

Smart ingredient dosing

Tetra Pak® Ingredient Doser
4000 A 2.0



The value of adding value

The market for ice cream products continues to grow. At the same time, there is a clear trend towards greater consumer demand for more exciting products, with more complex, exciting ingredients. Such products are often somewhat more costly to produce, but the payoff – in the form of greater profit margins – can make adding value a really smart idea.

Accuracy gives freedom

The new Tetra Pak® Ingredient Doser 4000 A 2.0 helps you make the most out of your ingredients – no matter what ingredients you choose. Thanks to exceptionally accurate dosing and gentle handling, it not only saves you big-time money through accurate dosing of expensive ingredients, it also enables you to achieve uniform product quality even with fragile and sticky ingredients – which are often more expensive – making your savings even greater.

But there's another side of it: tremendous freedom. You get to be more innovative than ever in your product development, bringing to market trendy new products with ingredients you perhaps tried unsuccessfully before, or never dared to try.

Achieving the optimum

All waste is, of course, lost profit. But with premium products based on expensive ingredients, accurate dosing is more important than ever. And with its smart innovations and automation, Tetra Pak Ingredient Doser 4000 A 2.0 takes accuracy to a new level.

But it's more than the machine. We place more than 50 years of expertise at your disposal, first understanding and then matching your recipes with the most optimized production that is customized to meet your specific needs. You can run trials of new products at our Ice Cream Product Development Centre, where we can offer sound advice on how to achieve the best results.

Tetra Pak ingredient dosers have been well established as the standard-setters in fruit feeding and ingredient dosing for years, with an installed base of well over 600 units worldwide. And now, with the new Tetra Pak Ingredient Doser 4000 A 2.0, we've made the best even better...



Exceptional dosing accuracy

How does Tetra Pak Ingredient Doser 4000 A 2.0 achieve this exceptional accuracy? By taking a winning formula and reengineering it from the ground up. The result is unique benefits such as amazingly consistent product quality – thanks to even distribution of ingredients – and the lowest total cost of ownership.

What’s new?

We’ve used smart automation to take out the guesswork and achieve greater control and accuracy than ever. This means more uniform product quality, less giveaway, less waste and lower costs.

We’ve developed an entirely new hopper with a newly designed dosing auger and agitator. This assures that the ingredient is accurately measured and the pre-selected amount of ingredient is conveyed to the feed pump.

The hopper is mounted on weighing cells, part of a very smart new automatic weighing system that provides loss-in-weight control by automatically adjusting the speed of the dosing auger to compensate for weight loss in the hopper, thus assuring that precisely the right amount of ingredient is added at all times.

Unique flexibility

Our new design enables high accuracy for a huge variety of ingredients, with such gentle handling that now you can also use fragile ingredients, and get even distribution of sticky ingredients as well, to prevent lumping and assure consistent quality.

One reason for this flexibility is the availability of a variety of designs of the dosing auger, mixers and auger gearing to match the requirements of your ingredients. For example, a sticky ingredient like raisins in a rum-sugar layer would use a larger pitch between the wings, to offset the risk of compression and lump formation.

We also offer an optional insulated double-wall ingredient hopper to prevent melting during the process. This can be particularly useful when working with ingredients that need to be dosed at chilled temperatures or even in frozen conditions (e.g. fruit pieces or cookie dough).

The environmental bonus

The fact that Tetra Pak Ingredient Doser 4000 A 2.0 significantly improves dosing accuracy means that you get much less giveaway, and that you get uniform quality premium products that you can sell at premium prices. And that is good for the economy of your operation.

But there’s also an environmental bonus: wasting less resources – and getting fewer rejects or off-spec products that have to be destroyed – is also good for the environment!

The Tetra Pak ingredient doser range

Tetra Pak offers a complete range of first-rate fruit and ingredient feeders for ice cream production, with an installed base of over 600 units.

Model	Ingredient capacity Litres/hour	Base product Litres/hour	Weight system
Tetra Hoyer Addus FF 2000 C2	10-200	100-2000	NA
Tetra Hoyer Addus FF 2000 N2	10-200	100-2000	Yes
Tetra Hoyer Addus FF 4000 C2	15-1200	1000-10,000	NA
Tetra Pak Ingredient Doser 4000 A 2.0	15-1200	1000-10,000	Yes
Tetra Hoyer Addus AF 2000 C2	10-200	NA	NA
Tetra Hoyer Addus AF 2000 N2	10-200	NA	Yes
Tetra Hoyer Addus AF 4000 C2	15-1200	NA	NA
Tetra Hoyer Addus AF 4000 N2	15-1200	NA	Yes

You also have the option to add any of the above ingredient feeders to your Tetra Pak Ingredient Doser 4000 A 2.0 set-up, enabling you to feed two or more ingredients simultaneously. This includes a vibrating feed for nuts, almonds etc.

