

Introduction of fish feed pellet extruder

Fish feed pellet extruder is a kind of pellet machine to make feed for fish, shrimp, crab.,etc for aquaculture. The ingredients to make fish feed can be Corn, rice, wheat, bone meal, soyabean meal, meat meal, Fish meal, tapioca flour, algae meal, oil, vitamins and minerals. According to different usage our machine can make floating fish feed and sinking fish feed. Different from the process technology we have dry type and wet type fish feed extruder.

Advantages of fish feed extruder

- Feeding evenly and constantly: Flat-bottomed scraper mechanism and feeder controlled by transducer make sure that the materials can be feed evenly and constantly.
- Cutting quickly and accurately: Removable cutting mechanism use knives with good elasticity, which attach to the die plate tenderly and can be regulated in six directions, can be operated quickly and accurately.
- High efficiency and low power consumption: With conditioner, the steam and water can be directly injected into the extruding chamber through special mechanism, thus the quality and quantity of products can be improved greatly with lower power consumption.
- Wide application: Variably configurations of screw bolts can match the producing demands for different formulas and raw materials.
- Longer service life: Screw bolts and dies are processed through vacuum quench treatment, also be processed with high processing precision and have a long using longevity.
- Easy operation: All the operating parts like steam valves, etc, adopt the humanization design, in order to facilitate actual operations.

Wet type fish feed pellet extruder



Wet type fish feed extruder is equipped with a boiler which can continuously providing hot steam. It can produce all kinds of floating or sinking aqua feed for fish, eel, shrimp, crab, loach, bullfrog, etc, and can produce many kinds of pet feeds for cat, dog, and etc. The pellet size can be from 0.9-15mm to feed different size fishes. High capacity and top quality products, our fish feed extruder is a preferred choice for medium or large size feed processing factory and aquaculture farm.

Extrusion means to cook the mix of ingredients under temperature, moisture and pressure in the fish feed extruder. When working, the temperature in the extruder chamber is 100-120℃ by electrical heating. So it can kill bacteria and pathogen when running. There is the temperature indicator on the machine. Once it reaches the set temperature, it will stop heating automatically by the reaction of thermocouple. During the high temperature ripening process, the starch and fiber of the raw material become swell. Then under the pressure-tight condition, material will be formed into pellets by shaping mould. At the end, through the high pressure produced by the regular rotating of the screw, after being cut by the forepart cutter which rotates regularly and high-speedily, the finished products will be shrunk and become small average puffed balls in room temperature and pressure.

Wet type fish feed extruder features

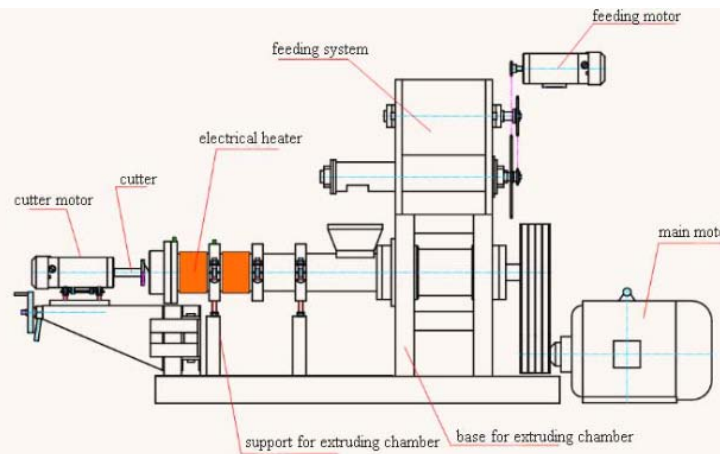
- Screw sleeve adopts jacketed construction, which can be injected in with hot steam or cooling water, thus the extruding temperature can be controlled effectively.
- The conditioner can make the materials have fully gelatinization of starch by a combination of hot steam and mechanical shear/mixing. The materials may remain in the conditioner for a time over 180s.
- We can make the conditioner from stainless steel as well as carbon steel. The carbon steel conditioner is cheaper while the stainless steel conditioner is much better to make feed.

