

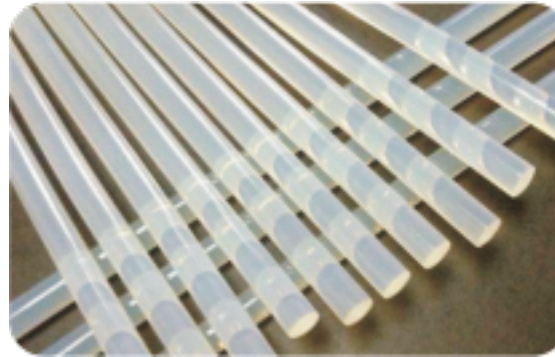
UNDER WATER PELLETIZING SYSTEM

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The **underwater pelletizing** process is widely used in the processing of thermoplastic materials such as elastomers, engineering plastics, biodegradable materials, color master-batches, recycled plastics, and hot melt adhesives. For example: PP, PP PS, PC, SAN, ABS, TPU, TPV, TPE, EVA, PET, PB, PA6, PA66, PTEF, PVC, EPS, and food particles.



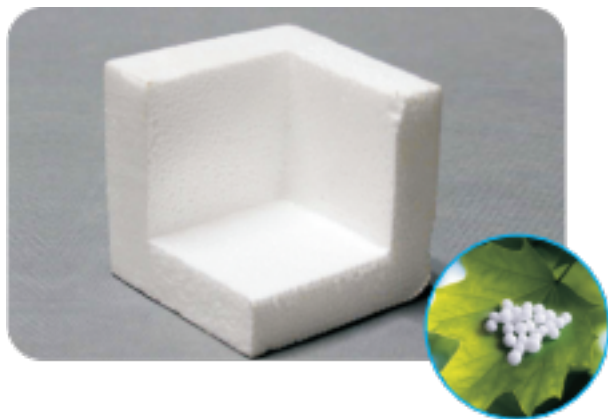
Elastomers(TPE,TPU)



Hot met adhesives



Biodegradable materials



EPS



Colormaterbatches



Engineering plastics

Why choose underwater pelletizing?

The underwater granulator is dedicated to the production of various polymers and thermoplastics, providing uniform spherical particles for subsequent production, with a yield of up to 12000 kilograms per hour. According to the operation mode, it can be divided into manual type and automatic type. The integrated water treatment system comes with a robust and stable centrifugal dryer, which ensures complete separation of particles from water and full drying of particles, while providing stable flow and temperature process water for the pelletizing process.



The flexibility and efficient performance of the design effectively meet your needs: XINDA's granulators can be installed on the ground, on rails, or in the form of pillar suspension. root According to customer requirements, XINDA can customize the most suitable turnkey engineering solutions for you, starting from the factory layout, including upper end feeding system, gravity metering device, extruder, melt pump, screen changer, pelletizing and water treatment unit, particle screening and separation unit, etc.

Advantage

Traditional granulation processes are divided into cold granulation and hot granulation. Compared to traditional cold drawn strip granulation and other hot cutting technologies, underwater granulation technology, as a new type of hot cutting technology, can be applied to almost all materials to be produced. You will benefit from:

- Compact and integral design
- Stable and reliable machine performance, low maintenance costs,
- Fully automatic operation, reduced manual intervention.
- Strong operational flexibility, safety, convenience
- Low noise, low energy consumption
- Environmental protection, pollution-free particles.
- Excellent quality, rounded shape, smooth surface, and uniform structure

Choose the model

The underwater granulator is the most core device in the underwater granulation process, with a stable and gentle feed method to ensure that particles of uniform size and rounded appearance are cut. According to customer requirements, manual and automatic feed modes can be selected.



Output	5~120kg/h	120~600kg/h	600~1000kg/h	1500~2000kg/h	2000~3000kg/h	3000~5000kg/h	More than 5000kg/h
Model	UWP-75	UWP-95	UWP-120	UWP-200	UWP-300	UWP-500	UWP-XL

● Price range: USD65,000~USD1,000,000, depending on the output. Per hours.

* Start-up valve



The melt reversing valve, also known as the start-up valve, serves as the dividing point between the underwater pelletizing unit and the upstream equipment, connecting or cutting off the pelletizing process and the upstream process. Well-designed and easily operated components can control the melt flow during the production process, providing you with a safe, stable, efficient and economical production process.

* Die head



The template is one of the core components of the underwater pelletizing unit. According to the characteristics of production and materials, the heating methods for designing templates are usually divided into electric heating and oil heating. According to different production and processing requirements, we tailor a more scientific and reasonable cutting head selection scheme for you.

* Water bypass



Early or late entry of water from the underwater granulation process into the cutting chamber can lead to unsuccessful start-up and even direct significant production losses. The bypass pipe can accurately help you control the time when the process water reaches the cutting chamber, thereby maximizing the startup success rate and production efficiency

* Spin dryer



Combining different production and processing needs, installing particle dryers beside water tanks or independently around silos is a good choice in actual production. Install a large material separator at the inlet of the dryer to prevent large materials from entering the dryer, thereby extending the service life of the filter screen. Installing a dehumidification fan on the top of the dehydrator can more effectively reduce water content and help with particle drying. With years of dedicated research, XINDA has developed a variety of water treatment systems to meet the production requirements of different materials and processes. The system can provide a water treatment process suitable for any application, including flexible adjustment of cooling and heating of process water, and accurate control of process water temperature. The water system can accurately control the residence time of particles in process water and achieve satisfactory cooling effects.

* Gear pump



When the melt pump is used in series with a single screw or twin screw extruder, it can significantly increase the benefits of the entire production line, ensure stable melt pressure and output during production, and provide the required pressure for subsequent pelletizing processes.

* Screen changer



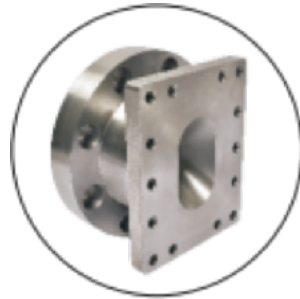
The process of removing impurities from the melt is particularly critical prior to the pelletizing process. Through a screen changer, impurities contained in the melt are filtered and removed, ensuring the purity of the material, thereby stabilizing production.

Spare parts

Always providing sufficient accessories to meet your production needs 24/7.



Connector.



Connector.



Knife screw shaft



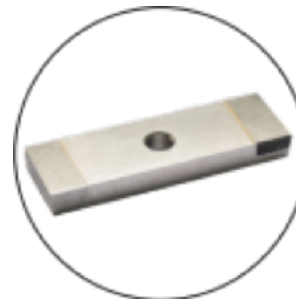
Knife insert



Cutterholder.



Cutterholder.



Cutter.



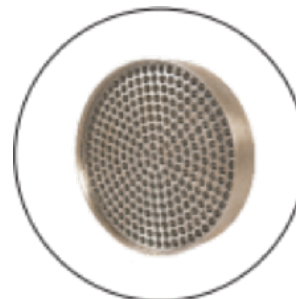
Cutter



Gear pump shaft

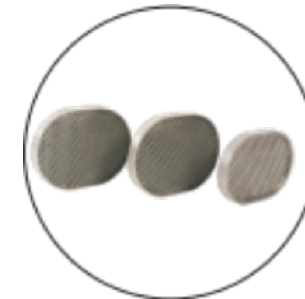


Gear bearing



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Filter



Filter

PSHJ-35 Twin scew extruder with underwater pelletizing system for TPU



PSHJ-95 Twin screw extruder with underwater pelletizing system for TPE



