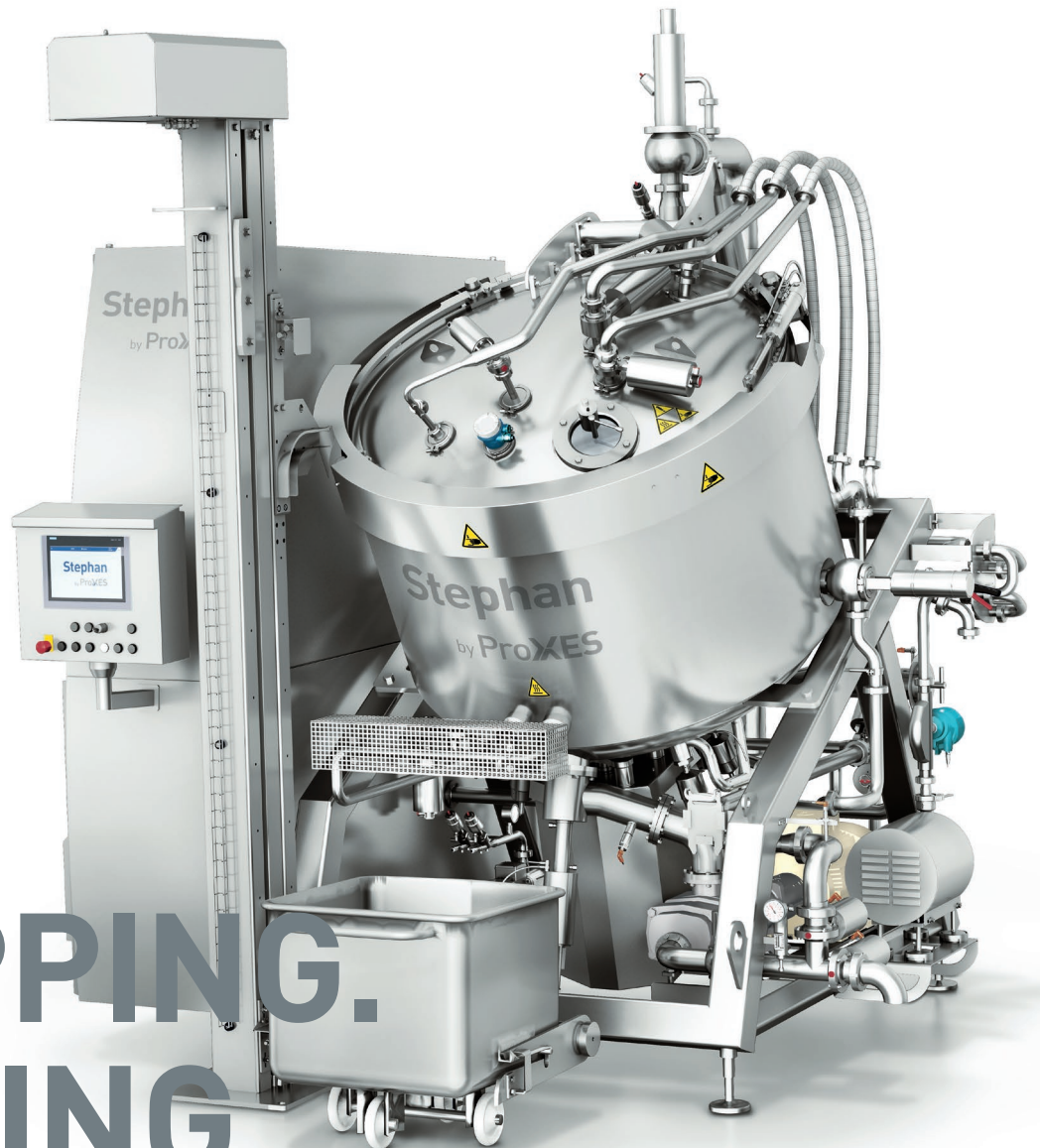


PLUS
VEGAN
TREND



CHOPPING.
HEATING.
EMULSIFYING.
DEAERATING.
COMBITHERM

Stephan



**SUSPENDING
STIRRING
MIXING
COOKING
COOLING
HOMOGENISING**

THE CRÈME DE LA CRÈME OF BATCH PROCESSING.

Whether you're producing creamy processed cheeses, savoury spreads, spicy dressings or vegetable and fruit purees – the Stephan Combitherm is your versatile solution for efficient processing.

BUILT FOR MAXIMUM EFFICIENCY

In developing the Combitherm, our aim was to maximise efficiency for every process step. This starts with design and geometry. For example, the compact vacuum-processing machine features a fixed, inclined, cylindrical vessel with a dished base – and an optional double jacket.

READY IN A FLASH

The vessel is equipped with an automatically-operated, full-diameter lid. Thanks to the free-standing lifting/tilting device, chunky raw ingredients can be added quickly and cleanly. Liquid or powdery ingredients with the help of the vacuum system and corresponding feed hoppers directly into the working area of the dispersing and cutting tool at the bottom of the container. Alternatively, large-volume liquid components can be added to the vessel from the top.

