

**In a completely automated bakery, production begins when raw ingredients such as flour, yeast, sugar, salt, eggs, milk, water, and oil are loaded into storage silos and refrigerated tanks. Computer controlled valves release exact quantities into a large stainless steel mixing bowl according to a programmed recipe. Sensors measure weight, temperature, and moisture to ensure consistency every time.**



**Once the ingredients enter the mixer, robotic paddles blend them at different speeds. The dough is mixed until it reaches the correct elasticity and texture. A conveyor then transfers the dough into a fermentation chamber, where controlled heat and humidity allow the yeast to rise. Cameras and sensors continuously monitor the dough and adjust**



**conditions automatically.**

**After fermentation, the dough moves to a dividing machine. This machine cuts the**



dough into equal portions for each loaf. The portions travel along conveyors to moulding units, where rollers shape them into smooth cylinders. Robotic arms place the shaped dough into baking tins.

The tins proceed into a proofing tunnel, where the dough rises again before baking. They then enter a long industrial oven. The oven is divided into temperature zones, allowing the bread to bake evenly from beginning to end. When the loaves leave the oven, they pass through cooling conveyors until they reach the correct temperature.



**Next, automated blades remove the loaves from their tins and transfer them to slicing machines. Each loaf is sliced into even pieces and packed in plastic bags by robotic packaging units. Finally, the finished sliced pans are stacked by robotic palletisers onto pallets, wrapped for transport, and prepared for delivery to shops.**

**Throughout the entire process, a central computer system records data, detects faults, schedules maintenance, and coordinates every machine, creating a fast, hygienic, efficient bakery requiring little human involvement, with production continuing smoothly around the clock.**

