

Bottle-2-Bottle

Recycling Solution

Protecting our planet by using
100% sustainable materials



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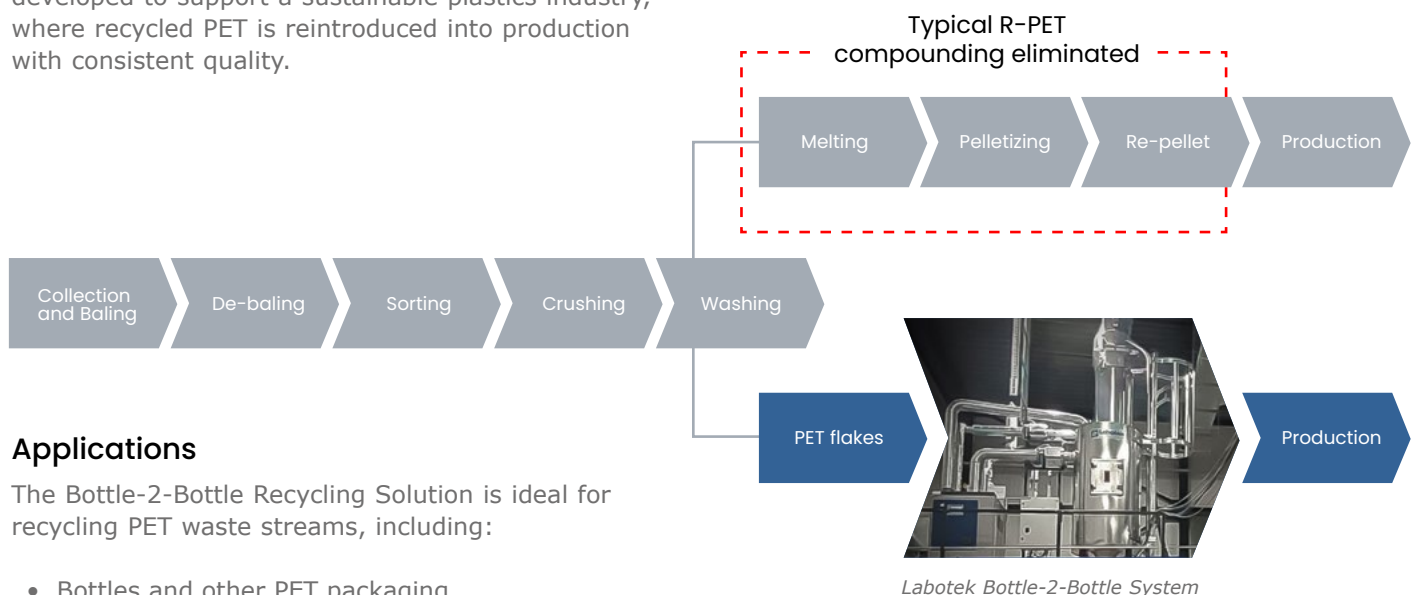
Introduction

The cost of transportation and production of recycled PET is significantly lower than producing new virgin PET resin from fossil-based resources and CO₂ emissions per kg are up to 60% lower. Used PET containers may be recycled numerous times, typically via chemical or mechanical recycling. Quite often the recycled PET material is re-compounded into R-PET granules, which adds another heat cycle and additional transport/handling, which adds even further CO₂ emissions. Furthermore; the cost of R-PET granules are typically much higher than using post-consumer regrind PET flakes.

The Labotek Bottle-2-Bottle Recycling Solution is developed to support a sustainable plastics industry, where recycled PET is reintroduced into production with consistent quality.

By crystallizing and drying amorphous PET, the system ensures that 100% recycled materials achieve the required mechanical strength and heat resistance. This makes them suitable for demanding applications such as sheet extrusion, blow molding and injection molding of preforms.

The system is designed for continuous operation, delivering stable performance, reduced energy consumption and lower operating costs – all controlled via a user-friendly Siemens touch-screen PLC interface.



