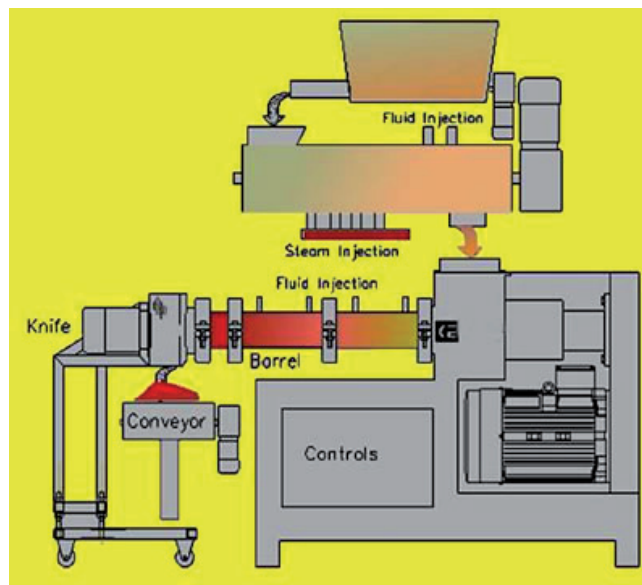




MODEL KL-130 COOKING EXTRUDER

The KoEx KL-130 Cooking Extruder is designed to produce up to 2400 kg per hour of cooked, expanded or formed pellets or collets for the production of Pet Food, Stock Feed, Fish Food or Human Food such as Snacks and Breakfast Cereals.



A large number of product shapes and sizes are available using existing KoEx dies or those built to customer requirements. The KoEx Cooking Extruder consists of the following functional parts:

Product Delivery System

This consists of a self-contained feeder mounted on the extruder. It has its own hopper and feeds directly to the barrel inlet or the optional Preconditioner. The operator can adjust the feed rate from the Machine Control System.

Preconditioner

A Preconditioner is provided in some applications where grain pre-treatment is required, such as pre-cooking with steam, hydration, addition and blending of additives, to produce the required end product.

Extruder Barrel Auger Assembly

Product metered from the grain feeder [or via the Preconditioner], is gravity fed into the auger system. The Auger will mix and shear the product inside the Barrel and then force it through specially shaped Die to achieve the desired result.

The Die Assembly is held in place by a heavy-duty quick release clamping system, enabling assembly or disassembly to be accomplished within seconds, greatly reducing machine downtime.

The Auger is made in sections allowing a configuration to be assembled which will give the desired action on the product.

Optional Electric heating can be provided to raise the auger system temperature to the required operating level. Cooling can also be provided by passing water through special passages in the barrel. Once production has commenced, the temperature controls automatically heat or cool the system to maintain the desired product process conditions. Water or Steam injection can also be provided if required.

Die Face Knife System

As the product is extruded from the die, it is cut to length by a rotating knife. This is driven by an independent variable speed electric motor, the speed of which controls the length of the product. The knife assembly is enclosed in a stainless steel guard for safety and cleanliness and directs the product downwards for collection. To provide quick and easy access

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to the die, the knife, complete with its guard assembly can be moved out of the way after releasing the clamping levers.

Main Drive System

A variable speed 75kW electric motor drives the auger system through a robust belt system. The main shaft bearings are grease lubricated for long life and minimum maintenance. For safety the belt drive is totally enclosed in an integral lockable cabinet.

Frame

The machine frame is constructed of heavy steel sections rigidly welded as a unit. Stainless steel covers provide protection for safety and cleanliness. The frame is mounted on adjustable feet, which may be bolted to a base or floor.

Control Equipment

The Machine Control System, gives the operator control and indication of the following functions:

- Feeder ON/OFF, Status, Speed Control & Indication
- Preconditioner, ON/OFF, Status, and outlet temperature
- Main drive ON/OFF, Status, Speed Control & Indication and Load Indication
- Knife drive ON/OFF, Status, Speed Control & Indication
- [Optional] Barrel heater control, Temperature Indication
- [Optional] Barrel cooling control
- [Optional] PLC and HMI Screen in place of basic Machine Control System
- [Optional] Recipe select control
- [Optional] Start & Stop Sequence control
- [Optional] Machine Overview Screen
- [Optional] Moisture Analysis and Control System

The use of sophisticated and flexible control equipment in the form of a PLC with LCD HMI Screen, allows us to offer functions which previously could only be achieved with great difficulty.

Many additional features can be provided, from simple trend displays to keep track of production rates and maintenance schedules, to on-line management reporting on a computer screen in the supervisor's office.

Safety Features

To protect the operators from accidental injury, all moving parts are housed behind interlocked and or lockable guards. The knife guards, are interlocked with their respective motors. Interlocks are also provided to sequence drives and thereby reduce the risk of accidental damage to the extruder.

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