

■ MIXING SOLUTIONS FOR BREAD, PASTRY, CAKE & SNACK FOOD INDUSTRIES

CONTINUOUS KNEADER VERYMIX





Continuous kneader

**Superior Performance
with respect to
traditional kneading**

The Verymix continuous kneader is the result of 30 years of experience by the leader in kneading. It is characterized by its extremely high performance in quality and productivity.

Respecting traditional standards in kneading, the Verymix continuous kneader is the industrial answer to your automated, high output production lines.

The Verymix allows the control of the duplication of your production, the guarantee of very consistent kneading for your raw-frozen, par-baked and frozen or pre-proofed and frozen dough used to make baguettes, ciabatta, pizzas, Danish pastry and puff pastry.

Productivity

- 24/7 production
- Automated washing system
- Installation of CIP procedures are possible after the completion of specific research.



Characteristics

- Range of capacity: from 500 to 8000 kg/h
- Double jacket stainless steel bowl for dough cooling
- Cooling unit using glycol water - Monopropylene glycol
- Ingredient dosing by gravimetric / volumetric
- Kneading control using energy (in Wh/kg)
- Complete stainless steel construction
- Geometric design of mixing bowl rotors adapted to your dough

Consistency of the dough

The complete process (dosing, initial mixing and continuous kneading) allows a continual workflow. The Verymix kneader ensures a homogeneous production and a consistent quality of dough.

Problems like extended process batch time, kneading variations, uncontrolled bowl resting time, are things of the past. The continuous kneader offers a very accurate answer to all your requirements in consistency and quality.

Extensive cooling capacity

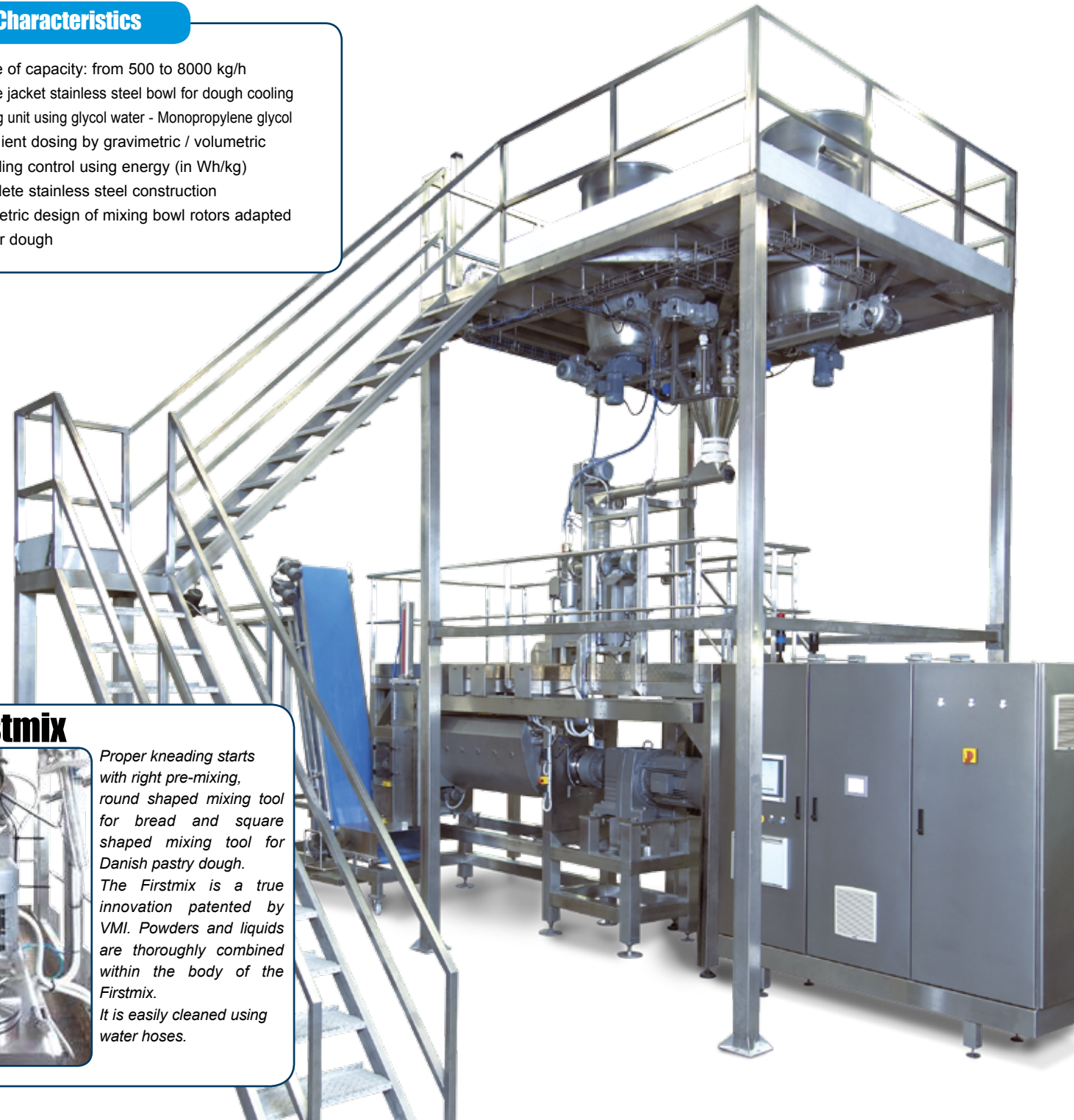
Equipped with a double jacket cooled mixing bowl, the Verymix continuous kneader allows dough temperature adjustment by using glycol water which temperature and flow vary according to the required dough temperature. Because of their specific geometric design, the kneading bowls optimize the thermal exchange with your dough.

