

ACERTECH



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**ADVANCED**  
**PLASTIC RECYCLING**  
**TECHNOLOGY**

艾斯瑞特  
回收和造粒设备制造商

www.aceretech.com



## EASY RECYCLING VALUABLE PLASTICS

### 03 > Pelletizing system

ACS-H™ Compacting & Pelletizing system	03/04
ACS-PRO Compacting & Middle Filtration	05/06
ASP™ Shredding & Pelletizing system	07/08
ASE-H™ Regrinding & Pelletizing system	09/10
ATE™ Twin Screw Extruder	11/12
ACS+ATE Recycling & Compounding	13/14
Low Energy conical twin screw extruder	15/16
Fully automatic and highly intelligent compounding and pelletizing turn-key solution	17/18

### 19 > Auxiliary machine

Pelletizing system	19/20
SCF series disc-type self-cleaning filtration system	21/22
Bottle to Bottle Food-grade Pelletizing System	23/24
LSP liquid state polycondensation	25/26
Shredder and Crusher	27/28
Screw dryer	29
Pulverizer Machine	30

### 31 > Washing system

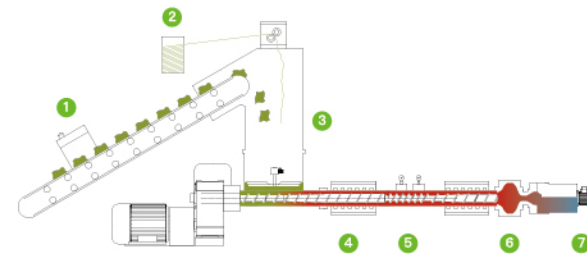
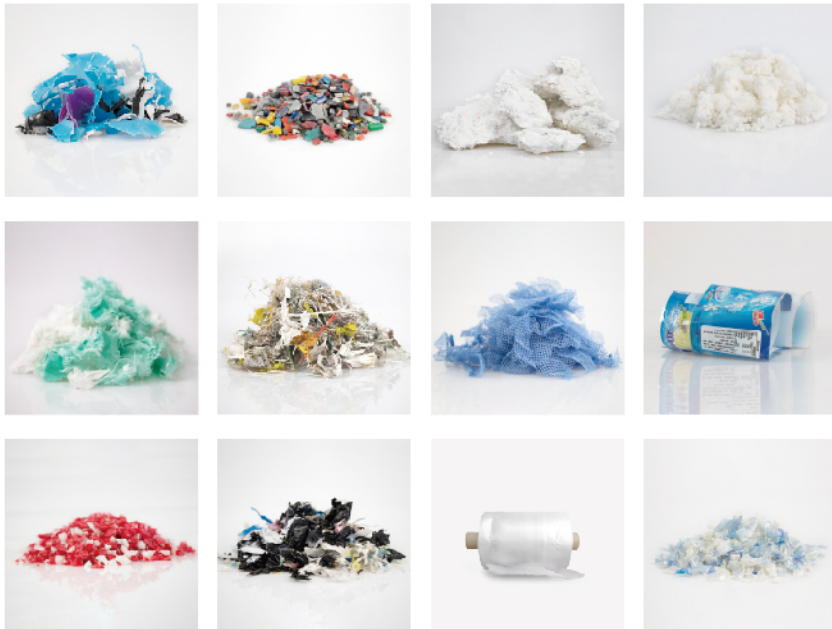
PP/PE film and woven bags recycling washing system	31/32
WEEE recycling washing system	33/34
Post - consumer recycling washing system	35/36
PET bottles recycling washing system	37/38

### 39 > ACERETECH

ACERETECH in the digital process	39/40
About us	41
Service and Support	42

# ACS-H™

COMPACTING & PELLETIZING SYSTEM



- (1) Belt conveyor
- (2) Hauling roller
- (3) Compactor
- (4) Single-screw extruder
- (5) Vacuum degassing zones
- (6) Screen changer
- (7) Water-ring pelletizer