Labotek Bottle-2-Bottle System

Applications

The Bottle-2-Bottle Recycling Solution is ideal for recycling PET waste streams, including:

- Bottles and other PET packaging
- Start-up scrap and purge waste
- By-products and discarded moldings
- Reserve stocks no longer suitable for sale

Typical downstream applications:

- PET sheet or profile extrusion lines
- Extrusion blow molding machines
- Injection molding machines for preforms

Key Benefits

- Continuous material feeding for smooth operation
- Reduced energy consumption and operating costs
- User-friendly operation with Siemens PLC control
- Consistent crystallinity and drying quality ensures reliable reuse of PET
- Compact design for easy integration into existing production setups

Specifications

Throughput capacity

Continuous crystallizing & drying system: up to 750 kg/h (based on bulk density @0.25 kg/l)

Control system:

Siemens PLC with intuitive touch-screen display

Process:

Continuous crystallizing and drying for PET and other recycled materials

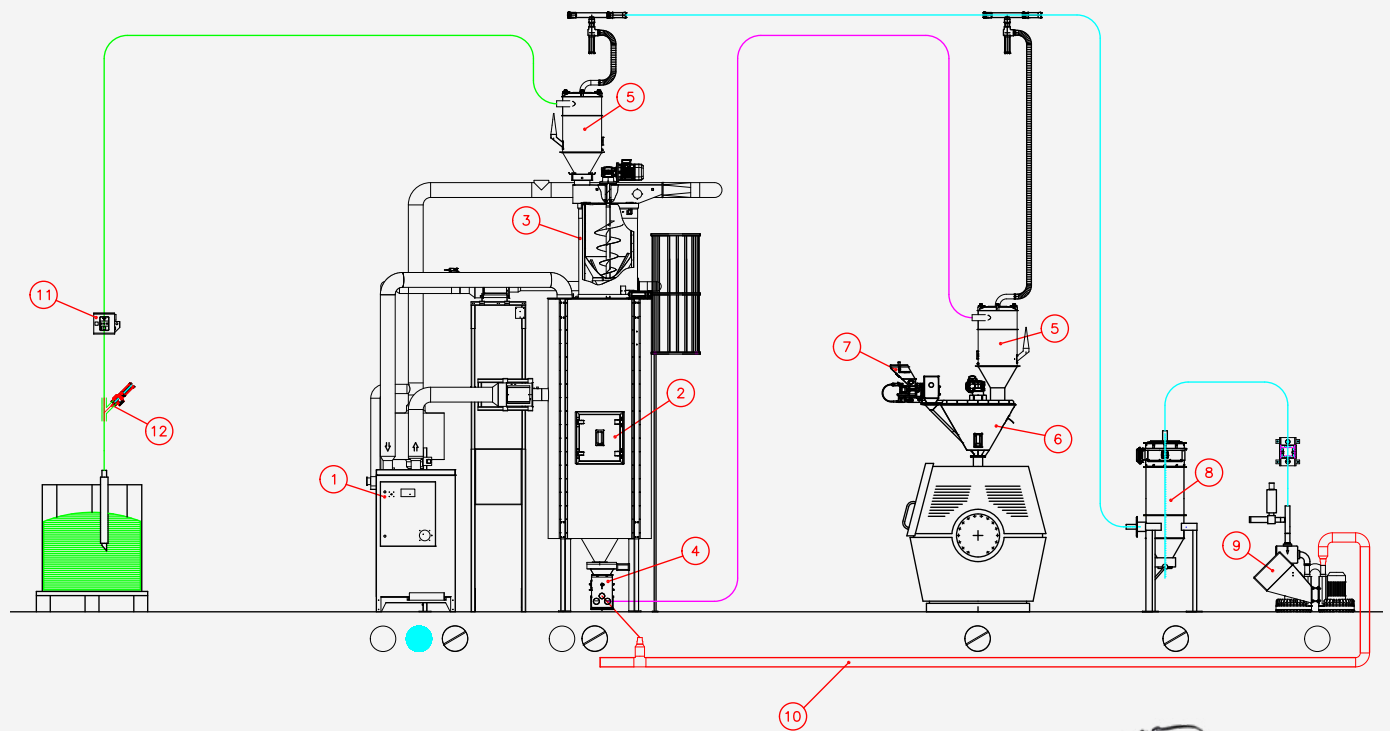
Design:

Robust construction for reliable long-term operation

Operation:

Optimized airflow and temperature control for consistent results

Technical Data



1. Desi. Flex Dryer
2. Drying Hopper
3. Crystallizer
4. Catchbox, 2xØ65 mm - pneumatic slide valve
5. Vacuum Reciever, SVR26 / Ø400
6. Material Hopper 50L, incl. Auger
7. Dosing Unit
8. Self Purifying Filter
9. Vacuum Station
10. Closed loop ducting
11. Metal Separator
12. Line cleaning valve



Documentation & Support

Labotek provides full technical documentation, energy-saving calculations and application support for every installation.

The system is covered by Labotek's 3-year warranty (excluding wear parts), backed by our worldwide service and support network.





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