



SINGLE SCREW EXTRUDER TT-ASE

The Single screw extruder TT-ASE stands out as a specialized and dependable solution, designed for recycling and re-pelletizing rigid plastic scrap. This ASE Single screw extruder system seamlessly combines plasticization and pelletizing into a single step, making it perfect for processing crushed regrinds or flakes of PE/PP/ABS/PS/HIPS/PC, and more.

The end products from the Single screw extruder TT-ASE line come in the form of pellets or granules, ready to be seamlessly integrated into the production line for film blowing, pipe extrusion, plastics injection, and other applications.

APPLICATIONS

- **Rigid Plastic Recycling:** Re-pelletizes crushed flakes and regrinds of PE, PP, ABS, PS, HIPS, PC, and PET.
- **Film Production:** Supplies recycled pellets for film blowing and packaging film manufacturing.
- **Pipe Extrusion:** Produces granules suitable for pipe and profile extrusion applications.
- **Injection Molding:** Recycles waste plastics into pellets for molding automotive parts, housings, and components.
- **Packaging Industry:** Reuses pellets for containers, caps, closures, and rigid packaging products.
- **Textile & Fiber Applications:** Converts plastic waste into granules for fiber and filament production.
- **Large-Scale Recycling Plants:** Supports continuous operations with capacities ranging from 120–1000 kg/h.
- **Sustainable Manufacturing:** Enables closed-loop recycling systems, reducing raw material costs and environmental impact.

FEATURES

Screw loader conveying flakes to single-screw extruder

SCREW LOADER

- Transfers crushed lumps or thick flakes into the single-screw extruder.

- Extruder compresses, plasticizes, and removes volatiles via vacuum.
- Material is filtered, then pelletized into uniform granules.
- Typical capacity: 100–1000 kg/h (based on screw diameter).
- Loading motor power: 2.2 kW.
- Stainless conveying pipe: 2 mm inner thickness, 102 mm diameter.

Volumetric main feeder with stirring screw and level indicator

MAIN FEEDER (VOLUMETRIC)

- Feeds material into the extruder with consistent dosing.
- Stirring screw prevents bridging at the hopper base.
- Hopper includes a level indicator for stable operation.
- Optional side feeders available for compounding applications.

Single-screw extruder for gentle plasticization and blending

SINGLE SCREW EXTRUDER

- Gently plasticizes and blends for thorough homogenization.
- Bi-metal barrel and screw resist corrosion and wear.
- Designed for stable output and long service life.

Extruder barrel with extended L/D and dual filtration options

BARREL

- High L/D enables single-stage to perform like double-stage.

- Middle double-piston screen filter improves melt cleanliness.
- Optional end filter for a dual-filter setup and better pellet quality.

Dual vacuum degassing zones on extruder

DOUBLE VACUUM DEGASSING ZONES

- Efficient removal of volatiles, micro-molecules, and moisture.
- Enhances pellet quality and surface finish.
- Well suited for heavy-printed materials and recycled feeds.

Liquid outlet configuration for multi-stage pelletizing lines

LIQUID OUTLET

- Supports improved melt filtration for higher production needs.
- Two or more single-screw extruders can feed a second stage.
- Parallel feeding increases efficiency on demanding jobs.

Non-stop piston type melt filter at extruder head

NON-STOP PISTON TYPE FILTER

- Choose single-plate/piston double-station or non-stop double-plate/piston four-station.
- Large filter area extends screen life and reduces change frequency.
- Quick screen changes without stopping production lower operating cost.

Continuous plate-type melt filter with dual plates and ring heater

PLATE TYPE FILTER

- Continuous design with two filter plates for uninterrupted flow.
- One plate remains active during screen changes.
- Ring-shaped heater provides consistent thermal stability.

SCF self-cleaning filtration system for contaminated melts

SELF CLEAN FILTER

- Proprietary SCF technology enables continuous, interruption-free recycling.
- Handles highly contaminated feeds with stable throughput.
- Removes up to ~5% contaminants (paper, wood, aluminum, unmelted plastic, rubber).

Water ring pelletizing head with automatic blade pressure control

WATER RING PELLETIZING SYSTEM

- Self-adjusting head maintains correct blade pressure for pellet quality.
- Blade RPM auto-adjusts with melt pressure for consistent cut length.
- Fast blade changeovers with no extra adjustment work.

Underwater pelletizing system with dewatering and conveying

UNDER-WATER PELLETIZING SYSTEM

- Automated system for high-MFI materials and large outputs.

- Includes pelletizer, valve, conveying pipeline, dewatering screen, and silo.
- Delivers uniform pellets with streamlined post-processing.

Vibration sieve with horizontal centrifugal dewatering

VIBRATION DRY

- Dewatering vibration sieve plus horizontal centrifugal unit.
- Produces dry pellets with lower energy consumption.
- Screw-mounted sieve assembly enables quick, tool-friendly changes.

Recycled plastic pellets as final product

PLASTIC PARTICLES

- Final output: uniform plastic pellets.
- Ready for reuse in high-quality plastic production.

Packing system with drying shaker, horizontal centrifuge, and weighing

PACKING SYSTEM

- Stores qualified granules after drying and dewatering.
- Drying shaker with horizontal centrifuge reduces moisture and energy use.
- Online capacity monitoring and quantitative weighing ensure accuracy.

System advantages summary

ADVANTAGES

- Lower initial investment for a durable, high-quality machine.
- Low energy use with high production output.
- Available overseas installation and training services.
- Warranty coverage with stocked spares for quick delivery.

TECHNICAL SPECIFICATIONS

Target Recycled Material	HDPE,LDPE,PP,BOPP,CPP,OPP,PA,PC,PS,PU,ABS,PET Final Product Shape: Particles			
System composition	Screw Loader, Single Screw Extruder, Filtration first, Vacuum Degassing, Pelletizer, Water Cooling Device, Dehydration Section, Conveyor Fan, Product Silo.			
Feeding Device	Belt Conveyor (Standard), Roll Hualing off device (Optional)			
Material of Screw	Bimetal			
Heater of Barrel	Ceramic heater or Far-infrared heater			
Vacuum Deashing Exhaust	Two Double-zone vacuum degassing system (Standard)			
Pelletizing Type	Water-ring pelletizing/ water-strands pelletizing/ Under-water pelletizing			
Technical Services	project design, factory construction, installation and recommendations, commissioning			
Parameters				
Machine Model	Screw Diameter	L/D	Extruder Motor	Output Capacity
	(mm)		(kw)	(kg/h)

TT-ASE80	80	38	55	120-160
TT-ASE100	100	38	110	260-350
TT-ASE120	120	38	160	330-480
TT-ASE140	140	38	200	550-650
TT-ASE160	160	38	250	600-800
TT-ASE180	180	38	315	800-1000



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