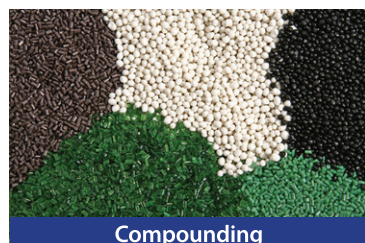




Polyolefin Pelletizing

☐ Polyolefin Pelletizing

- Jumbo Extruder
- Underwater Pelletizer



Compounding

☐ Polymer Compounding

- Color/filler and functional MB
- Engineering plastic reinforcement
- TPE/TPR/TPV
- Cable compounding



Foam Extrusion

☐ Polymer Foam Extrusion

- CO2 foam XPS board
- Graphite EPS beads pelletizing
- PET Foam Core
- PLA Foam Beads pelletizing
- XPE Foam Sheet



Direct Extrusion

☐ Direct Extrusion

- EVA/POE solar film
- UHMWPE battery separator film
- BOPET/BOPA/BOPP film extrusion
- Steel pipe coating



PET Recycling & Extrusion

☐ PET Recycling & Extrusion

- Bottle flakes recycling (BTB)
- PET fiber/film recycling
- Undried PET sheet extrusion
- PSF/POY direct extrusion



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JUMBO COMPOUNDER

■ Applications ■ Features ■ Jumbo ■ TDD ■ Data sheet ■ Pelletizer



Walk The Talk



USEON has been pushing the boundary of China-made twin screw extruders. Since the first set of China-made high torque twin screw extruder installed in 2007 at Useon, there has been more than 2700 sets of Useon-made high-performance twin screw extruders working worldwide. Over the years, SAT series have stood the test of time. Now the brand-new SAT series redefine the art of the state.

S-Safety—stability creates productivity. Safety provides stability. SAT series are designed on the basis of sufficient safety protection both in mechanical and electrical ways.

A-Accuracy—accuracy means accurate control that is supported by high precise mechanical parts, ingenious design and reasonable electrical program control. The high precise screw and barrel provides excellent self-cleaning capability, as well as accurate residence time control.

T-Torque—increasing specific torque ratio without compromising safety factor, newly SAT has brought the specific torque factor up to 15 Nm/cm³ that can make the polymer extrusion process with less energy, yet better quality.

SAT-A MILESTONE OF USEON

SAT series stands for Useon's standard compounder for most polymer processing. We not only provide high quality machines, but also can help you develop the new applications of SAT. The screw speed ranges from 100 up to 1200rpm. The L/D ration covers from 20 up to 72. The degassing or vacuum system and side feeders can be incorporated into SAT system easily. It provides the optimal cost-effective investment.



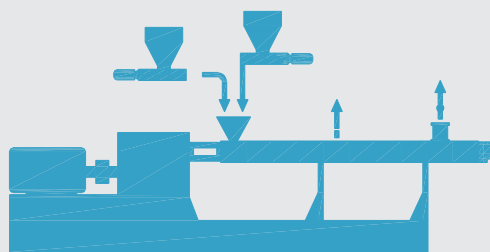


New SAT is able to achieve more delicate processing task, precise process control can meet complicate and sophisticate processing purpose. Better dispersion, more accurate temperature control and higher throughput have been integrated and optimized further.

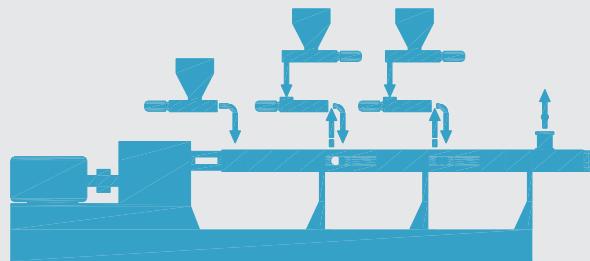
The procedural steps in compounding include:

SAT authentically explains one-for-multiple. More powerful gearbox, more precise screw elements endow SAT more flexible processing range and wider operation window. We also provide individual solution according to customized requirements. Variety of modular screw elements, barrels, melt filtration and pelletizing system will cater for your unique requirement.