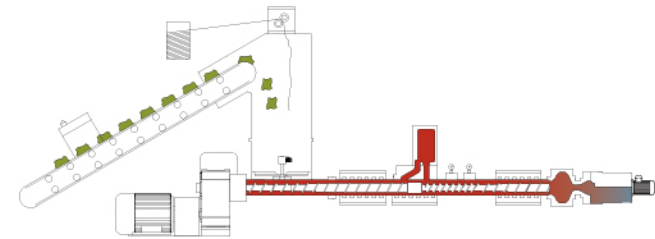
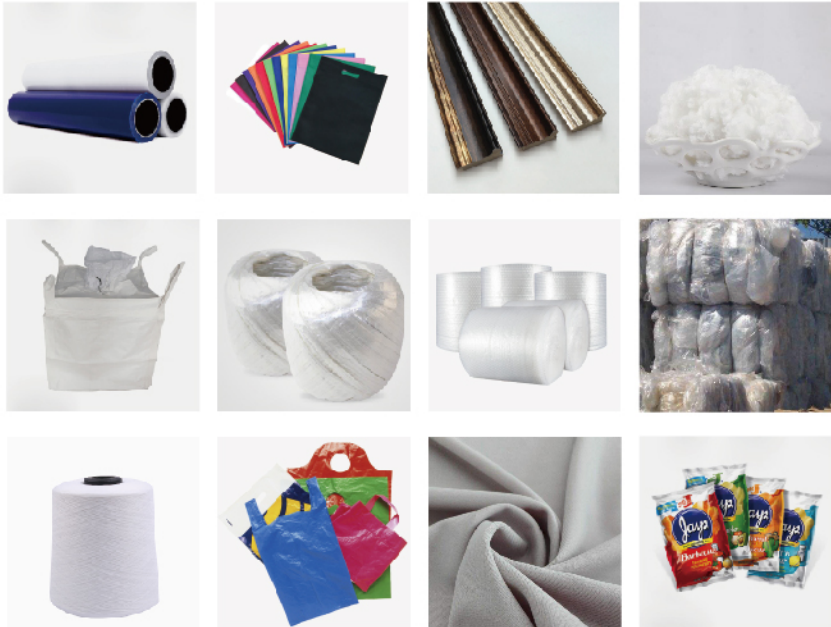
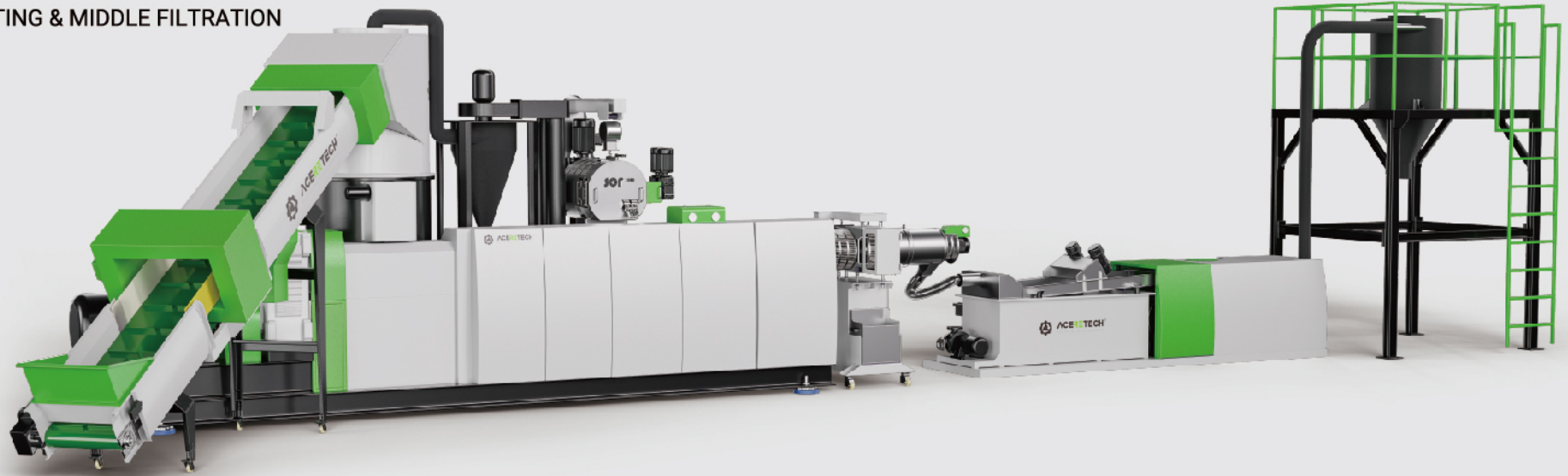
## 3 in 1 integrated recycling system

Size reduction, pre-heating and pelletizing, 3 in 1 integrated system, less cost.  
More effective and stable system for plastics of low bulk density.  
Higher output and lower energy consumption.  
Lower investment for a higher performance machine.  
Standard production and management in the workshop.  
Combines size reduction, plasticization and pelletizing in an integrated system.  
Qualified for soft plastics as well as rigid flakes with innovative special design.

# ACS-PRO



COMPACTING & MIDDLE FILTRATION



## Excellent degassing and filtering performance for recycling

The ACS-Pro is the entirely new standard recycling and pelletizing system with optimized super long L/D ratio, filtering ahead of vacuum degassing, specially suit to the waste plastics such as high contaminated and heavily printed recycling and pelletizing. The drive of compactor controlled by inverter, together with sliding gate device installed on the outlet of compactor room, to guarantee ACS-Pro not only handle losing material recycling but also rigid regrinds material re-pelletizing.

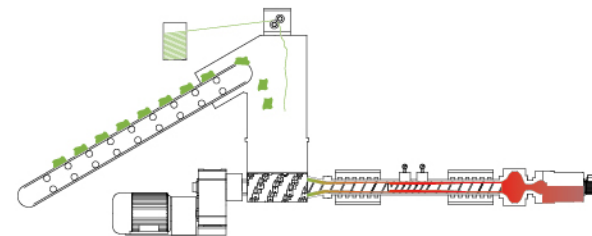
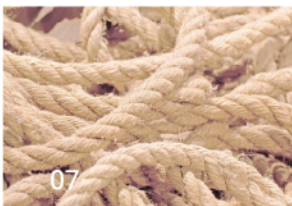


# ASP™

## SHREDDING & PELLETIZING SYSTEM



Suitable to both light/rigid plastic recycles;  
Easier operation;  
Smaller space occupation;  
Intelligence: One-button start/stop;

