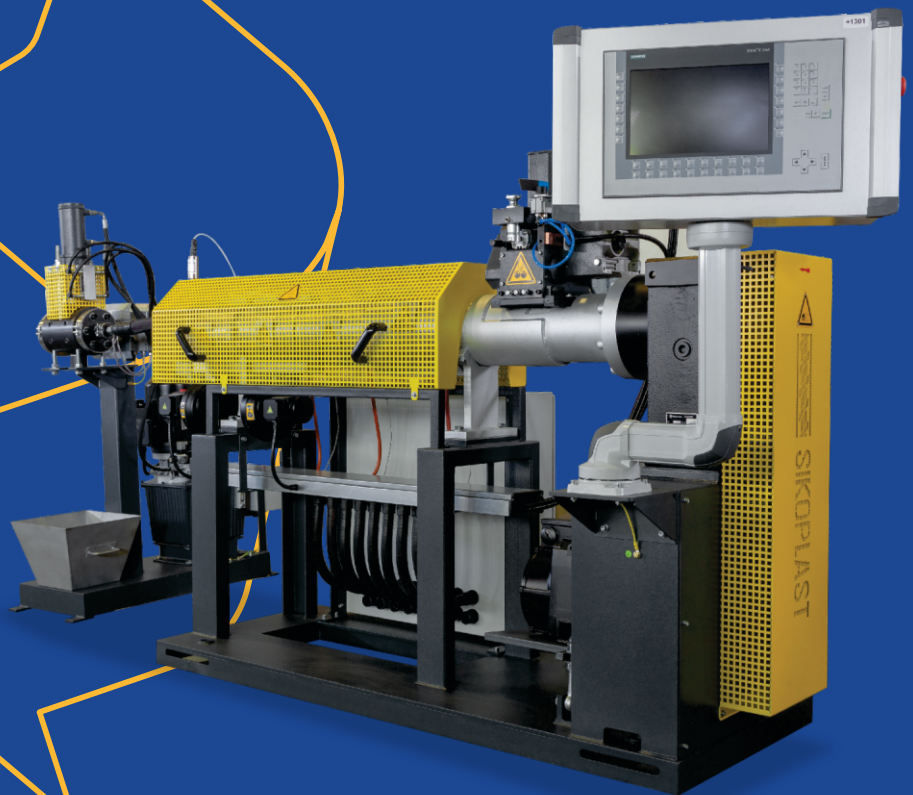


The SIKOREX system from SIKOPLAST
the ORIGINAL for almost 35 years

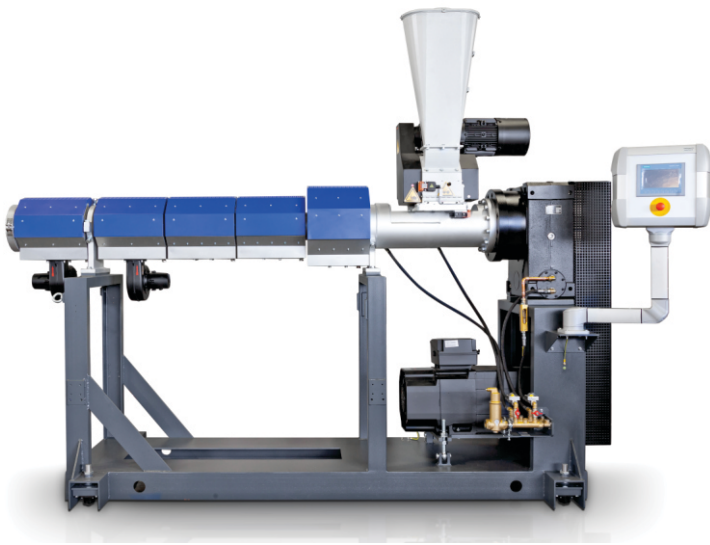


Order directly from the manufacturer
SIKOPLAST Recycling Technology GmbH

Fair prices, fast delivery
Already 400 systems delivered worldwide

In-Line regenerative extruder

One of SIKOPLAST's unique selling points are the machines of the SIKOREX series, which are becoming more and more popular, especially in the production of nonwovens. Simply put, these are essentially recycling extruders with the typical design of a conical screw fitted with one or two independently operated material feeders. Here, in an in-line process, the edge strips of the fleece winder are drawn in, converted into melt and fed directly back into the extrusion process as melt, i.e. injected into the production extruder of the plant. At the same time, the second infeed can process damaged or starter rolls, in most cases in full width.