- Par-baked and frozen bread: 22°C (72°F)
- Raw frozen bread: 18 to 20°C (64 to 68°F)
- Frozen pastry: 16 to 18°C (61 to 64°F)
- Puff pastry as well as Danish Pastry: 13 to 14°C (55 to 57°F)

The Firstmix



Proper kneading starts with right pre-mixing, round shaped mixing tool for bread and square shaped mixing tool for Danish pastry dough. The Firstmix is a true innovation patented by VMI. Powders and liquids are thoroughly combined within the body of the Firstmix. It is easily cleaned using water hoses.



Tradition and innovation

All traditional production methods can be performed continuously. The Verymix continuous kneader offers a wide range of mixing parameters which can be used according to the production criteria and quality required:

- Kneading rotor adapted to the dough
- Optimized bowl shape for continuous kneading operations
- Adjustable time and intensity of kneading
- Extensive flexibility and dosing accuracy - solid or liquid fat, scrap, specialty flours, egg, dried fruit and particulates can be dosed at any time during the mixing process
- Continuous kneaders are equipped with VMI's latest innovation: the Firstmix, a pre-mixing unit for which the consistency of premixing has been optimized. The cleaning time of the Firstmix has been reduced to 10 minutes.



Powder dosing



Flour dosing unit



Liquids dosing



Micro-ingredients dosing

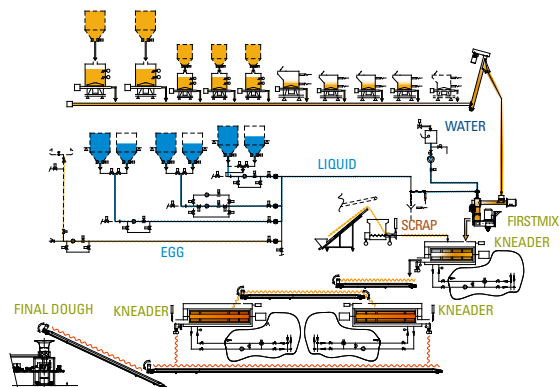


Scrap dosing

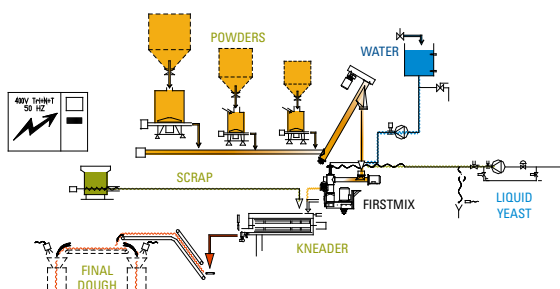


Kneading bowl with bowl/rotor tilting function forenhanced cleaning up to 180°

Principles of operation



Consistency of dough starts with the dosing by weight of all powders and liquids that are part of the recipe being produced. Measure, and ensure continuous reading of the transfer of powders and liquids to the pre-mixer, the FirstMix, and then to one or several kneading bowls.

