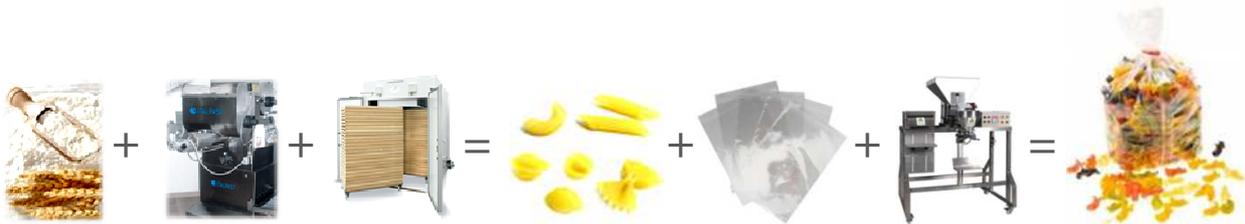


Knowledge and technology for dry pasta production

A business case study



Creating added value with grains

This comprehensive food processing line allows the production and packaging of dry short-cut pasta. Packed into flexible pouches, the finished product can be stored in ambient temperature without any additives, colorants and preservatives. Intensive training courses held by technicians will provide first-hand knowledge, operation and maintenance of the processing line, food-safe processing and packaging methods. The final result is 100% natural, nutritious, healthy and attractively packed dry pasta of different shapes.

All processing and packaging units are manufactured by leading European companies in the food industry and meet all European Economic Community (EEC) hygienic and safety standards. Advanced technologies guarantee durability, reliability, low energy consumption and easy operation and maintenance. The extremely solid and reliable technology is particularly suited for professional applications characterized by highly intensive 24/7 use in commercial environments. A team of 5-6 members can produce up to 80 kg of finished and packed product per hour and within 50 m² working space for processing, packaging and storage for raw and finished products.

Our semi-automatic packaging technology and pre-made flexible pouches of many sizes, functions and materials guarantee optimal product safety and quality, long shelf-life, attractive branding and marketability. The high-quality and energy-efficient diesel generator set completes the production line and ensures continuously reliable and efficient energy provision.

Dry short pasta production line

This dry pasta production line allows continuous production of 80 kg dry short-cut pasta per hour with 5-6 operators and within only 50 m² working space. Various grain flours can be processed into 100% natural, long conservable and nutritious dry short pasta of different shapes of choice. The extremely solid processing line is particularly suited for professional intensive use.

The pasta production and drying line is manufactured by a leading Italian company in the food industry and meet all European Economic Community (EEC) hygienic and safety standards. Advanced technology guarantees durability, reliability, low energy consumption and easy operation and maintenance. Our optional energy and packaging solutions complete this unit for optimal product quality, long shelf-life, attractive branding and marketability of the finished product.

Dry Pasta Extruder

- Production of 110 kg short-cut pasta per hour
- Capacity of mixing basin: 25 kg of flour
- Double mixing basin in stainless steel
- Dismountable mixing shafts and distanced mechanics.
- Automatic pasta cutter with electronic control of cutting speed complete with 3 knives
- Water-cooled extrusion cylinder
- Power 5,5 kW; 400 V; 50 Hz; three phase
- Five different pasta shapes (dies) at choice
- Bronze with teflon inserts of 143 mm diameter



Vacuum Extrusion Device

- Applied to the extrusion basin of extruder to improve color and brilliancy of the final product
- Filtering and lubricating system incl. control devices
- Special construction of mixing basin and of channel vacuum seals
- 25 m³ Vacuum pump equipped with joints to the extrusion basin

Refrigeration Plant

- Suitable for closed-circuit cooling of extrusion cylinder of the extruder
- Freon-running compressor
- Refrigeration circuit with exchanger, circulation pump and relevant tank in stainless steel for 17 l glycol water at 15%
- Electric control panel equipped with electronic thermostat
- Visual inspection of water level, water manometer, electro-valve 24V
- Self-supporting structure with painted body, dim. 465x540x740 mm
- Power 2,1 kW; 230 V; Hz:50; single phase