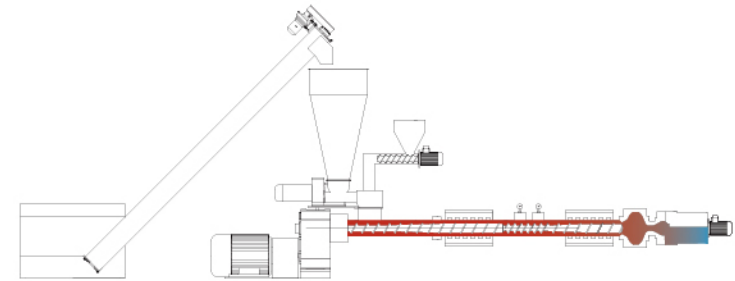
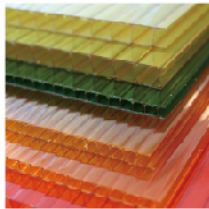


**↓ 25%**  
Lower energy consumption

The ASP™ series shredding and pelletizing system combines function of shredding, crushing, enforcing feeding, plasticization and pelletizing in one system. Applied in the plastics recycling and pelletizing process, ASP™ system is a integrated and cost-saving solution for every kind of plastic scrap, such as film, raffia, trim, purge, hollow part, bottle and foaming material in plant recycling.

# ASE-H™

REGRINDING & PELLETTIZING SYSTEM

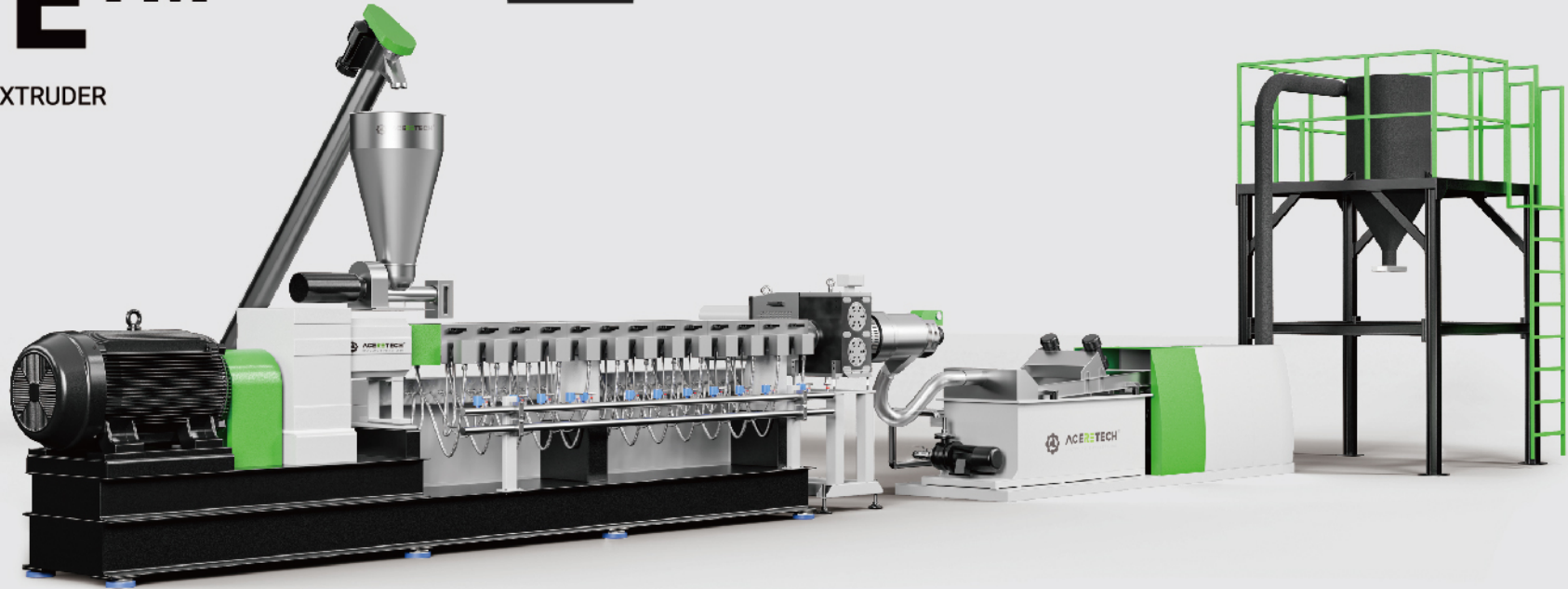


## Rigid Plastics Machine Pellet Quality Ensured

The ASE-H™ series single screw extrusion and pelletizing system, is a specialized and reliable system, suitable to the recycling and re-pelletizing job of rigid plastic flakes. It is an efficiency and continuous system for flakes, regrinds, crushed plastics into granules again with gentle re-melting, significant volatilization and impurities-filtration.

# ATE™

TWIN SCREW EXTRUDER



## ATE Twin-screw: Modular design for recycling, extrusion, compounding.

ATE Series Co-rotating Parallel Twin Screw Extruder consists of motor drive, torque distribution gearbox, processing section, temperature controlling units, die section and down-stream pelletizing system, etc.