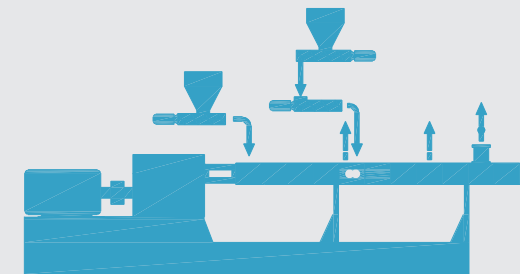
Metering > Feed intake and conveying > Melting > Dispersing/Homogenizing > Degassing > Pressurization > Filtering > Pelletizing > Packing



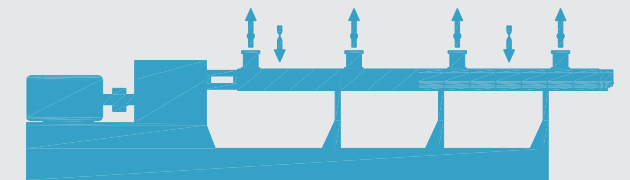
Homogenizing of Polymers



Plasticizing and Alloying



Large Scale In-line Compounding



Reactive Extrusion and Degassing



Applications

- ▶ Homogenizing of Polymers
- ▶ Blending of Polymers With Different Viscosities
- ▶ Reactive Processing Polymer Extrusion
- ▶ Degassing From Polymer Solutions
- ▶ POE / EAA / POP
- ▶ Extruded EPS / EPLA Beads Production
- ▶ Pelletizing of Polymer Melts And Elastomers
- ▶ ABS / POM
- ▶ Big Scale BOPET / BOPP / BOPA Film Extrusion
- ▶ UHMWPE Film / Fiber Extrusion

