



# THE PROFICUT

VACUUM COOKING EMULSIFYING PLANT

**The ProfiCut vacuum cooking emulsifying mixer is a universal plant for the manufacture of a wide range of products such as processed cheese, cottage cheese spread, desserts, creams, mousses, soups and sauces, baby food, gravy, stuffing, sweets, pastries, pies, mincemeat, nut pastes, marzipan, and many others. All operations from raw material input to the finished product are performed sequentially in a single plant.**

Loading raw materials (butter, cheese, meat...) is possible without the preliminary grinding blocks.

Grinding, mixing, and heating are implemented under a vacuum to prevent oxidation, reduce the temperature of processing the product, and thereby retaining its taste and flavor and giving it an attractive appearance.

The design of the ProfiCut plant consists of a working vessel mounted on the frame with pivoting supports. The operating bowl is equipped with a jacket for heating and cooling. Heating the product is also possible by the direct feed of steam going directly into the product. The integrated knife grinding head with direct drive from the motor (or the gearbox on request) is situated in the bottom of the operating vessel. There is a low speed drive reversing agitator on the cover of the bowl that provides delicate mixing of the product and a uniform heat exchange between the walls of the working container and a product, using a special form of scrapers. Also, lid accessories include a dosing funnel (to dispense the dry ingredients in the product) and a vacuum unit to maintain the required degree of vacuum inside the cup.

The rotatable mount allows you to set the bowl in a working position for the most convenient loading with standard containers. Unloading products are performed through the exhaust valve or by turning the bowl up to 90°.



## Mixing, Mechanical Grinding, and Cavitation

The product inside the working vessel undergoes a multidirectional impact of working elements.

The low-speed radial agitator moves in reverse towards the bottom cutting head, delicately mixing the product, and provides maximum heat transfer from the walls of the vessel. The special shape of the vessel's sides, the shape of the knives on the cutting head, and the angle of inclination provide in aggregate intensive vertical mixing and circulation of the product. The knife blades, passing through the mass of a product at a high speed, leave behind the cavitation cavities, thus the product is further disintegrated using the cavitation effect.



## Benefits

- ▶ Versatility – All operations are carried out successively in a single plant, without the need for pumping the product for further processing. The Proficut universal cooking plant replaces a grinder, mixer, emulsator, melter, pasteurizer, etc.
- ▶ Compactness
- ▶ Hygiene
- ▶ The lowest possible energy cost of producing a batch
- ▶ Consistently high quality finished products from batch to batch
- ▶ Ease of product download, including whole blocks
- ▶ Product can be completely unloaded by tilting the bowl or through the exhaust valve
- ▶ Hygienically designed, easy to clean and maintain

Model	ProfiCut-50	ProfiCut-150	ProfiCut-300	ProfiCut-420	ProfiCut-700
Total volume	48	150	300	420	700
Working volume	40	130	250	350	600
Rotating speed of knife cutting head	0-3000 (adjustable)				
Rotating speed of agitator	0-35 (adjustable)				
Drive power of knife cutting head, kW	7.5	22	30	37	45
Drive power of agitator, kW	0.75	1.8	2.2	2.2	3
Temperature of heating of the product, °C	110				
Pressure inside the working vessel, MPa	-0,04...+0,1				
Size of solid particles after homogenizing, not more, µm	4				
Temperature of steam supplied into the jacket, °C	140				
Pressure of steam supplied into the jacket MPa	0.3				
Consumption of steam supplied into the jacket, kg/h*	20	60	80	100	120



# THE EMA EUROPE COMPANY HAS MORE THAN THIRTY YEARS OF EXPERIENCE IN THE DEVELOPMENT, DESIGN, AND MANUFACTURE OF INDUSTRIAL EQUIPMENT FOR THERMAL FOOD PROCESSING

The range of commercially available equipment includes continuous conveyor fryers and ovens, drum fryers, batch blanchers, and continuous drum and conveyor blanchers, defrosters, continuous and batch cookers both atmospheric and vacuum, scraped surface heat exchangers, and a wide range of auxiliary equipment such as washers, conveyors, pumps, homogenizers, and others.

Our company offers a complete cycle service from design of technology projects to the manufacturing of equipment of any complexity in our own production site, located in the heart of Europe, as well as the introduction of the equipment in operation, upholding the warranty and after-warranty service with our own service center.

Having much experience in the practical implementation of projects in the industrial processing of meat, fruit and vegetable products, semi-finished and other products, our company is ready to offer technological consultation, development of the production process of the project, equipment manufacturing, erection supervision, commissioning works, and further maintenance services to its customers.



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