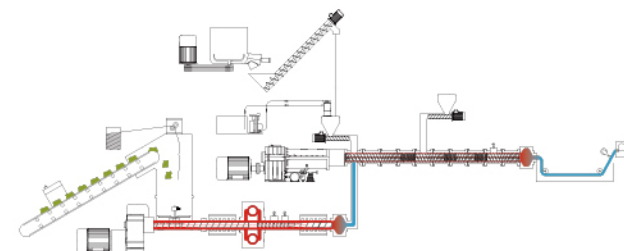
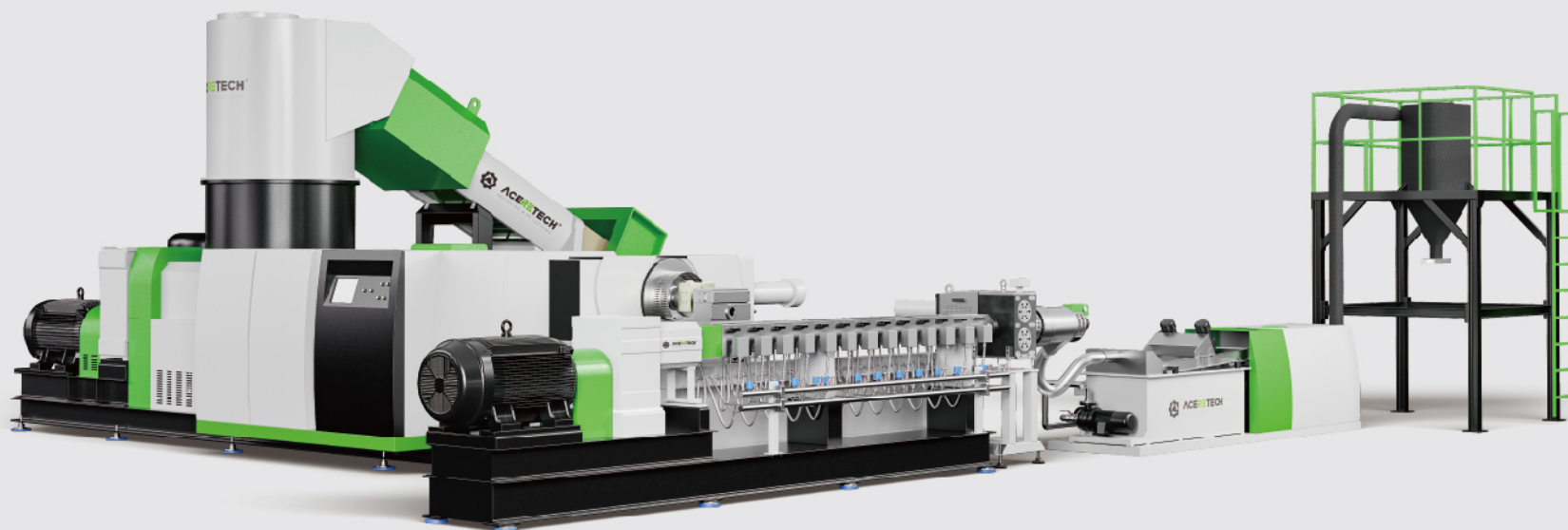
ATE Twin Screw Extruder adopts modular design principle, component standardization manufacturing, which can present stable and reliable performance.

Thanks to the modular principle, ATE extruder can provide highly customizable solutions according to customers' process and special requirements. Based on different output torque grade, ATE series extruders have basic type and efficiency type.

# ACS+ATE



RECYCLING & COMPOUNDING



For recycling and compounding of loose materials, ACERETECH combines ACS (single-screw extruder with compactor) and ATE (parallel twin-screw extruder) extrusion systems. Materials such as film, filament, fabric, nonwoven, textile, are of small bulk density, which are loaded into ACS system for compacting, plasticization, exhaust, filtration, and then enter ATE twin-screw extrusion system for multi-component compounding, thus realizes recycling, filling, coloring, alloying and other modification operations in one line, which achieves lower energy consumption, better polymer performance maintain, less process steps, more environmentally and valuable for plastic recycling.



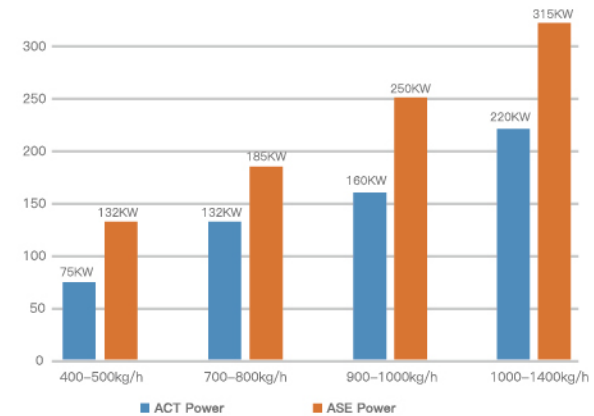
# Low Energy conical twin screw extruder



↓ **28%**  
Lower energy consumption

ACT series conical twin-screw extruder is especially designed for recycling rigid plastic flakes. Its main feature is energy saving. Compared with single-screw extruder, ACT saves up to 28% energy. Special conical twin-screw structure, uniform mixing, low shearing force, minimizes possibility of polymer degradation, thus makes ACT very popular in field of engineer plastic recycling, and has become 2 in 1 Super energy-saving extruder.