Automatic Modular Pasta Dryer composed of two drying chambers. Each chamber includes:

- Nominal capacity of each chamber 300-400 kg/m³ upon standard looms (3-4 kg for each loom)
- 4 carriages in stainless steel fitted with pivoting wheels, each complete with 32 wooden looms fitted with thermo-resistant net in polyester, Dimensions 120 x 60 x 55 cm
- Ventilation unit composed of 2 pieces reversible, high-lifting fan
- Heating group made up of finned resistances for thermal exchange
- Air exchange group made up of electric exhauster and motorized shutter
- Set of air conveyors for optimization of ventilation
- Electric control panel with PLC enables customization and display of the drying cycle by setting the following functions: ventilation times and cycles plus pause; humidity control, connected to the air exchange group; control of drying temperature connected to the heating group.
- Electric power installed: 39,4 kW; 400 V; 50 Hz, three-phase
- Total dimensions of drying chambers: 624 x 255 x 289 cm



ingredients



pasta extrusion



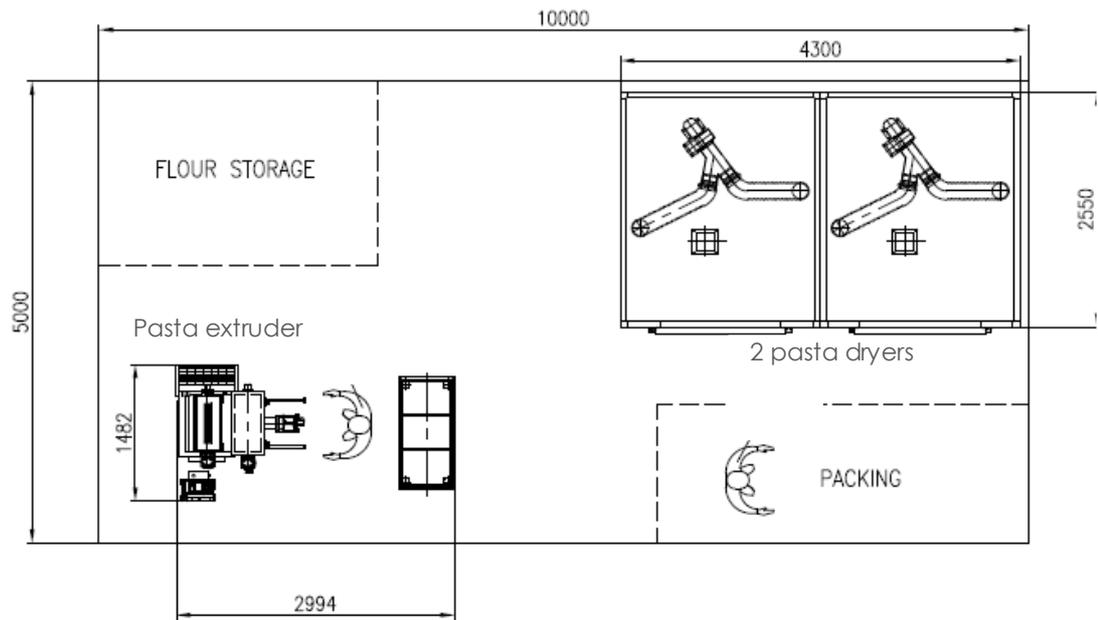
pasta drying



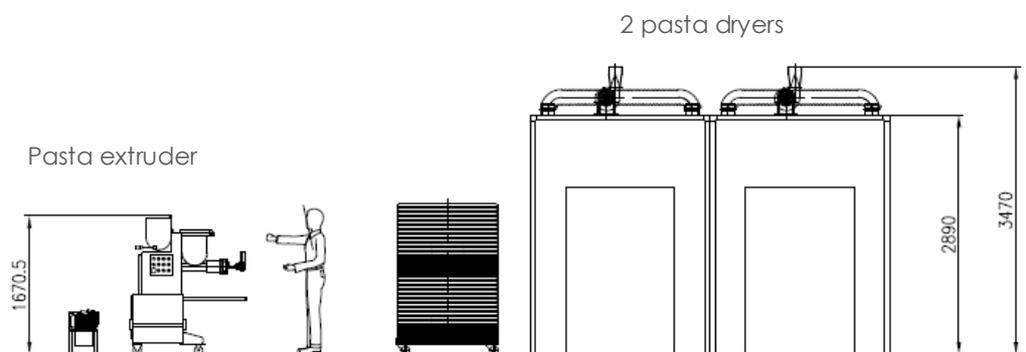
finished product

Schematic layout

Top view



Side view



Semi-automatic dosing, filling and sealing unit for pre-made pouches



This semi-automatic packaging unit doses and fills the dry pasta into pre-made flexible pouches of many different materials, sizes and functions. The operator simply holds the empty pouch below the dispenser and seals the pouch with the integrated manual impulse sealer after automatic filling of the defined quantity.

This unit is manufactured by a leading Italian company in the food packaging sector since over 20 years. The solid technology is particularly suited for intensive operation and accurate weighing, filling and sealing results.

Technical specifications:

- Nominal capacity 8-10 bags / min
- built entirely in stainless steel AISI 304
- hopper and support structure
- two vibrating channels for high weighing accuracy
- digital display for programming the desired weight
- integrated manual impulse sealer
- power consumption 1 kW
- 220 V electrical operation 50/60 Hz



Pre-made flexible pouches

High-quality flexible pouches for dry pasta ensure optimal food safety, quality and long conservation in ambient temperature without any additives and refrigeration. A large variety of pouch materials, formats, functions and designs can perfectly be adapted to the product to be packed. Long shelf-life of the packed products, reduced production energy, decreased storage space, and lower transportation costs make flexible pouches an economical and environmentally responsible packaging solution.

