

Food Extruders are used for converting large variety of food cereals for extruding various shapes which are pellets, RTE Snacks, Breakfast cereals, Precooked flours and starches, Expanded products such as Soy Nuggets, Aqua feed, and various Pasta products viz. macaroni, vermicelli, spaghetti, etc. Extruders have also been employed to produce Soy Dal Analogue product (SDAP) which taste very much like natural Tur Dal but with added proteins and nourishment than possible with natural Tur dal alone. Further applications of Extruders have been to produce Pet/Aquatic feeds or pellets for Race Horse, Dog food and for other pet animals. The extruded pet food not only aids in easy digestability by the animal, but could be made with added minerals, vitamins or flavours thus providing useful ingredients and taste to the animal promoting it's all round growth. Thus Food Extruders have very wide applications.

Following categories of Extruders are used for producing the above products:

1. HTST High Temperature Short Residence Time) Cooker or Gelatanizer
2. High Shear Adiabatic Extruders.
3. Low Shear Extruders (Formers).
4. Collette Extruders.
5. Medium Shear Extruders which employ more wet Raw materials for Extrusion.

Pellets are half-cooked products or “third generation” Snacks, and need to be fried or heated in hot oil or air for complete expansion and consumption. Raw pellets are produced using HTST and Former or Product Densification Unit (PDU)- Raw-materials (Wheat, Rice, Potato, etc.) being first cooked, followed by cooling and densification in the Former. The Former is fitted with various die inserts for forming the shape of pellet, e.g. Wheels, Tubes, Stars, Etc. In addition to conventional 2-D shapes mentioned, 3-D or hollow pellets are formed using special tubular die units to extrude a cooked sheet first with two layers. The two layers after collapsing and pre-drying could be punched with suitable dies to get 3D pellet which are further dried before final packing.

Direct Expanded Snack products are produced using High Shear Adiabatic Extruders, using various Food Cereals which are fully expanded immediately as they emerge from the die attached to the Extruder. They are used for producing RTE Snacks, Baked Corn Curls or Collette, Soy Nuggets, Aqua Feed (floating), etc. For producing sinking aquatic feeds, combination of Cooker (Gelatiniser) and PDU is employed.

Low Shear Extruders or Formers are used for producing various Pasta products like Macaroni, Spaghetti, Vermicelli, etc.

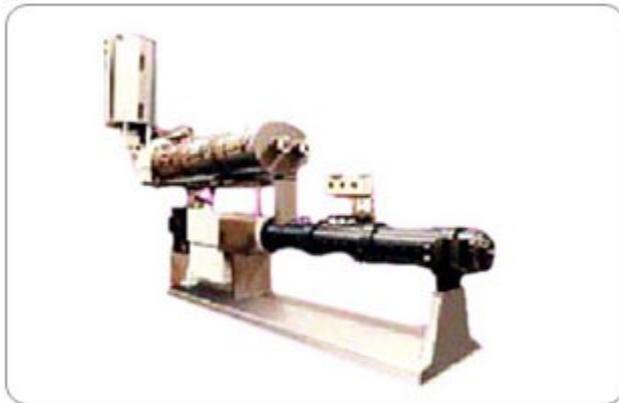
Medium Shear Extruders are employed to get partially expanded snacks, Pet foods, Snack Pellet, SDAP, Fortified Rice and such other products needing high moisture content upto 40% approx. while processing in the Extruder.

In all the above Extrusion processes, product has excess moisture and the same is removed by passing in Dryers before the product cools down for safe packing. The Drying Equipment

should include a Pre-Dryer to remove some moisture before final Drying in the Main Dryer- to permit safe handling without sticking of products. Continuous Belt Driers with Conveying Belts arranged in multiple decks are usually employed to operate continuously.

The Fry type Collette Extruder is a specialized Extruder designed for producing Fried Corn Curls/Collette. The working principle is entirely different from normal Screw Extruder, as the raw-material (corn meal or grits) gets cooked between two circular bronze discs (one is fixed and other is rotating, there is no die) and randomly cut by stationery knife on periphery. A short, feed screw feeds the de-germinated corn meal or grits between the 2 bronze discs where the material gets cooked due to high shearing forces and is cut into suitable lengths as it emerges out of the gap between the discs, by the knives. The product is fried in hot oil and applied with seasonings in a coating drum.

For Range of Food Extruder being manufactured by us, download our brochure following “Download” link.



800 Kg Capacity with Pre- Conditioner



Cooker Extruder(300 kg/hr.)



Extruder for producing Direct Expanded Snacks.



Belt Drier



Medium Shear Extruder for Aqua Floating Pellets.

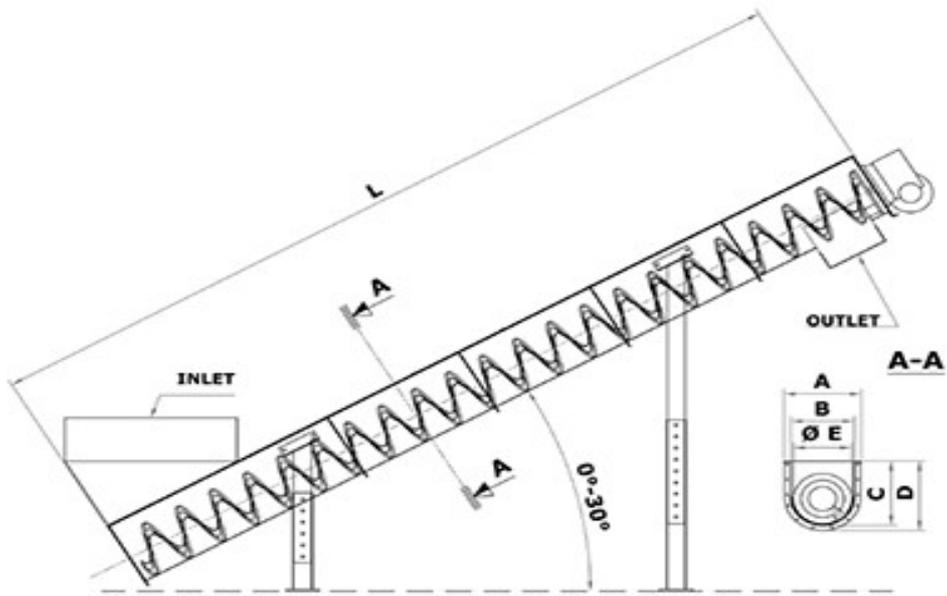


Mini Extruder 30 Kg capacity for Puff snacks



Coating Drum





Screw Conveyor for putting the Raw-materials from Mixer to Food Extruder



Continuous Belt Drier for Food products



Snack Extruder for Potato/Wheat Pellet



Direct Xpanded Food Extruder for RTE Snack



Medium Shear Extruder for SDAP



Paddle Mixer showing Mixing Paddles



Pasta products Drier 7 Layers- 2 Tons/hour Drying Capacity of product



Medium Shear Extruder for producing Race Horse feed pellet



Soy Nugget Extruder



Lab Medium Shear Extruder



Medium Shear Pet Food Extruder



Direct Expanded Maize/Rice products Extruder



Twin Screw Food Extruder with Preconditioner



Cold forming Lab Extruder



Pasta Extruder