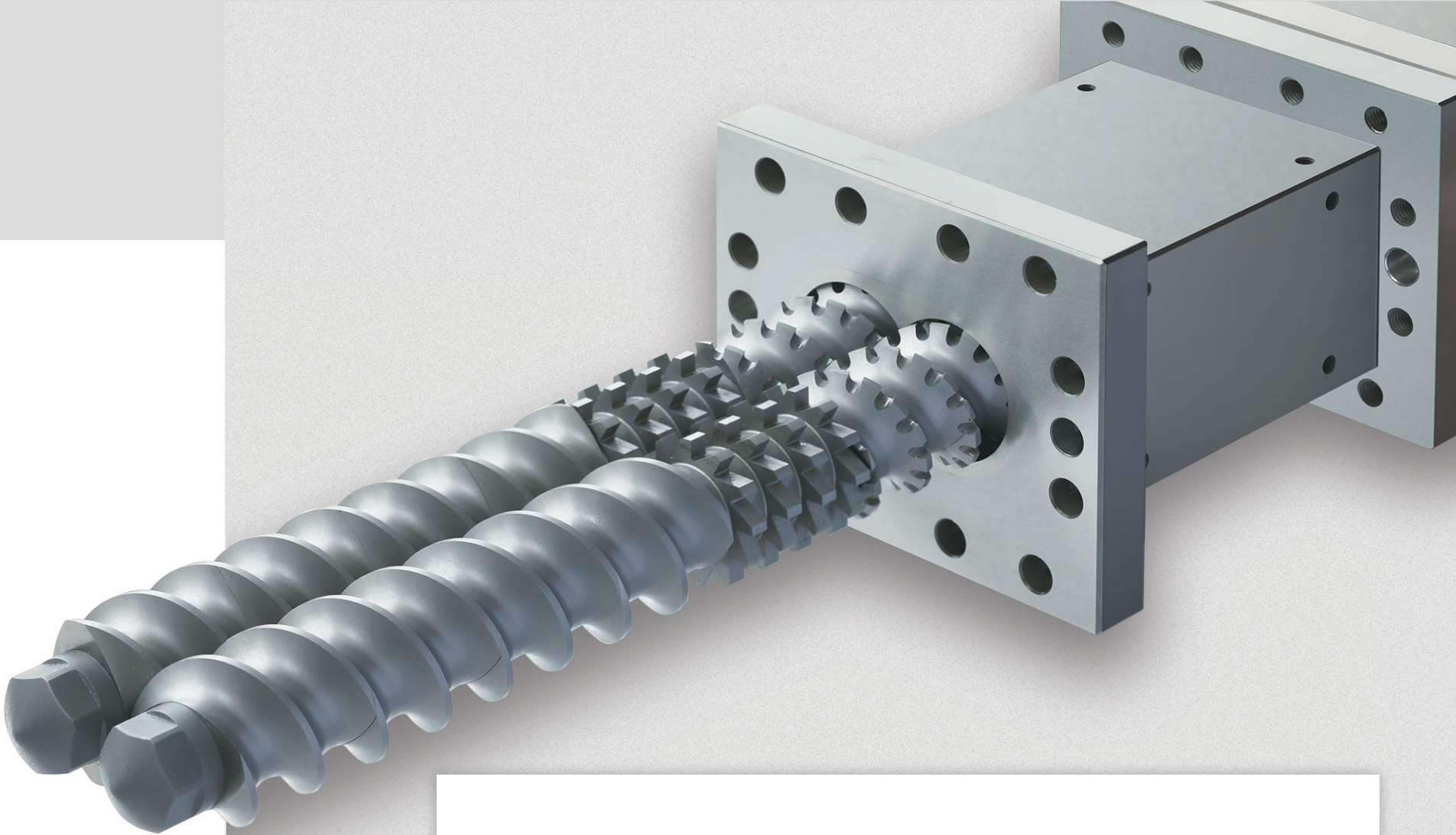
Screw Elements

Precise screw elements made by CNC tools provide SAT better intermeshing and self-wiping performance which ensures the entire processing no dead corner and better control in RTD (residence time distribution).

The ratio of outside diameter and inside diameter determines the free volume. SAT series extruder feature the excellent self-wiping functions. Combining with screw torque and free volume, the Do/Di of SAT is optimized at 1.55 that provide sufficient torque while remain enough free volume.

Except various screw geometry, we supply several materials of screw elements for different processing purpose. We also can configure different screw materials in different processing section to optimize the lifetime of the complete screw.

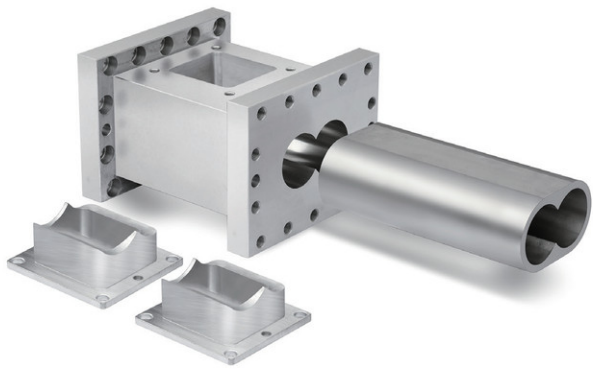
Material	Description	Hardness	Abrasion	Corrosion
W6Mo5Cr4V2	Through hardened tool-steel	58~60HRC		
Cr12MoV	Through hardened alloy steel	58~60HRC		
SAM10/CK45	HIP-composite bimetal steel	58~62HRC		
38CrMoAlA	Hardened and tempered nitrided steel	>HV940		
440C	Hardened Stainless steel for food	54~56HRC		
C-276	Hastelloy	180HB		



Barrels / Liners

SAT adopts ingenious cooling channel design which provides more efficient cooling performance and easier maintenance job. Modular design allows barrel sequence can be optimized with different barrel material as per the characteristic of processing task.

To ensure the precision, all SAT barrels are processed by CNC machines and checked by CMM (Coordinate Measuring Machine). We have various barrel structures to cater for different feeding types, venting types and liquid injection.