Ingredient examples

Typical ingredients

- Chocolate flakes
- Nuts
- Jam

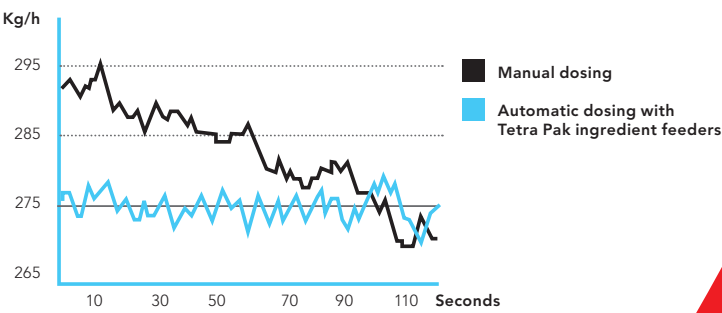
Fragile ingredients

- Cookies
- Chocolate drops with caramel
- Large fruit pieces

Sticky ingredients

- Cookie dough
- Brownies
- Winegum
- Marshmallows

Accurate dosing



The example above shows almond dosing with accurate weight-controlled dosing compared to fixed dosing speed, targeting 275 kg/h.





Gentle handling & even distribution

Many ingredients that have the potential to add great value to your ice cream product are fragile. Certain berries, for example, crush easily and no longer look like berries by the time your products reach the packaging line – unless you can assure truly gentle handling. And because sticky ingredients easily lump together, some products will end up having too much and others too little – unless you can achieve even distribution. Tetra Pak Ingredient Doser 4000 A 2.0 solves both problems brilliantly.

The consumer rules

Consumer expectations drive sales. And consumers expect that each individual product will contain the right ingredients. If they are broken – or missing – the consumer will simply turn elsewhere next time.

One way to solve the problem might be to increase the dose of an ingredient, to assure that all products will at least have a minimum. The problem is that other products will have an overdose – the kind of giveaway that can kill your profits.

The real solution

Tetra Pak Ingredient Doser 4000 A 2.0 consistently delivers a significant reduction in the amount of broken ingredients. Moreover, the ingredients are dosed in the exact, correct amounts, evenly distributed, resulting in consistent quality in each individual product.

The new dosing auger design, in combination with the new hopper outlet design*, minimizes the risk of breaking and lumping, even of fragile and sticky ingredients, so you can get premium prices for your premium ice cream products.

How it works

In the newly designed ingredient hopper, the ingredient is accurately measured and the pre-selected amount of ingredient is conveyed to the feed pump, consisting of a rotor with retractable lamellas. The hopper is mounted on weighing cells, part of a very smart automatic weighing system that provides loss-in-weight control by automatically correcting the speed of the dosing auger according to the changing weight in the hopper, to ensure that precisely the right amount of ingredient is added at all times. And remember, you're not just saving money by avoiding costly ingredient giveaway, you're also assuring uniform product quality – all the time.

Ingredients are fed by the dosing auger into the cavities between the lamellas, and gently and evenly incorporated in the ice cream flow – not in lumps, but in accurate doses. You won't find a better way anywhere to get the right quality in every product, hour after hour, year after year.

*Patent pending





Lowest total cost of ownership

The profits you stand to make out of an investment don't come from having the lowest possible investment cost, but from the lowest total cost of ownership. Are you able to fully utilize expensive ingredients, or do they end up as giveaway or rejects? Do consumer complaints cause lost market share? Do profits evaporate in high maintenance cost and excessive downtime? When you do the math, Tetra Pak Ingredient Doser 4000 A 2.0 is certain to come out the winner.

Uniform quality pays

How much can Tetra Pak Ingredient Doser 4000 A 2.0 really save you in terms of reduced product loss? In one actual scenario with a relatively cheap (€2/kg) strawberry jam ingredient in production for 1750 h, we were able to save the customer €26,000 per year. For a costlier (€8/kg) almond ingredient, the savings amounted to €104,000. What's your ingredient? Let us show you how much you can save!

These ingredient savings are just one reason why the payback time is so short. And after the payback, it's pure profit. Moreover, these savings don't even take into account that there will be no consumer complaints about missing ingredients.