Energy consumption comparison chart for ACT conical twin screw extruder and ASE single screw extruder





## Fully automatic and highly intelligent compounding and pelletizing turn-key solution



PP+CaCO<sub>3</sub>



PA+Glass fiber



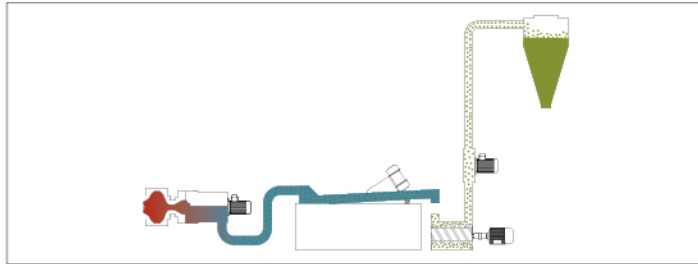
PVC+CaCO<sub>3</sub>



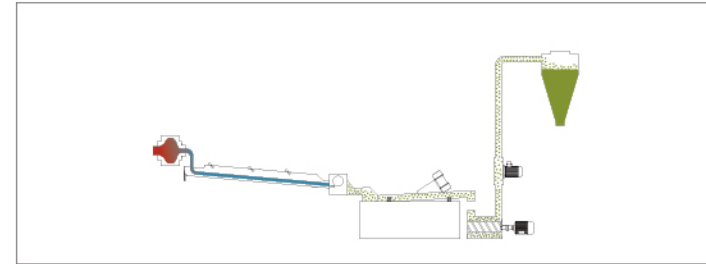
Color masterbatch

The machine is equipped with dual-use feeding stations, vacuum centralized feeding, LIW weighing system, ATE extruder with high torque gearbox, combined filtration system, melt pump and water cooling strands pelletizing system which with special S-shaped cooling water trough, shaking machine that can rely on shaking to remove a lot of moisture, blowing and sucking air knife that further removes residual moisture from the surface of the strip, as well as strand pelletizer, Lifting vibration dryer, drawer type permanent magnet, Vibration sieve. It is equipped with a large storage silo with stirring function, which allows the extruded particles to be mixed better, and it adopts a vacuum loading machine with vacuum feeder to convey finished product to the automatic weighing and packing machine, and then connects to the stacking and packaging system and AGV intelligent transport to the designated area. It is fully automatic and highly intelligent, which can effectively reduce various production and operation costs.

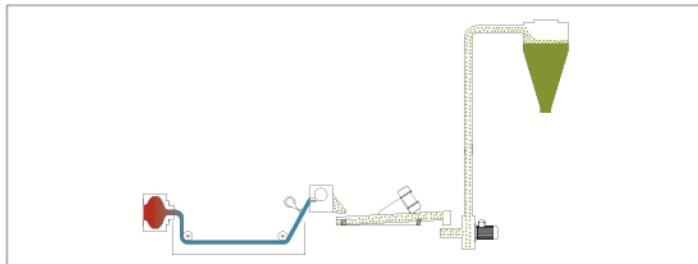
# Pelletizing system



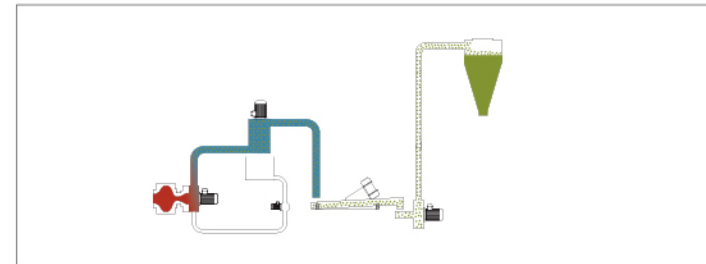
Water-ring pelletizing system



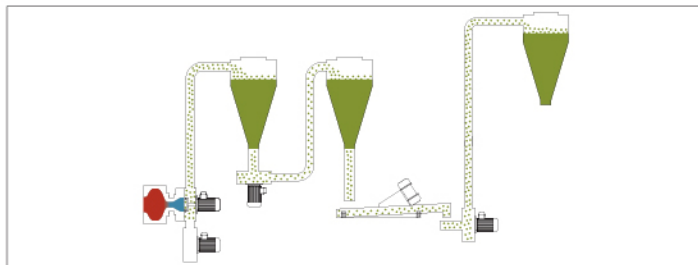
Automatic strands pelletizing system



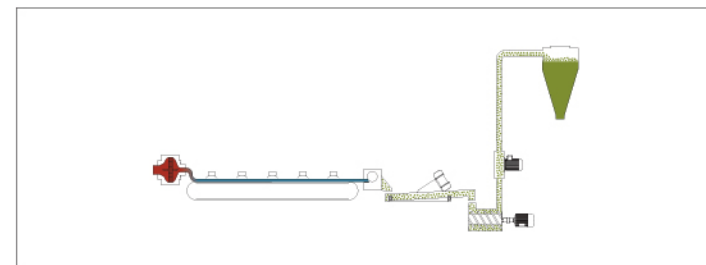
Water cooling strands pelletizing system



Under-water pelletizing system



Air cooling hot air die head pelletizing system



Air cooling strands pelletizing system



# SCF series disc-type self-cleaning filtration system

## Non-mesh design

The new SCF self-cleaning filtration system makes non-stopping recycling extrusion, especially suitable to highly contaminated materials re-pelletizing. Different from traditional screen changers, which requires timely changing the dirty wire mesh, the SCF system will present continuous filtering performance, and remove the contaminates from the surface of steel screen plate automatically. The SCF filtration system consists of hardened steel screen plate, rotating unit, hydraulic section, scraper blades and discharge screw.