Material	Description	Hardness	Abrasion	Corrosion
Cr26MoV	Through hardened alloy steel	60~62HRC		
W6Mo5Cr4V2	Through hardened tool-steel	60~62HRC		
Ni60+25%WC	PM boned HIP nickel base material	62~64HRC		
38CrMoAlA	Hardened and tempered nitrided steel	>HV940		
440C	Hardened Stainless steel for food	54~56HRC		
C-276	Hastelloy	180HB		



Jumbo Twin Sciew Compounder

USEON provides the Jumbo extruders for huge capacity polyolefin compounding. The maximum throughput can reach up to 35 tons/hr. Our supply scope covers from automatic raw material conveying to compounder, then from pelletizing to packaging.



Gear Box



Clutch



Barrel



Screw



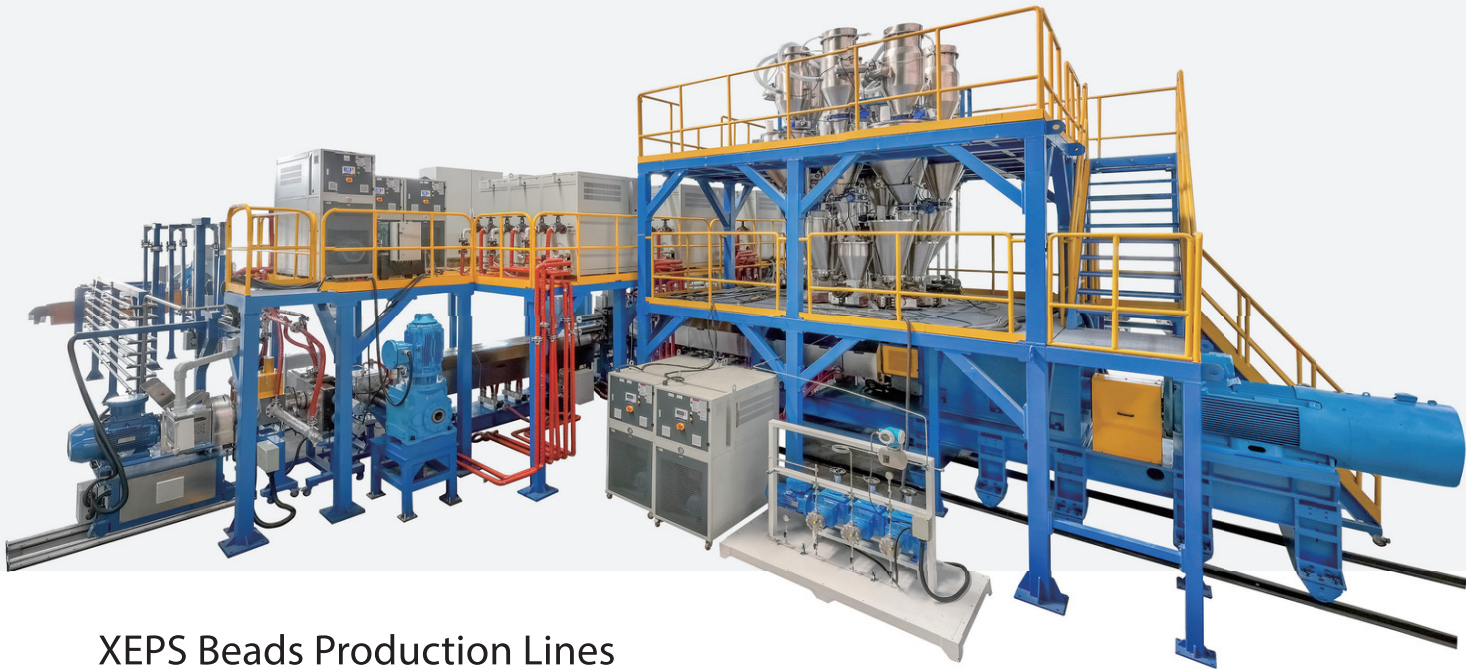
Vent Section



Diverter & UWP

TECHNICAL DATA SHEET

Model	SAT130	SAT150	SAT-175	SAT-260	SAT-330	SAT-360
Diameter mm	130	150	175	260	330	360
Speed control	Inverter	Inverter	Inverter	Inverter	Manually	Manually
Motor kW	1250	1500	2000	3500-4500	6500-10000	9000-15000
Power Supply kV	6.6-10	6.6-10	6.6-10	6.6-10	6.6-10	6.6-10
Specific Torque Nm/cm ³	12	12	12	12	12	12
Output / KTA	50	60	70-80	100-150	200	300-400



