

# Join the plant-based fermented revolution

SPX FLOW offers process equipment for each step in the manufacture of both plant-based and dairy products.

Demand for plant-based products – which offer a healthy, more sustainable and more eco-friendly alternative to dairy – has risen over the last few years, resulting in a commensurate growth in sales.

But it's important to understand that this doesn't mark an end to dairy products; it just means more opportunities for producers/manufacturers and more options from which consumers can choose.

## Health and simplicity

The most common plant sources for dairy alternatives are soya, almonds, oats, rice and coconut, but other plant-based milks are also gaining popularity, such as cashew, peas, hemp and flaxseeds.

Current food trends focus mostly around health and simplicity. People are becoming more aware of ingredients and the origin of what they eat and drink, and are looking for simple, clear labelling and nutritious food.

As a result of this, more plant-based products are being incorporated into consumer diets as they look for animal-free alternatives to their usual sustenance. Plant-based milks (and fermented products) fit this requirement perfectly and will offer a significant global market opportunity in the coming years, across all the regions, including Asia Pacific, Americas and Europe.

The factors affecting these trends include:

1. Demand for 'free-from' foods and vegetarian diets

2. Increasing incomes and increasing expenditure on food/beverages
3. Awareness among consumer about nutrition and well-being
4. Outlook towards sustainability, being socially acceptable, feel good factor and being 'cool' about new trend
5. Religion/cultural preference combined with animal welfare considerations

## Huge processing flexibility

The process for making plant based fermented products depends on the raw material selected. Soya beans for example need blanching and then grinding. While the processes for rice and oat that involve enzymatic reactions prior to grinding. For grinding, SPX FLOW offers a wide range of mixtures to select from, depending on the duty and function required. The slurry created by the grinding process is then subjected to fibre separation and heat treatment.

Heat treatment is a critical step for various reasons. Apart from very important bacteriological critical control points, this step also contributes to stopping enzymatic activities. SPX FLOW has in its portfolio a comprehensive portfolio of thermal processing solutions, backed by 1,000+ references and more than 50 years of experience. The technologies include direct heating, such as infusion or injection, or indirect heating including tubular, plate or scraped surface heat exchangers, any of which can be deployed to get the desired process advantages.

## Expert help with testing

The heat-treated plant-based juice obtained by the various processes above can be used for a variety of fermented products. As this field is still emerging and offers potential to



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## SPX FLOW is a brand

with extensive expertise in plant-based products and 30 years of experience in the market. It offers state-of-the-art production equipment and process line solutions for manufacturing different types of plant-based ferment-ed products and milk. Contact us if you are ready to ride the plant-based revolution.

many producers, SPX FLOW offers a testing facilities at its two innovation centres in Silkeborg, Denmark and at ENIL University, Mamirolle France.

In addition to its significant research and development and test-lab-based operations in the test centres, SPX FLOW already has significant real-world experience in the processing of plant-based products. Indeed, it is currently installing plant based lines with a number of leading food manufacturer known for its dairy products, but expanding operations into plant-based alternatives.

Traceability and up-to-mark CIP protocol is another primary requirement and forms another area of expertise within SPX FLOW. The two areas where cross contamination can occur are mixing and CIP stations. As a result,

separation of those areas is critical! Dairy & non-dairy in the same plant.

Some process equipment, including heat treatment, can be used by both dairy and plant-based lines. This gives manufacturers the opportunity to run both dairy and non-dairy products in the same plant. The major equipment elements remain the same, with just the temperature parameters and bacteria culture differing.

As each different plant-based raw material possesses different compositions – in terms of carbohydrates, proteins, lipid profile etc. – the culture or enzyme chosen requires specific know-how and the testing of recipes, collecting samples and checking market adaptability might be needed. This can be done by performing a test at one of the SPX

FLOW test centers or on a pilot/small-scale plant. Both alternatives have their own advantages. Performing tests at an SPX FLOW test center gives the manufacturer access to know-how and industry best-practices from SPX FLOW, while doing it in their own premises keeps intellectual property in-house.

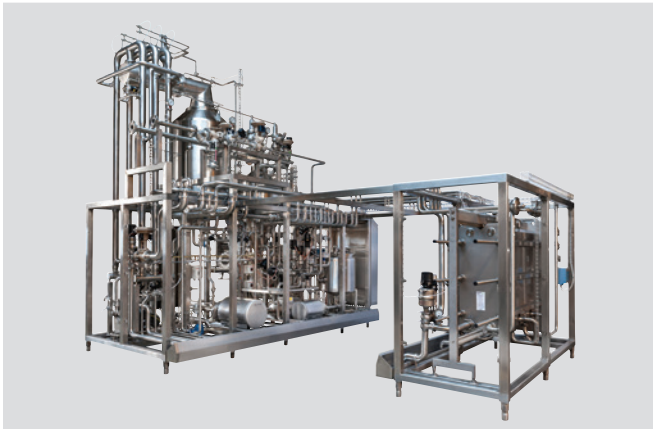
SPX FLOW can offer a small scale, plug and play skid-based plant with capacities of around 150-200 kg/hr at a very affordable market price. These small-scale plants, along with larger commercial plants, are optimized in terms of their sustainable energy footprint and layout, and offer the flexibility, MES compatibility and traceability required by many customers. Each design prioritizes taste, mouthfeel, nutrition, digestibility, visual appearance, yield and economy. ●

# SPXFLOW



Scan for More on our Innovation Centres

## JOIN THE PLANT BASED REVOLUTION ?



Curious to find out if your plant can be used to produce tasty, appealing plant-based products.... but not sure where to start? Ask the experts!

SPX FLOW has a comprehensive portfolio of solutions – backed by 30 years' of experience – that have repeatedly helped our customers to produce market leading plant-based products.

Work with our specialists to refine processes and test new recipes at our Innovation Centres; then use our state-of-the-art technologies to efficiently produce high quality, maximum-flavour products.

- CONCEPTULISE new recipes, process design
- OPTIMISE taste, efficiency, sustainability, safety
- MINIMISE energy consumption, waste, time to market

Find and grow new customers... and keep them coming back for more!

Contact SPX FLOW today:

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