THE POWER OF PLANT-BASED DRINKS
Plant-based milk isn’t just nutritious and tasty. It’s also a major source of market growth as increasing numbers of consumers opt for alternatives to traditionally produced dairy milk. You can take advantage of the opportunities by either extending your existing process or by acquiring an entirely new one.

The diverse raw materials used to produce plant-based milk are not the only factor impacting process design. It is also the different form they come in, such as whole grains, flour or ready made liquid base. What all production processes have in common is what comes after the so-called ‘slurry’ is produced. After the enzymatic treatment, large fibres are separated before the correct formulation is made. Follow-on steps include UHT treatment, as well as buffering and filling.

Producing slurry from pre-ground raw materials can be good to start with at small scale. However the real potential lies in grinding yourself. For example, raw materials with high fat content such as almonds or different varieties of nuts can be ground with or without using water. Designing the grinding step without the need for water means that an energy intensive drying step can be avoided, saving time and resources.

By grinding yourself you profit from higher yields after separation, greater control of your process and, consequently, more consistent product quality.

**A BETTER PROCESS FOR BETTER MILK.**

**MANUFACTURING PROCESS OF PLANT-BASED MILK**

- Whole nut
- Whole grain
- Grinding without water
- Grinding with (hot) water
- Enzyme treatment
- Separation
- Formulation high shear
- Additives
- UHT
- Aseptic buffering
- Aseptic filling

**YIELD FLEXIBILITY CONTROL ENERGY WASTE**
TAKE CONTROL OF YOUR GRIND.

Deciding which form of raw materials will be used for plant-based milk production is crucial. Pre-processed materials, such as flour, are substantially more expensive than grinding your own whole grains, require additional treatment and their handling and dispersing makes the whole process more complex.

THE GRINDING PROCESS
Concept examples of grinding process with water:

**CONCEPT 1: DOSING VIA HOPPER PUMP** For high throughput applications, a perfect fit for industrial soy and oat lines

Continuous dosing via hopper pump → Pre-grinding → Fine-grinding → Further processing

- Water
- Grains, nuts, legumes

**CONCEPT 2: DIRECT DOSING INTO MILL HOPPER** For the highest levels of flexibility with moderate throughput

Continuous dosing into mill hopper → Pre-grinding → Fine-grinding → Further processing

- Water
- Grains, nuts, legumes

If you’re upgrading an already existing processing line or designing a new one, it makes sense to consider grinding in-house, as this gives you more control over the quality you produce, as well as a wider range of options and long-term savings on raw material costs.

Regardless of whether you want to grind nuts, seeds or legumes, FrymaKoruma has the right expertise, technology and concepts to give your process the greatest advantage.

**BENEFITS OF THE NEW GRINDING SOLUTION**
The combination of the new MD Disc Mill and proven MZ Toothed Colloid Mill is ideal for the wet grinding of various raw materials in different forms. From high throughput to enhanced flexibility, our concepts are tailored to your exact needs.

Get in touch with us directly to find out how we can help improve your process and give you the freedom to create a variety of plant-based products.
PROXES PLANT-BASED DRINKS

HELPING YOU MAKE MORE THAN JUST MILK.

Ready-made plant-based milk or grind slurry is frequently used as a basis for various other plant-based dairy products.

In addition to our grinding expertise, ProXES also offers a wide range of solutions for the production of plant-based cheese, yogurt or ice-cream.

For example, our multifunctional vacuum process systems combine steps such as mixing, dispersing, emulsifying, heating, cooling and deaerating in one machine. This helps you make the most of your raw materials to create a range of plant-based products.

One of the byproducts of plant-based milk production is so-called ‘okara’. Okara is often discarded or given to the feed industry, yet it still contains a great deal of value, such as high-quality protein and dietary fibre. With ProXES, you can process okara further and use it as a basis for high value raw ingredients.

FUTURE-PROOF YOUR FOOD PRODUCTION

Consumers have clearly shifted their preferences and are looking for a wider variety of alternatives to conventionally produced foods. Plant-based options are clearly here to stay and will continue to expand in future. Capitalise on emerging trends and ensure that your production can maximise gains by investing in quality machinery. At ProXES, we’re not just a provider; we’re your partner and will work together with you to develop the best solutions for your business.

Just give us a call and let’s talk!

PLANT-BASED: YOGURT ICE CREAM CHEESE
EXCELLENCE IS A TEAM EFFORT

With three leading brands FrymaKoruma, Stephan and Terlet under one roof, ProXES combines long-standing expertise with a challenger mindset. As an agile partner, we support our customers from first product concept to the implementation of a successful production process.

At ProXES, we believe in the power of co-creation: We’re here to listen, learn and advise. In close collaboration with our customers, we merge their ideas and our technologies into innovative processes and tailor-made solutions that help them align the quality, energy efficiency and profit of their production.

With standalone machines, modern process lines, advanced automation and service concepts, ProXES drives the business of customers in the food, pharmaceutical, cosmetics and chemical industries.

What about you? Let’s create value together – sustainably!

FROM INSPIRATION TO FEASIBILITY

Our process technology and training centre is a space to try out new ideas. Here you can develop or improve formulas in a professionally equipped laboratory, test any kind of machine, perform scale-ups and produce test batches. You will receive expert advice and support on all the capabilities of the technical equipment and modifications.

GET IN TOUCH WITH OUR EXPERTS

For a full list of our global subsidiaries and their contact details, please visit: www.proxes.com

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