



HTM TWIN-SCREW EXTRUDER

Counter-Rotating,
Non-Intermeshing
Twin-Screw Compounding Extruder



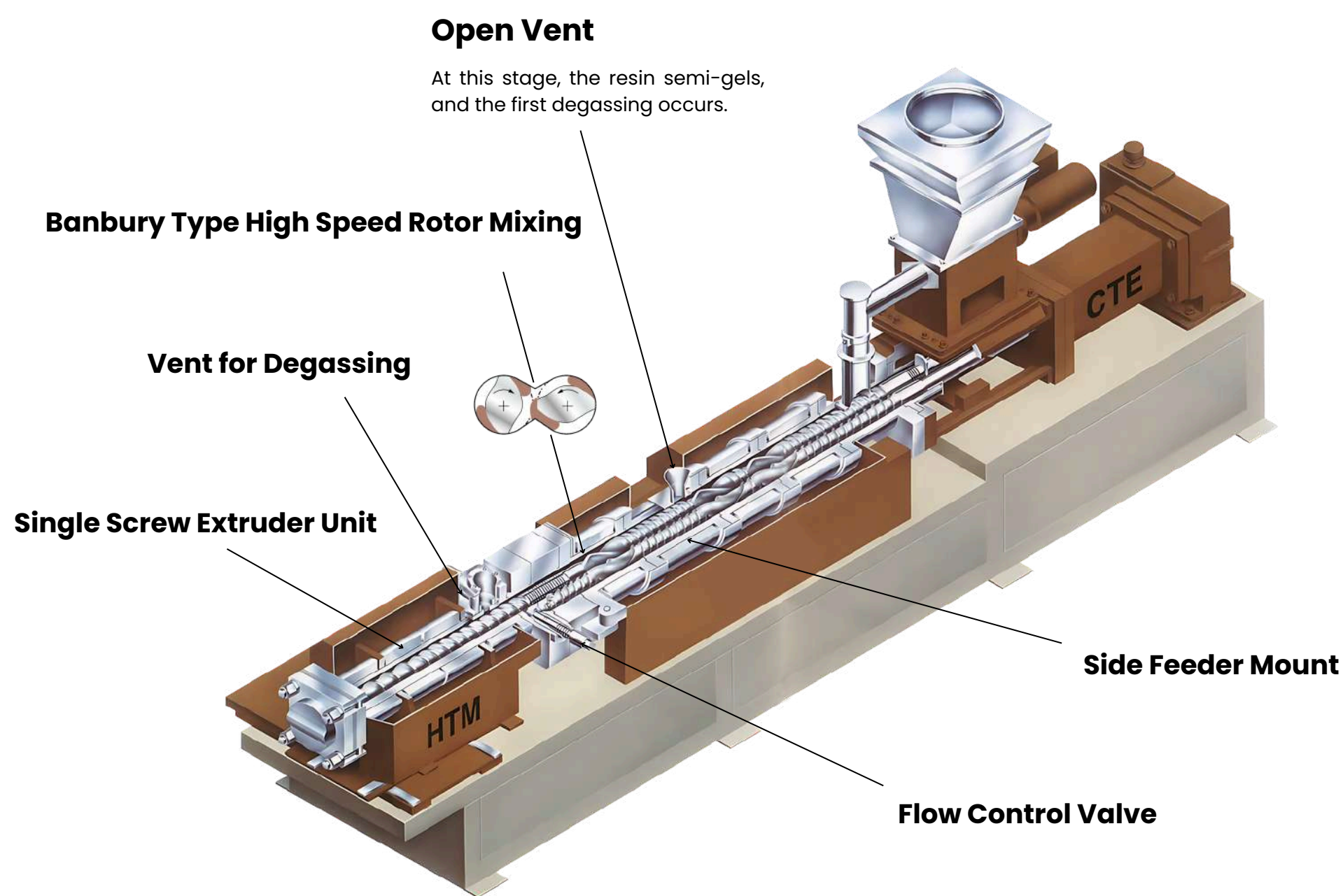


Unmatched Performance for High-Filled Compounding!

The HTM Twin-Screw Extruder is a patented product built on CTE's advanced extruder technology, utilizing a counter-rotating, non-intermeshing twin-screw design. This system excels in high-filled compounding, providing superior kneading and dispersion capabilities.

