RECYCLING TECHNOLOGY

SOLID STATE POLYCONDENSATION REACTOR viscoSTAR

IV increase, for PET and PES pellets, **decontamination for direct food contact,** reduction of acetaldehyde and VOCs, **continuous batch process,** fast and easy installation

Starlinger

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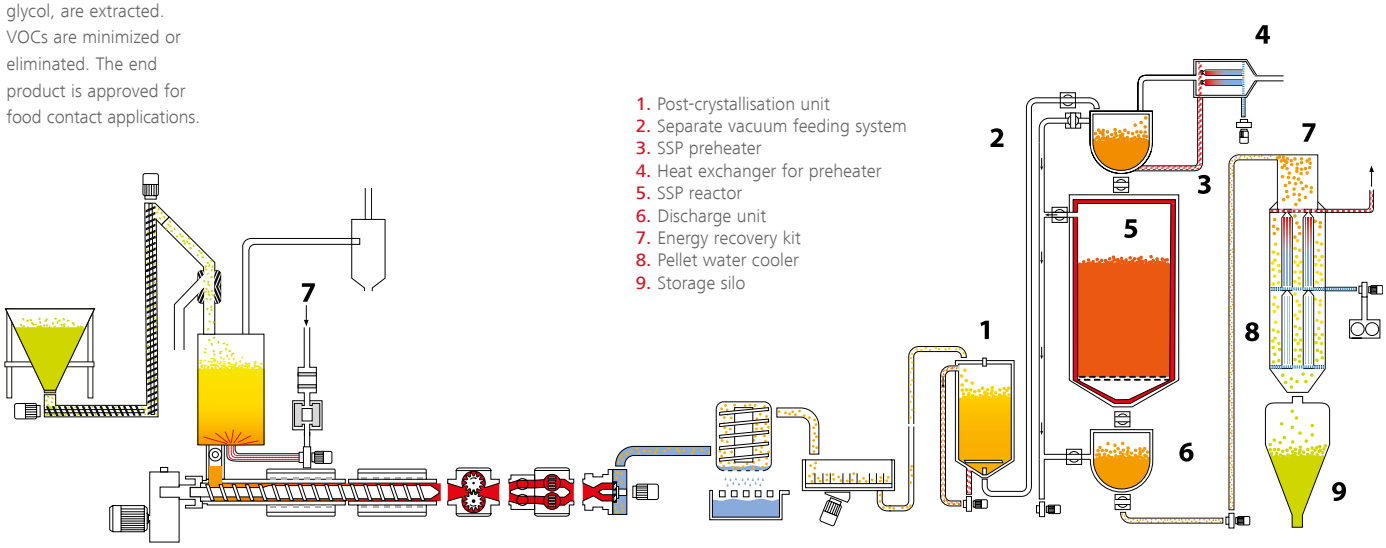
The patented outlet device of the reactor is designed for consistent treatment time of the material in the reactor, preventing center flow of the pellets.

The AA level is reduced.
Foreign particles, e.g. glycol, are extracted. VOCs are minimized or eliminated. The end product is approved for food contact applications.

State-of-the-art solid state polycondensation for the IV increase of PET and PES pellets. Possible source material is regranulate from bottles, preforms, fibers, nonwovens, sheets and strapping.

recoSTAR PET recycling line combined with viscoSTAR SSP reactor offers the following advantages:

- Effective decontamination and adjustable IV increase under vacuum
- FIFO principle
- Equal residence time for each batch
- Modular design for capacity increase
- Energy saving in case of inline processing
- Low transformation costs



Technical data

Type	120	150	200	250	350
Max. output with pellets[1] [kg/h]	1600	2000	2400	3200	3200
Effective volume of reactor [m³]	12	15	20	25	35
High-vacuum system [mbar]	≤10				
Energy consumption [kWh/kg] approx.	0.06 – 0.15				
IV increase [dl/g/h]	0.01 – 0.02				
Food grade according to	EFSA, FDA, brand owner approvals				
Dimensions					
Equipment height [m]	11.3	12.5	14.5	14.7	16.2
Floorspace [m]	8x8			11x9	

[1] 6h residence time

Starlinger recycling technology
Furtherstrasse 47a
2564 Weissenbach, Austria
T: + 43 2674 800 3101
E: recycling@starlinger.com
recycling.starlinger.com

Starlinger Head Office
Sonnenuhrgasse 4
1060 Vienna, Austria
T: + 43 1 59955-0

Starlinger & Co Gesellschaft m.b.H.
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All data depending on design!

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We reserve the right to technical modifications. Published 02/2026. DPR-24851