## UP TO 5%

SCF filtration system can handle and remove up to 5% contaminates in the melt flowing, can separate the contaminates such as paper, wood, aluminum, unmelted plastic and rubbers etc.

## SCF typical features



Non wire-mesh required, long using life of disc screen plate



Reliable Continuous Filtration with stable pressure



Self-cleaning job done in the filtering room, friendly to the environment and not pollute the air



Filtering accuracy can reach 120µm, can handle and remove up to 5% contaminates



Less back-pressure in the filtering room thanks to short flowing channel and big filtering area



Larger filtering area, up to 2.32 million micro-drilled holes



Automatically wiping action to assure constant self-cleaning of screen plate



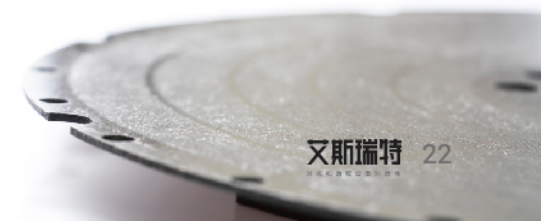
Lower waste of melt stream while discharging the impurities



Easily operation for replacing the disc screen in 30 minutes



PLC control to present fully automation





## Bottle to Bottle Food-grade Pelletizing System

The latest efficient recycling solution. Thanks to the vacuum technology, the SSP IV increasing technology, and the pelletizing extruder specially made by Aceretech, the IV value of the final PET granules can meet the requirements, and this value can be stably maintained. Even there are uneven IV values and moisture content of the raw materials, the final pellets can be maintained at a reasonable, qualified IV value within a set interval, meanwhile the quality and the output are always stable. It can maintain a stable IV value output for further downstream processing and molding, such as stretch blow molding, up to 100% bottle-to-bottle technology in new bottles.

PET SSP



## LSP liquid state polycondensation



### Applicable materials

PET film, sheet, scrap, perforated waste or fabric fibers, polyester cloth and waste silk and etc.

### Features

For this LSP equipment, the Spray cooling vacuum exhaust device and the multi-screw large area vacuum exhaust extruder are the core equipment. Compared with the normal exhaust device, the Spray cooling vacuum exhaust device can increase the empty surface area of PET melt to 1000 times, while the multi-screw large area vacuum exhaust extruder can not only increase the surface area of PET melt, but also can achieve PET homogenization. These two devices combined with a powerful vacuum pump can fully remove the glycol in PET and improve the degree of polymerization of the melt. This process will promote the production of PET new molecule, finally achieve the purpose of increasing the intrinsic viscosity (IV) of PET.

# Shredder and Crusher

In the whole A to Z process of plastic recycling, shapes and sizes of waste plastics vary greatly. In order to facilitate the recycling operation, plastics are usually processed in a uniform size, that is "size reduction", which helps a lot to further processing and transportation.

Generally process of size reduction is divided into two steps: pre-shredding and fine grinding. Large, thick and bulk materials need to be pre-shredded before further fine grinding. Fine crushing as second step, for size homogenization, which is convenient for transportation and subsequent operations.

As a professional manufacturer of plastic recycling equipment, ACERTECH provides series of single-rotor shredders and crushers for various plastic materials to get uniform size. With modular design and targeted rotor structure, it realizes uniformity, continuity and reliability of shredding and crushing.



### Design principle in full view: manufacture as needed

ACERTECH specializes in design, planning and manufacturing overall plan for recycling plastics. We provide optimized solutions for different application scenarios, so that shredder and crusher meet actual needs, and can be friendly applied to related operations, which is the original intention of our design and manufacture shredders and crushers.





## Screw dryer

Equipped with double- shaft disintegrator



### Screw dryer

This screw dryer has the following characteristics:

- 1.This machine is our new designed machine, specially double- shaft disintegrator design;
2. This machine is especially for plastic film, plastic bags, woven bags, Solve the drying problem for soft plastic.
3. After drying, the moisture will be 5-10%.
- 4.Energy saving and high efficiency, low power, high output.

### Product parameters

Screw dryer		
Motor power	22 kW	45 kW
Screw diameter	φ390 mm	φ490 mm
Hydraulic power	1.5 kW	1.5 kW
Output	500-800 kg/h	1000-1500 kg/h
Equipped with double- shaft disintegrator		
Motor power	11 kW	

## Pulverizer Machine

The ultra-high output unit is equipped with automatic temperature control



### Technical features:

- Dosing channel/Vibratory feeder
- Pulverizer housing
- Pulverizer discs
- Temperature control
- Drive and mounting frame
- Safety devices

### Pulverizer Machine

The PM serie pulverizers are ultra-high output units that can be equipped with automatic temperature control. The material to be pulverized is fed centrally between fixed and high-speed rotating pulverizing discs, which have a centrifugal effect, allowing the material to pass through the processing zone and then be pneumatically discharged from the machine.