INTUITIVE OPERATION

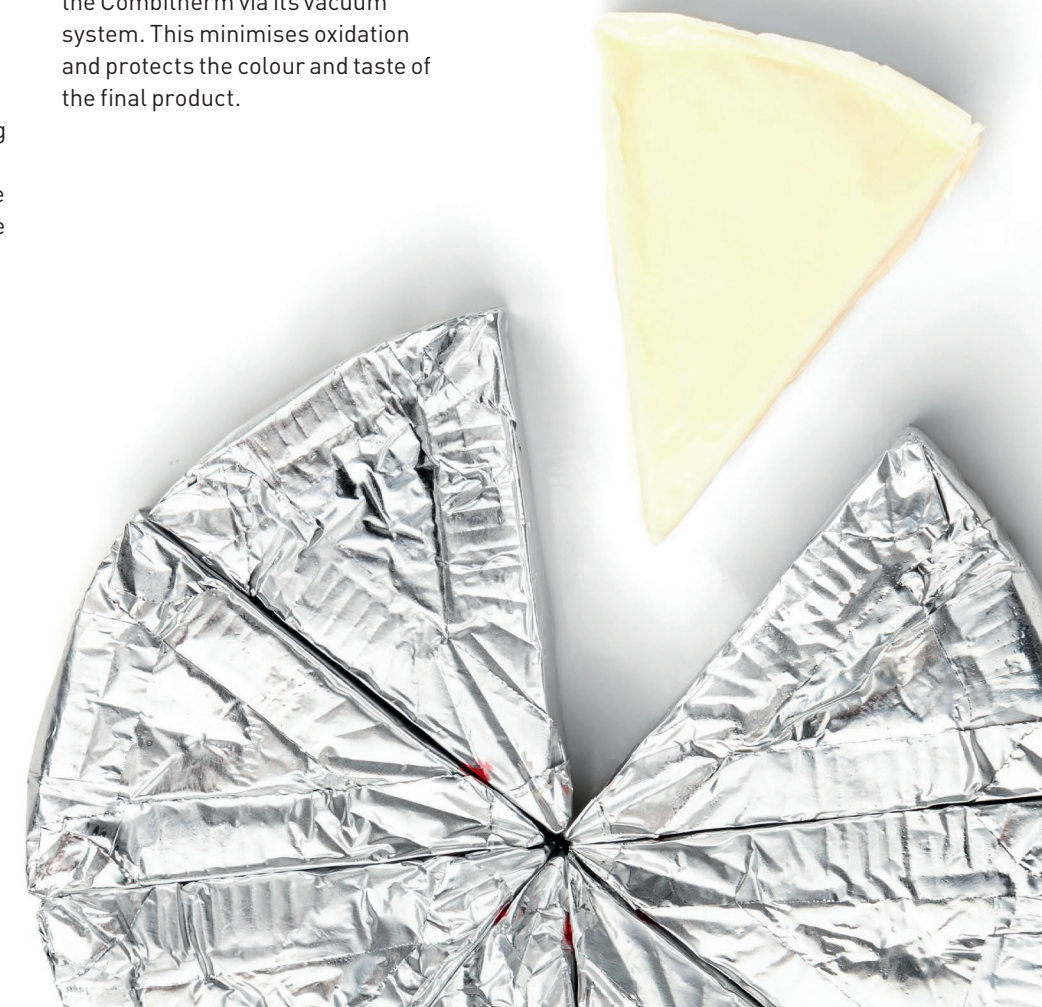
Built into the vessel base, the agitator with contour-following scrapers can be conveniently controlled via the ProUI user interface. Thanks to integrated SPRO automatic recipe management, even complex recipes need just a few clicks.

60% INCLINE, 100% QUALITY

The Combitherm works at an incline, thus ensuring effective, homogeneous mixing of all recipe ingredients – ingenuity that's typical for Stephan. And the proven direct-steam injection heats quickly yet gently.

HOT, COLD, UNDER VACUUM

The scrapers in the agitator not only prevent build-up, they also support optimum heat transfer from the double jacket, depending on the operating mode selected. During processing, the product can be deaerated within the Combitherm via its vacuum system. This minimises oxidation and protects the colour and taste of the final product.



COMBITHERM – READY FOR MORE.