The HTM effectively degasses air and gases trapped during material melting, ensuring optimal dispersion and preventing resin degradation. With its world-class performance, the HTM Twin-Screw Extruder is the leading solution for high-filled applications.

- #WoodFlour
- #WoodPlastic
- #WPC
- #ChemicalRecycling
- #MaterialRecycling
- #Recycling
- #PETFilm
- #NylonFiber
- #Regrind
- #Cellulose
- #InorganicFiller
- #Pulp
- #ContainerRecycling
- #Kenaf
- #Nanofiber
- #MagnesiumHydroxide



Specification	HTM-38	HTM-50	HTM-65	HTM-78	HTM-90
Screw Diameter / mm	38	50	65	78	90
Screw L/D	42:01:00	42:01:00	42:01:00	42:01:00	42:01:00
Screw Rotation (Max.) / rpm	800	800	700	700	600
Heater Capacity / kW	40	60	105	140	180
Motor Capacity / kW	22~37	45~75	90~160	160~250	250~350
Max Extrusion Rate (ABS) / kg/h	200	400	900	1,400	2,000



Superior Performance for Wood Flour Compounding!

The HTM Tandem Compounding Twin-Screw Extruder excels in wood flour compounding without the need for pre-drying. It allows direct feeding of non-dried wood flour (with a moisture content of 4-10%) and PP into the extruder for pelletization. This process enables significant reductions in equipment size, building footprint, and energy consumption, leading to substantial cost savings in production. Additionally, the system prevents wood flour from burning, maintaining the color quality of the final product.



Formulation Guide (kg/h)

- Compound and Extrusion Rate Examples (kg/h)
- The extrusion rates in the table are reference values.
- Example: HTM-38/75 → Twin-screw diameter = 38mm, Single-screw diameter = 75mm

Formulation Guide	HTM-38	HTM-50	HTM-65	HTM-78	HTM-90	HTM-105	HTM-120
Nylon Waste Yarn Ground Product (Bulk Density ≤ 0.05)	50	100	200	300	400	600	800
PET Film Ground Product (Bulk Density ≤ 0.04)	50	100	200	300	400	600	800
Rigid Re grind (MFR = 2~9, Bulk Density 0.6)	100	200	400	600	800	1200	1600
PP + Magnesium Hydroxide 60%	100	200	400	600	800	1200	1600
LDPE + Carbon 45%	80	150	300	450	600	900	1200
PP + Titanium Dioxide 60%	80	150	300	450	600	900	1200
PA6 + Glass Fiber 30%	100	200	400	600	800	1200	1600
Recycled PP + Wood Flour 50%~	50	100	200	300	400	600	800
PLA + Wood Flour 10~60%	50	100	200	300	400	600	800
PBS + Cellulose 50~60%	50	100	200	300	400	600	800
PP + Talc 70%	80	150	300	450	600	900	120

Features

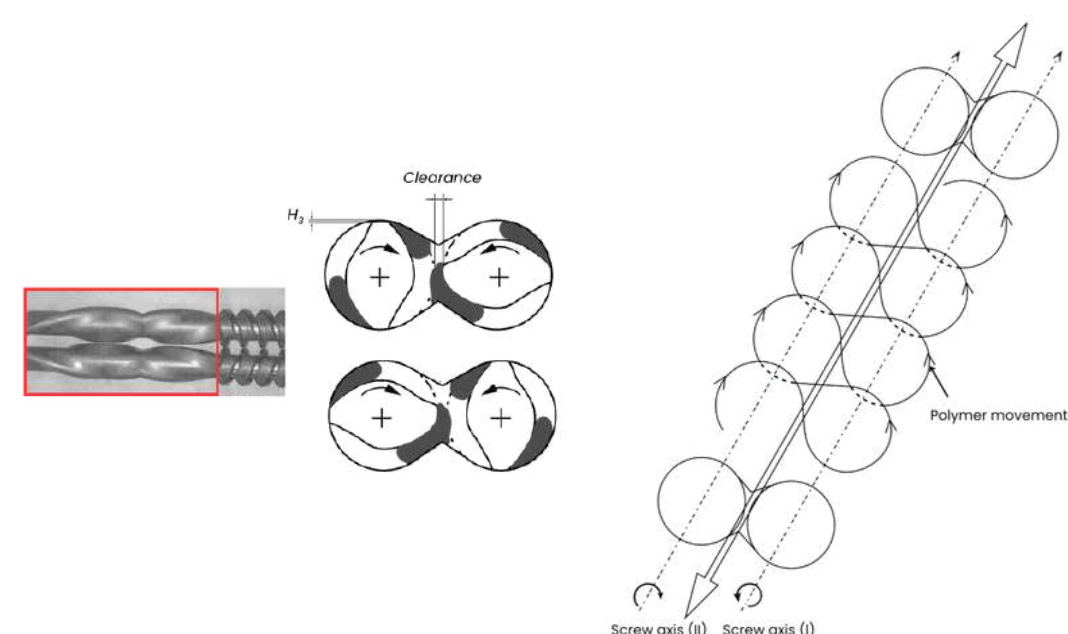
The HTM Tandem Compounding Twin-Screw Extruder offers superior kneading performance with its high-speed rotors, flexible segmented screw design for various resins, and low-temperature, low-speed extrusion for high-filler compounds. This design ensures efficient kneading, reduced material degradation, and high-quality output across diverse compounding applications.