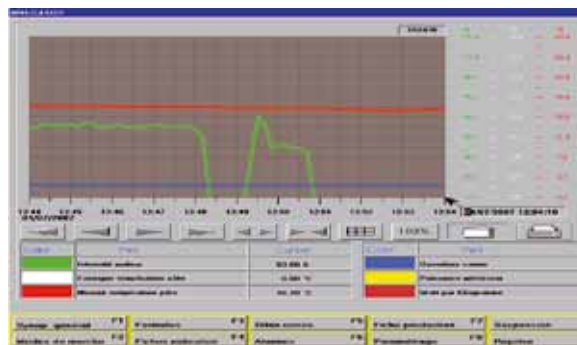


The double jacket bowls are continuously cooled by glycol water for which the temperature and flow vary according to the temperature to be reached for the dough being produced. Pre-mixing and kneading operations required to produce a homogeneous and smooth dough are also continuously measured and verified. A continuous flow of dough is therefore ensured, from dosing of the flour to the output of the kneading bowl.

Traceability



DOSING CONTROL - at any time you can verify the losing weight of each dosing unit. You can therefore ensure the respect of the flows and calibrations of your powders dosing units load cells.

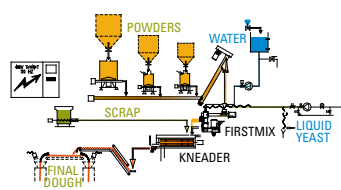


READING OF KNEADING PARAMETERS - a visual control by your operators allows you to control the consistency and uniformity of your kneading operations. Motor intensity, dough temperature, glycol valve opening and kneading energy graphs provide stability to your production procedures and are the proper tools to ensure consistency of kneading.



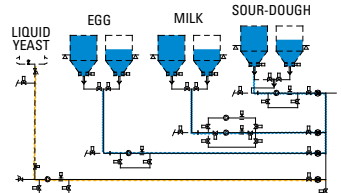
EXTENSIVE CONTROL - Each dosing unit is equipped to operate using either volume or weight modes; When set to weight dosing, you can control the stability and consistency of each dosing unit during dosing and feeding operations. Weight losses as well as the weight of the ingredients are permanently controlled.

Dosing

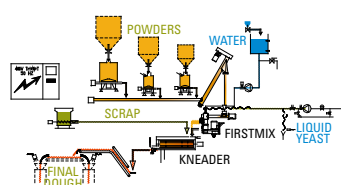


DOSING OF POWDERS
Flour, salt, sugar, powdered milk, gluten, improvers and others are weighed by stainless steel load cells (3).

These load cells can be fed automatically by intermediate hoppers, manual loading hoppers, or big-bags.



DOSING OF LIQUIDS
Water, egg, milk, liquid yeast, flavors, liquid sugar and brine are dosed in a very accurate manner. Dosing pumps and electromagnetic or massic flow-meters ensure the weighing process of the liquids.



DOSING OF SCRAP DOUGH
Dosing of the quantity of scrap to integrate is always significant. For bread they can reach 25% of the weight of the flour and for some puff pastry up to 50% or more!



VMI: an international dimension

Based in the heart of Europe, on the coast of the Atlantic in France, VMI is established in Montaigu, near Nantes. The factory employs 220 people within its workshop that spans 20 000 m². VMI is a division of the Bretèche Industry group having to this day a sales figure of 150M€. VMI exports its know-how throughout the world. Its products are found in Europe, the

United States, South America and numerous countries of the Asia- Pacific region. Thanks to its commercial network and special techniques, that take into account the specifications and processes of its clients, VMI supports them during their growth, favoring in this manner a true partnership alliance.

In-line mixing system



Verymix III, horizontal kneading under vacuum



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