Wet type fish feed conditioner technical data

Model	Capacity (t/h)	Main motor(kw)	Feeder motor(kw)	Screw rod Φ(mm)	Cutter motor(kw)	Conditioner motor(kw)	Dimension (mm)	Weight (kg)
DSP60	0.18-0.2	15	0.4	60	0.4	0.75	1780*1250*1300	480
DSP70	0.25-0.30	18.5	0.6	70	0.6	1.1	2460*1550*1740	940
DSP80	0.35-0.40	22	1.1	80	0.75	1.5	2650*1450*1750	1000
DSP90	0.50-0.60	37	1.1	90	1.1	2.2	2600*2100*1900	2000

DSP120	0.70-0.80	55	1.1	120	1.5	2.2	3200*1950*1900	2200
DSP135	1.0-1.2	75	1.5	135	2.2	3.0	3750*1980*1800	2500
DSP160	1.8-2.0	90	2.2	160	2.2	4.0	6600*2800*2330	3800
DSP200	3.0-4.0	132	2.2	200	3.0	5.5	6600*2900*2350	4500

Dry type fish feed pellet extruder



The main body of the dryer type fish feed extruder is almost same as wet type, only difference is on top of the machine there is no conditioner, raw material feed into screw rod from a screw feeder without ripen.

Dry type fish feed extruder features

- Composed of feeding system, extruding system, cutting system, controlling system.
- Auto-temperature control system, make the temperature controlling more direct viewing and the parameter more precise.
- Combined main shaft can adapt a variety of materials
- Screw barrel are designed optimized to get longer service life lower production cost.

Dry type fish feed conditioner technical data

Model	Capacity (t/h)	Main motor(kw)	Feeder motor(kw)	Screw rod Φ(mm)	Cutter motor(kw)	Dimension (mm)	Weight (kg)
DGP40	0.03-0.04	5.5	0.4	Φ40	0.4	1400*1030*1200	240
DGP50	0.06-0.08	11	0.4	Φ50	0.4	1470*1100*1250	320
DGP60	0.10-0.15	15	0.4	φ60	0.4	1470*1120*1250	350
DGP70	0.18-0.2	18.5	0.4	φ 70	0.4	1650*1400*1300	580
DGP80	0.2-0.3	22	0.6	φ 80	0.6	1800*1450*1300	695
DGP90	0.3-0.4	37	0.6	φ 90	0.8	2100*1450*1350	950
DGP120	0.5-0.6	55	1.1	φ120	1.5	2400*1950*1600	1700
DGP135	0.7-0.8	75	1.1	φ133	2.2	2550*2050*1650	1900
DGP160	1.0-1.2	90	1.5	φ155	3.0	3100*2650*1800	3200
DGP200	1.8-2.0	132	2.2	φ195	4.0	3100*2850*1900	3800

How to Choose Dry Type or Wet Type Fish Feed Extruder?

The fish feed pellet extruder can be divided into two types: dry type fish feed extruder and wet type extruder. The differences and features of the dry type extruder and wet type extruder:

1. Dry type fish feed extruder does not need the steam boiler while the wet type equipped with conditioner and need to equip the steam boiler. So the dry type fish feed pellet extruder is cheaper and easier to use and operate.
2. The feed pellet made by wet type fish feed pellet machine is more smooth and with better quality because the material is ripen and mixed enough in the conditioner compared with the dry type extruder.
3. The capacity of the wet type fish feed pellet machine is higher than the dry type feed pellet machine, so usually the wet type fish feed machine

is suitable for large feed pellet factory while the dry type fish feed pellet machine is better and economic for the small and medium size user or factory.

Fish Feed Pellets: To Sink or to Float?

Commercial fish diets can be classified into floating (extruded) or traditional sinking (pressure-pelleted) pellets. Both floating and sinking feed can produce satisfactory growth, but some fish species prefer floating, others sinking. There are both pros and cons both in the two types of pellets. However, the use of floating pellets provides more advantages compared to sinking ones:

1. Reduce Waste. Sinking pellets that remain at the bottom of the tank will often get lost and wasted. However, the floating feed pellets can retain its shape, even after being in the water for many hours, uneaten feed are still intact.
2. Decrease Disease. Sinking pellets that remain at the bottom of the tank will eventually rot, which may give rise to proliferation of bacteria and spreading of harmful fish disease.
3. Convenient Observation. Another reason to feed floating (extruded) pellets because the farmers can directly observe the feeding intensity of his fish and adjust feeding rates accordingly. Determining whether feeding rates are too low or too high is important in maximizing fish growth and feed use efficiency. However, sinking pellets will fall into the bottom of the tank, even fish can not find them.