500 g flat pouch



Volume: 400 g
Size: 240 x 360 mm
Material: OPP 40 µm
Design: custom made
Print: 4 color flexo print

Energy-efficient diesel generator set

This reliable and high efficiency generator set combines high-quality materials and advanced technology. Its nominal power perfectly suits for the complete processing line and is designed to operate reliably in challenging applications and to have low life cycle costs.

This unit is manufactured by a leading Spanish company in the energy generation sector since over 65 years. Its technology is particularly suited for continuous operations with high energy reliability.

Specifications

- Nominal power 65 kVA
- Gen-set 50hz
- Continuous 1500 rpm
- Open set (without canopy)
- Deutz engine
- Oil cooled
- Three phase 400V , pf: 0.8
- Remote-Manual panel
- Stand-by 65 kVA
- Continuous 58 kVA
- Weight 800 kg
- Dimensions L/W/H 1900/850/1200 mm
- Acoustic power 99 dB



We invite you to contact us to learn more about our packaging and energy solutions for this processing line.

BACKGROUND INFORMATION

As a traditional staple food with many advantages, demand for pasta products remains high while health-oriented characteristics of pasta products like whole-wheat or organic pasta suggest market growth.

Our pasta production lines with different production capacities enable processing of many kinds of flour into variously shaped dry short pasta like penne, macaroni, spirali, fusili, funghini, fiori etc. The producer can use either own production of raw materials like wheat, oat, rice, maize, barley, quinoa, multi-grain etc. or purchase from local farmers or associations. The end products can then be packaged and distributed to grocery wholesalers, supermarkets and other food outlets.

As moisture-proof packaging is critical for food-safety, optimum texture, crispness and long shelf-life, we provide advanced packaging technology. Continued support to our clients with comprehensive after-sales services guarantee that our customers profit from sustainable solutions.

Our processing lines help extend production over the harvest time and ensure year-round employment and food safety. Purchasing of raw materials from local producers helps maximizing positive impacts for the small farmers by giving them a guaranteed and fairly priced outcome to their production and employment opportunities on the plant site.

We invite you to contact us to learn more about our comprehensive dry short pasta production solutions.

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