XEPS Beads Production Lines

A New Member of Polystyrene Insulation Family

Graphite enriched EPS can reduce the thermal conductivity by 20–30%. Thanks to our own graphite EPS beads factory where we installed 7 lines, our wealthy experience can help you launch this project successfully.

This line also can turn EPS waste into EPS beads again, making the EPS recycling into a circular economy mode.

Tired of white EPS packaging materials? ECOFEL™ can produce EPS beads in any color.



TECHNICAL DATA SHEET

Model	Output	Transformer required
SAT110–TDD200	800–1,000kg/hr	600KVA
SAT135–TDD250	1,500–2,000kg/hr	800KVA
SAT175–TDD400	3,000–4,000kg/hr	1,250KVA

Tdd Single Screw Compounder

TDD series single screw extruder are specially designed for shearing or temperature sensitive melt material extrusion. With venting design for better degassing. In reaction and devolatilization extrusion, USEON has a long tradition and wealthy experiences.

Due to its unique working principle, the relative line speed is low so that the material can be processed under very low shear force and fast exchange rate of material turn over.

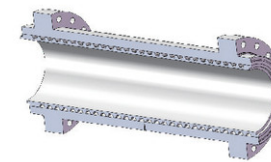
Featured Design

Special cooling design on barrel for high efficiency and high precision temperature control.

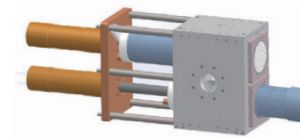
Special degassing system for VOC control

Two driving shaft gear pump for less temperature increasing

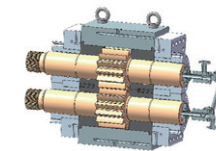
Big surface filter for less back pressure.



Barrel



Screen Changer



Gear Pump

TECHNICAL DATA SHEET

Model	TDD250	TDD300	TDD400	TDD500
Diameter mm	250	300	400	500
Max. Speed rpm	150	120	100	80
Motor kW	600	900	1200	1500
Screw Length L/D	20–44	20–44	20–44	20–44
Output / KTA	20–30	40–60	50–70	70–100



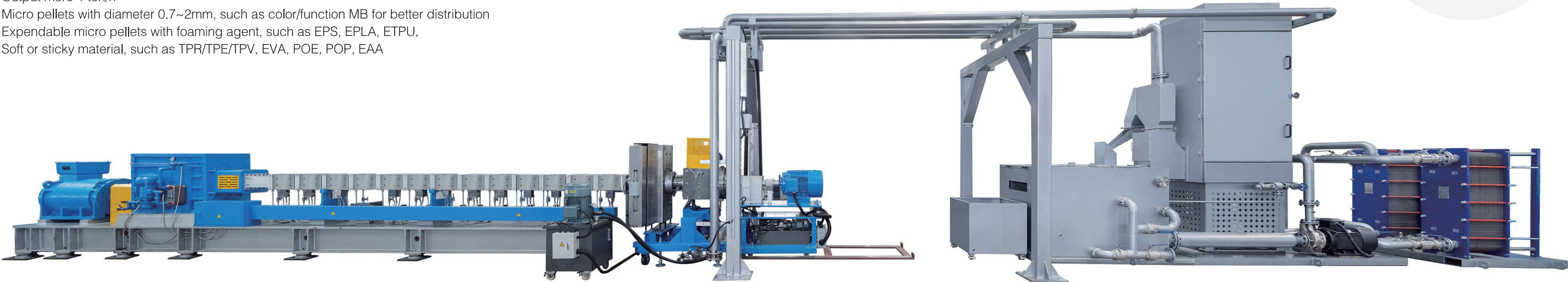


Under Water Pelletizing System

Underwater pelletizing system can handle almost all kinds of polymers. Comparing with other pelletizer, underwater is more compacted which is more obvious when the output is huge. The size of final pellets also can be better controlled.