CTE vs. Conventional Extruder Comparison

Kneading Comparison by Rotor Design & Resing & Gas Movement

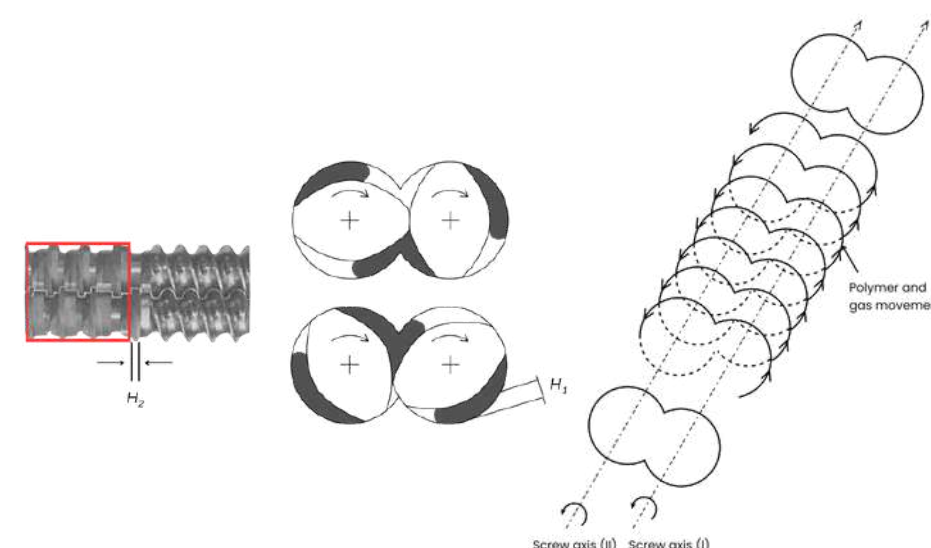
HTM Technology

Resin passes through the rotor's clearance, undergoing high shear and even kneading. The repeated compression and release process controls heat generation, enabling efficient kneading and low-temperature extrusion.