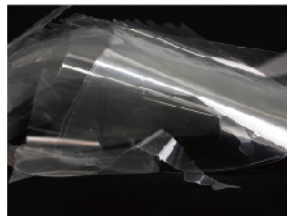
### Advantages

- 1.Long service life of discs between regrindings.
- 2.Replace and adjust discs quickly and easily.
- 3.Low residence time means low thermal stress on the process material.
- 4.High throughput capabilities.
- 5.Cost effective operation.





## PP/PE film and woven bags recycling washing system

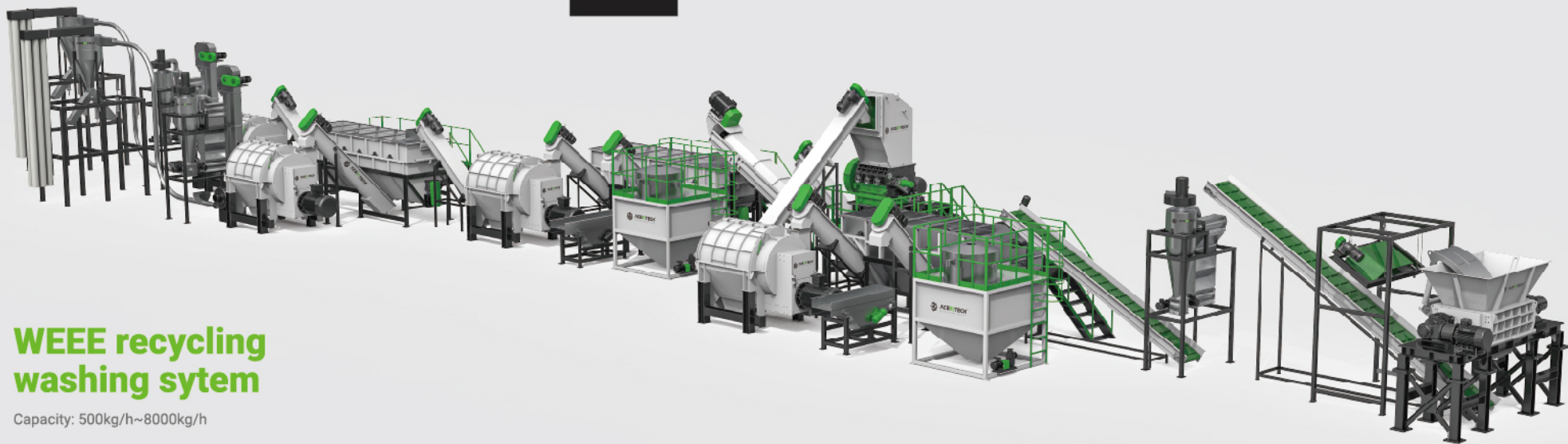


### Washing line

For the plastic recycling industry, ACERTECH can offer a series of well-developed recycling washing and pelletizing lines for the efficient recycling of all kinds of plastics material.

### Recyclable material:

- LDPE/HDPE/LLDPE/PP Agricultural film
- Post-consumer film
- PP woven/jumbo bags
- Other recyclable plastics



## WEEE recycling washing system

Capacity: 500kg/h~8000kg/h



### Materials: ABS/PP/PE/PS

ACERETECH team has many years of research and development experience in household appliance cleaning and recycling lines and has designed washing and recycling solutions for washing, separating, and drying plastic and electronic equipment waste.

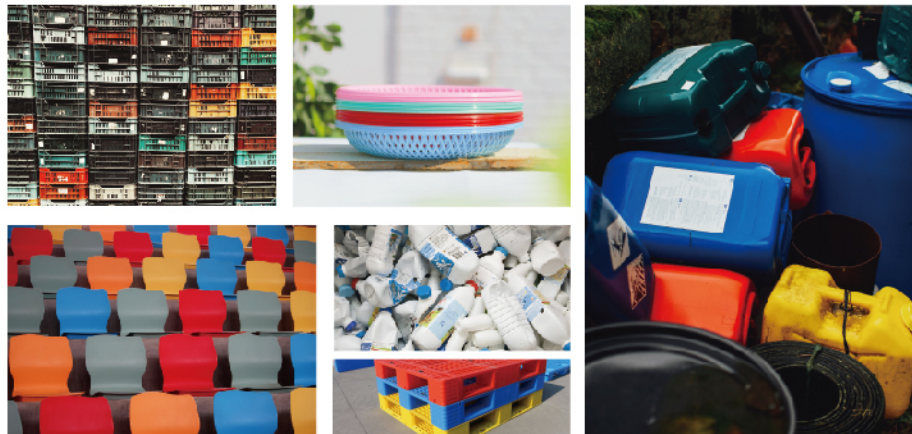
The WEEE recycling line developed by the ACERETECH team uses density separation (salt water) to achieve high purity PS and ABS materials with consistent performance.





## Post - consumer recycling washing system

Capacity: 500kg/h~6000kg/h



In the field of PE/PP/PS recycling projects. Most of the materials come from urban and industrial collection sites, their sizes vary, and the composition of raw materials is different from country to country, even though the composition of PE-PP- PS in the same country is different.

ACERTECH series Washing Line is designed for recycling daily-use plastic products. Through sorting, crushing, and washing, clean and reusable materials can be obtained for downstream use.

The raw materials that can be processed by this system are HDPE/PP bottles and utensils, HDPE/PP barrels and boxes, and HDPE/PP daily-use rigid plastics.