How it works

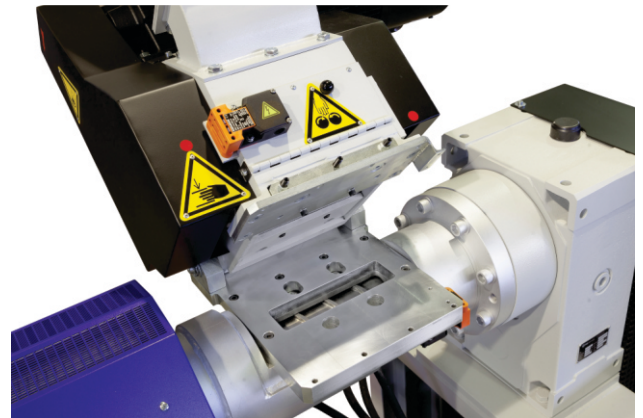
- The material is fed directly from the winder (edge strips) and/or from the unwind stand (rolls) through one or two feeders.
- It is then taken up, compressed and melted in the extruder's feed area.
- The built-in pressure sensor monitors the melt pressure.
- The screen changer serves for melt filtration.
- A controlled recirculation rate can be set at the melt pump.
- A flush bore hole allows the system to be started up easily.
- In the final step, the plastic melt is fed through a melt pipe into the production plant. An integrated non-return valve prevents a backflow of melt from the production plant into the SIKOREX extruder.

Innovations in the nonwoven sector

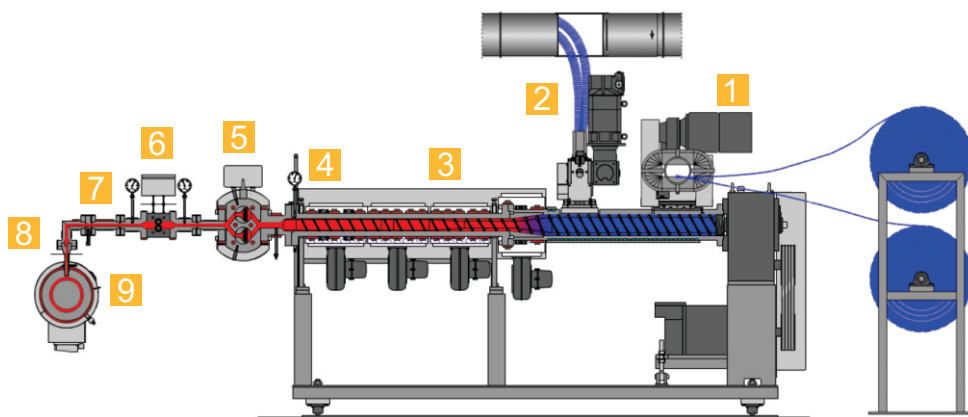
Always open to new ideas, SIKOPLAST is responding to a trend in the nonwovens sector, hydrophilic or hydroentangled nonwovens, by supplying a modified line where edge strips and starter rolls made of this material are fed directly as melt into the production process. The modified recycling extruder must be fitted with a longer screw (6 x L/D) because degassing is required, meaning that a vacuum suction pump must also be used. The use of a metering pump must also be provided for.

Areas of application

- Specially developed for the nonwoven and PE/PP film industry
- Nonwovens (SMS) with high MFI values and 100% "melt blown" content can be processed with the highest process stability
- Direct recycling of production residues in the form of melt into the production plant or a raw material reactor (e.g. for PA/PET fibres)
- Can be used for the recirculation of rolled material or for direct edge strip recirculation with infeed speeds of up to 375 m/min. Special solutions of up to 600 m/min and more are possible on request.
- Existing plants can be easily retrofitted.



Machine structure



The diagram shows the basic structure of a SIKOREX machine with:

- 1. Off-line roller infeed
- 2. In-line roller infeed
- 3. Extruder
- 4. Pressure sensor
- 5. Screen changer
- 6. Melt pump
- 7. Flush bore hole
- 8. Non-return valve
- 9. Production extruder

Advantages of our in-line regranulation systems

- ☀ Our product range includes standard systems with material throughputs from 30 kg/h up to approx. 250 kg/h
- ☀ No pre-crushing necessary. This reduces the material stress and prevents the formation of mill dust
- ☀ The small L/D ratio of the screw and the flush bore hole for flushing the system allow for quick material and colour changes
- ☀ The speed of the roller infeed is controlled, eliminating fluctuations in the feed material and ensuring a consistent recirculation rate
- ☀ A second feeder enables parallel feeding of edge strips and rolled material, with both feeders being controlled separately
- ⚙ Energy consumption is half that of OFF-LINE systems, as both the pre-crushing and granulation processes are eliminated
- ☀ Short payback period thanks to the low investment costs, reduced storage costs through direct regeneration and the recycling process in production
- ☀ The special screw geometry ensures that the melting process is gentle on the material while keeping dwell times short
- ☀ Direct feeding of the plastic melt into the production extruder. The intermediate granulation step is eliminated without replacement
- 📏 Low space requirement thanks to the compact design
- ⚙ In addition, the line can be expanded to include a melt metering pump for precisely defined recirculation rates
- 📏 If required, the system can be equipped with a screen changer
- ⚙ The fully automatic regenerative system requires no additional operating personnel