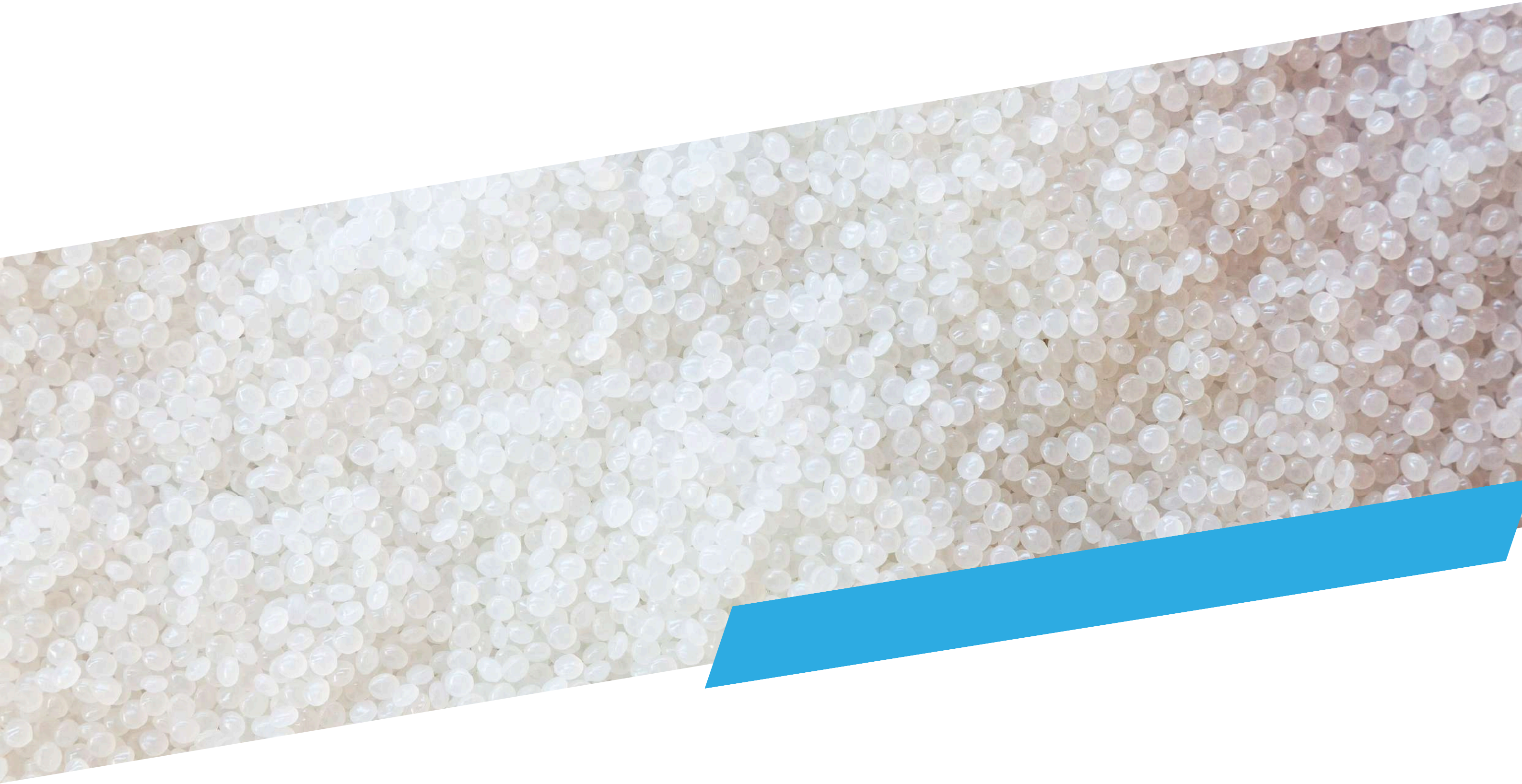
Conventional Technology

Resin remains in a high-compression state without release, receiving medium shear. This results in higher heat generation and less effective kneading compared to the rotor-based system.



Technologies	CTE's Patented Technology (Counter-Rotating, Non-Intermeshing Type)	Conventional Technology (Co-Rotating, Intermeshing Type)
Gas Venting Design	The two screws do not intermesh, with a gap between them. Gas and air escape through the gap, resulting in excellent gas venting.	The two screws intermesh, causing gas to move only along the grooves, resulting in poor gas venting.
Kneading	The resin undergoes high shear by the rotors and is evenly kneaded. The repeated compression and release allow for high kneading efficiency and low-temperature extrusion with reduced heat generation.	The resin is continuously sheared under high compression, leading to significant heat generation even with minimal kneading.
Low-Temperature Extrusion	After melting and kneading in the HTM twin-screw section, the single-screw extrusion section minimizes heat generation.	The extrusion section after kneading is twin-screw, making it prone to heat generation.
Dispersibility	◎ Excellent	○ Good
Shear Heat Suppression	◎ Excellent	△ Needs Improvement
Gas Venting	◎ Excellent	△ Needs Improvement
Material Feeding	◎ Excellent	△ Needs Improvement
Productivity	◎ Excellent	○ Good
Maintenance	○ Good	○ Good
Resin Temperature Control	◎ Excellent	△ Very Inferior
Material Applicability	◎ Excellent	△ Needs Improvement

Creative **T**echnology & **E**xtruder



**Get In
Touch**



www.cte-japan.com
Open QR codeをクリックしてください

cte

株式会社シーティーイー
CTE Co., Ltd

〒362-0032 埼玉県上尾市日の出 3-4-5
3-4-5 Hinode, Ageo City, Saitama 362-0032, Japan

TEL: 048-778-0393 / FAX: 048-778-0394
Email: info@cte-japan.com