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MALIK'S now are experienced manufacturers of wide range of Food Extruders including low shear extruders specifically designed for extruding delicate pasta products, e.g vermicelli, macaroni, spaghetti, penn macaroni, spiral, shells, and various other figures, using semolina (durum wheat) mixed with water and egg, if required.

The mixed ingredients are processed in a low shear Extruder having specially designed auger screw & longitudinally grooved cylinder externally cooled by water to remove extra frictional heat from the process. The plastified dough is forced down the vertical die head fitted with many die inserts of desired shape. A continuously operated rotary cutter cuts down the product into small lengths. The cut product is conveyed via bucket elevators into a Pre-Dryer which removes 5-6% moisture from the product to give the product some stability and strength for further handling in the Main Dryer. Max. Moisture is removed in the Main Dryer to maintain final moisture content between 8-9 per cent. It is very important to regulate the drying time, since too fast or too slow cooling would be detrimental for product quality, appearance and taste.

The main components required for pasta production are:

- 1) Mixing device- It is usually single or double agitator mixer with SS tank and adjustable paddle.
- 2) Dosing pump- Usually a piston pump to spray water through nozzles placed in the Paddle mixer.
- 3) Vacuum chamber- This removes all entrapped air from the mixed ingredients before feeding to the Extruder for processing. Especially in vermicelli manufacture, it can help to avoid air bubbles & chalky appearance in the product.
- 4) Extrusion Press: It is a single screw extruder consisting of a precision Auger having profile designed to impart minimum shear to the ingredients while giving proper kneading and required pressure to pump the dough through shaping dies. The longitudinal grooves in the cylinder assist to move the sticky dough forward without much slippage. The cylinder is water cooled to prevent excessive temperature rise of dough due to mechanical friction.
- 5) Cutter- For short goods, this consists of a rotating knife near the die face to cut the product in small lengths.
- 6) Pre-Dryer: It is usually Shaking type to keep the product separate, avoid sticking together. It removes moisture approx. 5-6 per cent in short time.
- 7) Main Dryer: Usually having multiple passes of belts to bring down the moisture content to 7-9 per cent. Drying times need to be controlled as per product and are usually higher.

Pasta Dies: The die head of Pasta extruder is designed for holding several die inserts which impart the shape to the product. Both bronze as well as Teflon inserts are suitable. While Teflon gives smooth finish, bronze will give slightly matt or rough surface which is desirable for most pasta products so that sauces hold onto pasta.



The MALIK'S Range of Pasta Extruders:

MEPES-100 Prod. Capacity upto 250 Kg/Hr. MEPES-125 Prod. Capacity upto 350 Kg/Hr MEPES-160 Prod. Capacity upto 500 Kg/Hr.

Manufacturers:

MALIK ENGINEERS

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