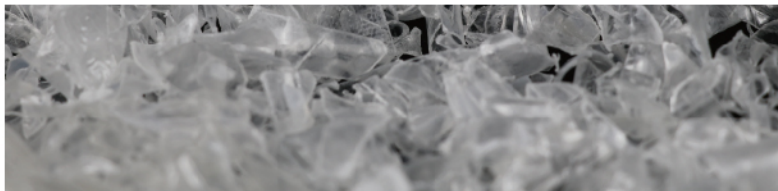


## PET bottles recycling washing system

Capacity: 500kg/h~12000kg/h



◀ PET bottles



▶ PET bottle flakes

In the field of HDPE/PP/PS/ABS/PC/PET recycling projects. Most of the materials come from urban and industrial collection sites, their sizes vary, and the composition of raw materials is different from country to country, even though the composition of HDPE/PP/PS/ABS/PC/PET in the same country is totally different.

ACERETECH team integrated the washing line technology in Europe and China and continuously optimized it. Finally, it developed a series of modular equipment that can adapt to the different characteristics of HDPE/PP/PS/ABS/PC/PET materials. Aiming at blow molding packaging bottle/box/cup/barrel/bucket and injection waste recycling. It can realize a washing and recycling line and handle hard materials at the same time. And flexible plastic.

Including sorting, size reduction, metal removing, cold and hot washing, high efficiency friction washing and drying modular.







## Data terminal consultant system for Intelligent Machine

ACERETECH in the digital process

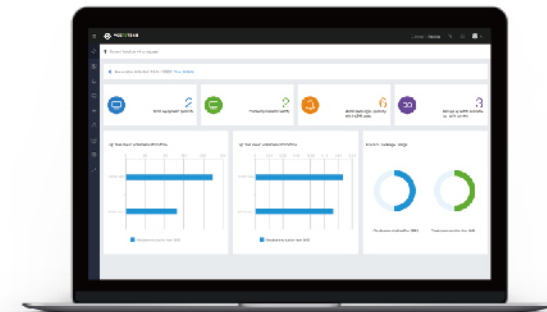
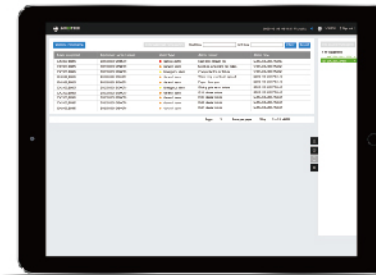
Equipment maintenance includes functions such as automatic notification of planned maintenance of equipment, convenient and rapid formulation of work orders for equipment failure maintenance, and timely execution of maintenance and repair. All steps of execution and processing are sent online and in real time with short messages to ensure efficient maintenance of equipment and reduce downtime. Time, improve production efficiency, and ensure equipment utilization. Support data analysis and decision-making functions. The data provided by the system can grasp the production operation indicators such as equipment failure rate in time. The equipment maintenance data can be quickly analyzed and summarized, which is beneficial for management to make business decisions.



## Aceretech intelligent manufacturing-cloud based MES manufacturing execution system Build a digital factory, realize lean production

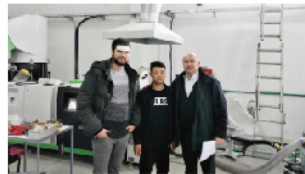
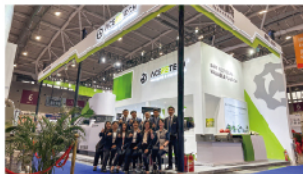
-  Fully electronic and standardized storage of equipment ledger for easy traceability and analysis; accurate production, work efficiently, reduce costs
-  Record equipment operation efficiency in real time for predictive maintenance; improve overall equipment efficiency, plant productivity, machine downtime
-  Support live photos, voice and text records and real-time feedback; production data intelligent analysis to guide production and find problems
-  Mobile end pushes maintenance tasks, quick response for maintenance; real-time monitoring machine status to improve planning flexibility

• Mobile and computer





## ABOUT US



## SERVICE AND SUPPORT

### What can we do for you?

Aceretech can provide washing and pelletizing turn-key solution for all customers. Please contact professional sales team from Aceretech, they will provide you with the customized solutions. All the design drawings and technical specifications can be provided according to your request.

#### Installation, Testing and Training

Aceretech can arrange engineer to customers' factory for installation, testing and training according to your needs. It will facilitate a better integration for the new factory and new machine.

Engineer can offer training lessons at customer's factory during the installation, customer can also send their engineer to Aceretech for training. The technician from Aceretech will introduce all the parts of operation and maintenance equipment for customers' engineer. Aceretech will provide detail instruction manuals for all the customers, operation will be more convenient.

Before delivery, Aceretech will also provide you layout drawings and other installation requirements, it will help your operators are fully prepared for production, and improve operational efficiencies. Please contact sales from Aceretech arrange on-site work.

#### Spare Parts

Aceretech has spare parts in stock and our highly efficient service staff will ensure that any required parts are shipped without delay. Spare parts can be transported by air, by sea or by courier, depending on the emergency condition. We encourage our customers to hold their own key spare parts, such as pelletizing blades and rubber sealings to ensure best machine conditions and production performance incase spare parts delayed.

#### Service Support

Your Aceretech sales representative will provide you professional consult, online service and spare parts.