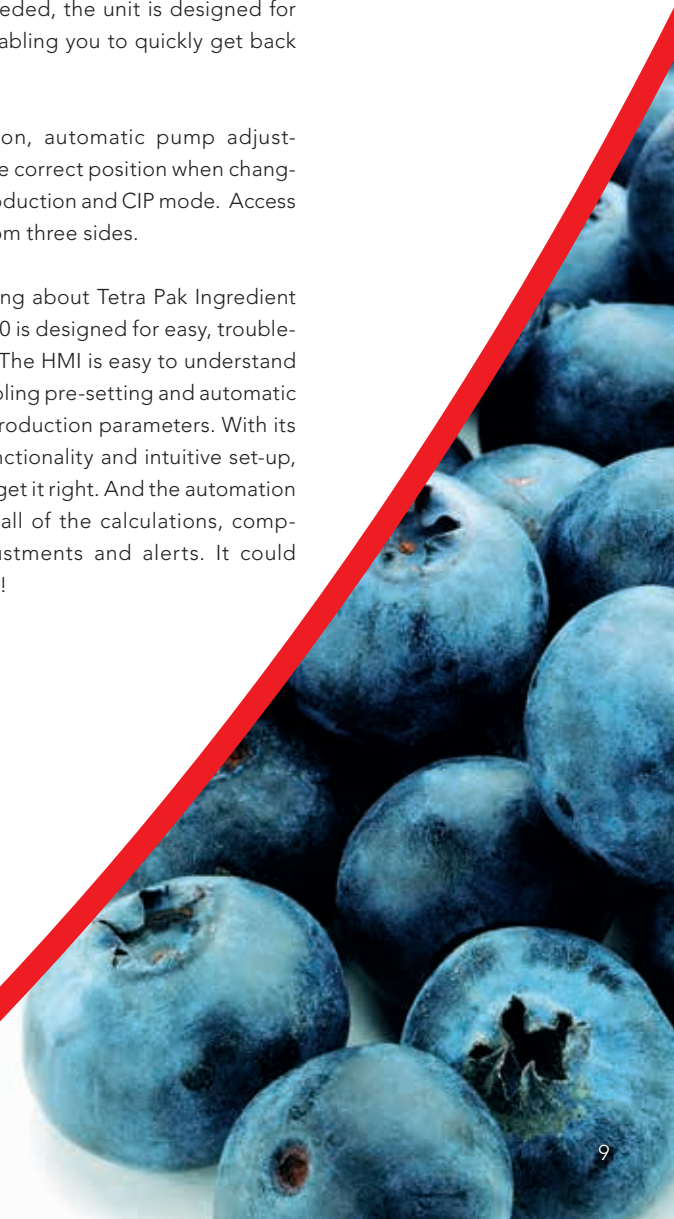
Smooth operation

The unit has a smaller footprint, saving you nearly 20% on valuable floor space compared to any other unit of similar capacity. Further savings come from low maintenance, thanks in part to durable parts with less wear, e.g. lamella lifetime that is typically 3000 hours of operation.

Service intervals are thus longer, but with automatic reminders to reduce the risk of human error and assure the longest possible uptime. CIP is also automatic, and when service and/or cleaning are needed, the unit is designed for easy access, enabling you to quickly get back on track.

During operation, automatic pump adjustments assure the correct position when changing between production and CIP mode. Access for refilling is from three sides.

In fact, everything about Tetra Pak Ingredient Doser 4000 A 2.0 is designed for easy, trouble-free operation. The HMI is easy to understand and to use, enabling pre-setting and automatic control of key production parameters. With its touchscreen functionality and intuitive set-up, it's very easy to get it right. And the automation handles nearly all of the calculations, compensations, adjustments and alerts. It could hardly be easier!



Complete, customized solutions

Tetra Pak Ingredient Doser 4000 A 2.0 is available as a stand-alone unit. But it is also prepared for full line integration, either as a replacement for an existing line or as part of a complete ice cream line solution.

Tetra Pak combines over half a century of knowledge and experience in ice cream production with our dedication to understanding your specific needs. This combination goes into the design of every ice cream production solution we deliver. Perhaps this is why we've supplied more than half the world's installed ice cream equipment.

Our scope is comprehensive, covering everything from mix preparation, freezing, shaping, cooling, hardening, coating and wrapping, whether for filled, moulded or extruded ice cream products. We have even developed a low-temperature ice cream concept that allows production of low-fat products with creamy taste.

What's in a line?

It is unlikely that any two ice cream production solutions from Tetra Pak will ever be identical. But they will have quite a few things in common, e.g. uncompromising food safety, automation to optimize production, a high degree of flexibility, and upgradability to assure a future-proof investment that can grow and change along with your business.

Other things in common are good environmental performance that also saves you money by cutting waste. And the fact that our solutions are backed by written, validated performance guarantees on parameters that are of importance to you.

Delivery of your solution is only the beginning. We support what we supply with timely reliable service in order to assure you superb lifecycle performance.

We make it our motto

Tetra Pak builds machines and lines that assure gentle handling, even distribution of ingredients and consistent quality, thus helping to build and protect your brand. We design for maximum safety, helping to protect your plant, the people working in it and the environment. And we also help to protect your profits by giving you outstanding lifecycle economy – a direct line to the lowest cost per ice cream product on the market. All this is the motto of what Tetra Pak does: "PROTECTS WHAT'S GOOD".

Top profit is the bottom line

Tetra Pak ingredient feeders are about more than just ingredient dosing – they're about smart ingredient dosing. They not only assure dosing accuracy, they're customized to match your every ingredient need, while cutting waste and helping you achieve big-time savings. And they're backed by specific performance guarantees. That makes them a smart investment! With superior dosing accuracy, gentle handling and even distribution of ingredients and the lowest total cost of ownership, they add up to a smart, future-proof investment. Because top profit is the bottom line.