Application

- Output more 1 ton/h
- Micro pellets with diameter 0.7~2mm, such as color/function MB for better distribution
- Expendable micro pellets with foaming agent, such as EPS, EPLA, ETPU.
- Soft or sticky material, such as TPR/TPE/TPV, EVA, POE, POP, EAA

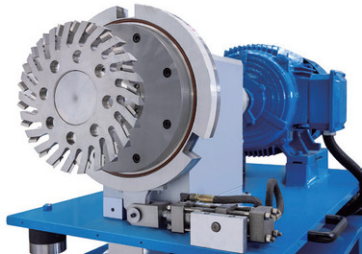
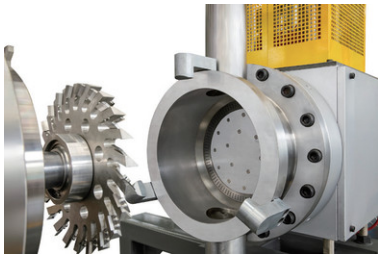


Main Parts

- Diverter
Discharge position/Working position, Hydraulic driving
- Pelletizer:
Die plate heating: electrical heater or oil
Knife moving: hydraulic
Online polish for knife
One button start/stop
Knife length indication
- Water circulation system:
Water level: adjustable one HMI
Water flow control by speed of pump
Water pressure indication
Dewater with degassing fan and filter
Water temp. control: Including heater, heat exchanger,
Proportional valves for outside cooling water.

TECHNICAL DATA SHEET

Model	UP1000	UP4000	UPD250	UPD300	UPD400
Diverter	D50	D60	D70	D120	D160
Hole No.	40~80	100~160	700~1000	1000~2000	2000~3000
Knife No.	8~12	12~18	16~22	16~24	20~40
Knife moving	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Water system	W1000	W2000	PCW250	PCW300	PCW400
Output kg/h	~2000	3~8ton/h	10~20t/h	20~35t/h	35~50t/h





■ Applications ■ Features ■ Jumbo ■ TDD ■ Data sheet ■ Pelletizer

Applications



Model: SAT 175
Motor: 2000KW
Output: 70KTA
Material: PP



Model: SAT 175
Motor: 1850KW
Output: 50KTA
Material: HDPE



Model: SAT 260
Motor: 3150KW
Output: 120KTA
Material: PP

Useon - Your Reliable Partner

Only with customer's support and trust, can we achieve more. A good strategic relationship can put both parties in win-win position, yet it can contribute to the industry. Many of our improvements were the result of working with customers, in this course, we witnessed the growth each other.

Cooperation Begins Understanding - Welcome To Consult Us

If you are a rich-experienced user of twin screw extruder, you could purpose any possible requirements on equipment and USEON will carry out your idea with our optional equipment. We can discuss further to determine the final solution.

If you have no professional know-how on extruder, our experts would like to share our expertise and knowledge with you to get the most reasonable solution and equipment. Our team will help you complete the whole project in a turn-key way.

In addition, our well-equipped lab center is open for you. We welcome you to test your new material, new recipe, new process and new ideas before you make decision. Our professionals are here for you.

How To Select A Suitable Extruder

Learn comprehensively about processing characteristics of your raw material and identify which type of screw extruder is suitable for your case.

Determine the main parameters, i.e. L/D, screw diameter, driving motors, screw speed according to throughput and process.

Select the auxiliaries, i.e. material loading, feeding, vacuum units, screen changers and pelletizing units according to the process purpose. Whether you purchase single set of extruder or a complete project, our experts will give you professional advice.