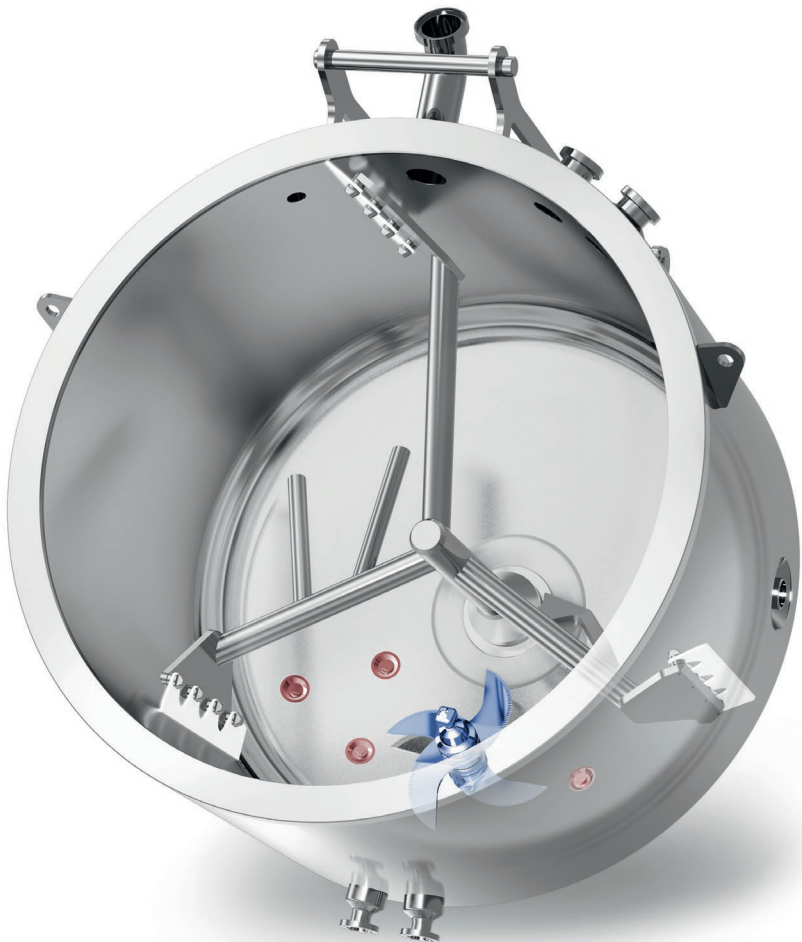
EXPANDS TO MEET NEW
CHALLENGES

For ultra-fine chopping and homogenisation, a Stephan Microcut® can be retrofitted. This external rotor/stator homogeniser processes solid ingredients quickly and evenly. A displacement pump fitted at the vessel's lowest point feeds the product evenly to the individually-configurable tool set of the Stephan Microcut® – and via a circulation line back into the vessel. In addition to providing circulation, the product pump also serves as a discharge pump.

A SPRINTER WHO LOVES
MARATHONS

To ensure outstanding product quality as well as high machine availability, the Combitherm is designed for automated cleaning (cleaning-in-place, or CIP). Downtimes are thus reduced to a minimum and productivity is increased – without the need for more space.

In short, the Combitherm is your ideal compact solution for manufacturing a variety of highly-processed foods. Its precise production and cleaning processes ensure top-class, reliable quality and efficiency when preparing large batches.



PROCESSED CHEESE SAVOURY SPREADS HUMMUS DRESSINGS MAYONNAISE FRUIT / VEGETABLE PUREES



BENEFITS FOR YOUR PRODUCTION



Compact, all-in-one processing system



Stable emulsions



Optimum dispersion of solids



Intuitive ProUI user interface



Flexible SPRO recipe management



Effective, homogenous mixing



Efficient and gentle direct-steam heating



Minimised air inclusions
Avoids oxidation



Automated cleaning (CIP)



Adaptable and expandable

TYPE		CT 801	CT 1201
Batch size max.	l	800	1200
Capacity (depending on product) up to	l/h	2,400	3,600
Working temperature max.	°C	95	95
OPTION I A: Working temperature, max.	°C	105	105
OPTION I B: Working temperature, max.	°C	110	110
Required electrical power*	kW	70	100
OPTION II A: Microcut®, single head		MCH 150	MCH 150
OPTION II B: Microcut®, double head		MCH-D 150	MCH-D 150

* reference configuration RC1 at 400 V AC / 50 Hz

NEW FOOD TRENDS, NEW OPPORTUNITIES.

Food trends like living vegan, clean eating or gluten-free diets are on the rise, creating both new opportunities and challenges for the food industry. ProXES helps you capitalize on changing nutrition patterns and stay ahead of the competition.

Whether for health reasons, as part of a lifestyle or out of concern for animal welfare, more and more consumers are substituting meat and dairy for plant-based proteins.

Vegans, vegetarians and flexitarians are driving market growth: The global vegan food market size is projected to expand at a rate of almost 10% until 2025. 'Clean eating' is another booming trend. It focuses on food products

with simple, natural ingredients, that are free from additives, preservatives or GMOs.

ADJUSTING PROCESSES AND RECIPES

While new food trends can initiate innovation and create opportunity for growth, they also confront food manufacturers with challenges. How can recipes be modified to be 'cleaner and greener' without compromising on

product quality, taste and shelf-life? Which implications does the removal of stabilizers with E-numbers have on viscosity? Can your existing machinery handle plant-based substitutes like soy, rice, or nuts?

At ProXES, we're your partner in making your business future-proof. **Let's talk about how our solutions and machines can help your company benefit from the latest food trends!**





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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 advanced materials 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:
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