine maximum production efficiency with minimum environmental impact. This certainly applies to the latest

Tetra Pak Blockformer system 6. Compared to its predecessor, water consumption is reduced by up to 18%, and electricity usage and carbon footprint by 29%.

### Figures per 1000 kg of product

Electricity <sup>1</sup> , kWh	10.3
Heat energy <sup>2</sup> , kWh	0.1
Carbon footprint <sup>3</sup> , kg CO <sub>2</sub>	5.2
Fresh water, litres (incl. CIP)	180
Product loss, kg	0.1
COD effluent load from product loss <sup>4</sup> , kg O <sub>2</sub>	0.15

*Based on 1600 kg/h capacity.*  
1. Direct electricity use plus estimated electricity for air compressors servicing the equipment.  
2. Related to CIP.  
3. Indicative value based on world average CO<sub>2</sub> emissions from electricity generation and natural gas for steam production.  
4. Indicative COD (chemical oxygen demand) value based on food product loss composition.

