PREMIUM
AQUA FEED PLANTS
AND PROCESSING MACHINERY

CLIENT :

PLANTS / SYSTEMS ON TURN - KEY BASIS

- TINY AQUA FEED PLANTS LAB - SCALE 25kg./hr. to 50kg./hr.
- MINI AQUA FEED PLANTS FARM - SCALE 100kg./hr. to 200kg./hr.
- MAJOR AQUA FEED PLANTS COMMERCIAL SCALE 300kg./hr. to 3000kg./hr.

KEY - EQUIPMENT

- MIRACLE MILLS
- MICRO PULVERISERS
- TURBO CLASSIFIER MILLS
- BLENDERS
- COOKERS
- PELLETIZERS
- SINGLE SCREW EXTRUDERS
- DRYERS / COOLERS
- CRUMBLERS
- SIEVES
- ELEVATORS / CONVEYORS
- BAG WEIGHERS / STITCHING MACHINE
- STEAM GENERATOR
- BINS / SILOS

Designed, Manufactured & Supplied by :

PREMIUM PULMAN PVT LTD

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PROFESSIONALS IN SIZE REDUCTION TECHNOLOGY

EQUIPMENT USED IN AQUA FEED PREPARATION

PULVERISERS

They are used for grinding the feed ingredients. Grinding of ingredients improves the feed digestibility, acceptability, mixing properties, pelletability and increases th bulk density of some ingredients. The grinders are available in various forms as described below.

* HAMMER MILLS

Hammer Mills are mostly impact grinders with swinging or stationary bars forcing feed ingredients against a circular Screen or solid serrated section called striking plate. Material is held in the grinding chamber until it is reduced to the size of the openings in the screen. Impact grinding is most efficient with dry, low fat feed ingredients.

* ATTRITION MILL/AIR SWEPT MILL (TURBO CLASSIFIER MILL)

In attrition Mill, grinding is done between two discs equipped with replaceable wearing surfaces. One or both of these discs are rotated. If both the discs are related, they rotate in opposite directions. When one disc is rotated, and the other stands stationary the assembly is used for shredding and delibering. Coarse ground materials are passed through attrition mill for blending or smoothing out ingredient or mixture containing liquids which may have clumps.

* HORIZONTAL MIXERS/BLENDERS

Non continuous or interrupted ribbons are similar to the continuous ribbon mixers except that short sections called **"paddles or ploughs"** are spaced in a spiral round the mixer shaft. It is more suitable for mixing liquids with dry solids.

* EXTRUDER

The basic units of n extruder include a barrel fitted with a die plate and a screw shaft conveyor which is connected to a high speed motor. The feed mixture is fed into an extruder by proper arrangement of water/steam injection facility. The extruder operates at high pressure and steam injection. The temperature of the material rises for a short spell of time and cooks the food, gelatinizing the starch present in the feed mixture.

* PELLETIZER

Pelletizer is primarily used in prawn feed production. The main components are a pair of rollers and a die which is driven by a high speed motor. The pelletizer works with a combination of high pressure and moderate temperature.

* VERTICAL COOLER DRYER/ HORIZONTAL COOLER DRYER/TRAY DRYERS

Feed pellets in this dryer are discharged from the Mill into the top of a flat sided hopper and dropped into an attached cooling bin.

Coolers of the horizontal type consist of a moving wire belt or sectional belt of perforated metal trays which convey pellets from the discharge spout of pellet mill. The depth of pellets on this belt and their speed of travel are so adjusted that pellets leaves for storage at a desired moisture and temperature.

For small production TRAY DRYERS are used.

* STEAM BOILER

Where steam is used in the palletizing process, a steam boiler is needed. A pellet mill with a capacity of 1.0 – 1.5 Tons Per Hour of pellets would require a steam generation plant capable of producing about 60-90 kg./hour of steam at 100 – 150 psi.

* CRUMBLER

A crumbler is a roller mill with rolls specially designed for breaking up pellets into smaller particles. Usually, a crumbler consists of two corrugated rolls situated below the cooler/drier exit. The pellets can diverted into the crumbler, if crumbles or granules are desired, or they can be by-pass it.

* SIFTER

The sifter is a separator, usually oscillating, with a number of screens. It is used to separate crumbles or granules which are too large .

- SINKING/SLOW SINKING and FLOATING PELLETS
- 1 mm. Ø to 2.5 mm. Ø onwards PELLETS
- 25 Kg./Hr. to 3000 Kg./Hr. MANUAL/SEMI MECHANISED and AUTOMATIC PLANTS.